annual report 2024



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Message from our President

The 2024 financial year will be marked in our memory by the tragedy caused by floods in Valencia. From here, I would like to reiterate our solidarity with all those affected, especially with the colleagues of the TYPSA Group who directly suffered its consequences. The solidarity response of the entire organisation has been exemplary, and the TYPSA Foundation has played a fundamental role in providing direct and urgent help to affected employees.

TYPSA has once again demonstrated its strength and capacity for growth, achieving record results in revenue, new contracts awarded, and backlog in 2024, thanks to solid organic growth and the consolidated trust of our clients.

- Revenue reached 396 million euros, with an increase of 13% compared to the previous year and a cumulative growth of 81% in the last five years.
- New contracts awarded amounted to 453 million euros. also with an increase of 13% compared to 2023, which also represents a growth of 81% in five years.
- The backlog expanded by 15% to 465 million euros, 47% more than five years ago.
- Our workforce has continued to grow and in December was already approaching 3,800 professionals, an increase of 33% in five years, and currently exceeding 4,000.

TYPSA maintains its role as an international company of reference in mobility and transport, with outstanding actions such as the detailed design of the track and overhead catenary system on the California High Speed train line, the supervision of the works of the northern ring road of Mumbai (India) or the detailed design of the Stockholm metro yellow line (Sweden).

In the hydraulic area, our activity has been especially intense, with projects such as the improvement of urban drainage systems in flooded areas of Peru, the programme to reduce unmetred water in Costa Rica and the Las Placetas hydraulic system in the Dominican Republic. We have also had an outstanding participation in ports, in the United Kingdom, in Rotterdam (the Netherlands), in Uruguay, in Angola and in the Democratic Republic of Congo.

In the area of renewable energy, we have taken firm steps, highlighting our participation in large-scale projects, such as those in Saudi Arabia: the Al Muwayh and Haden solar plants, and the Shegran, Hisu and Bilghah wind farms. We have also been involved in unique building projects, such as the expansion and renovation of the Gregorio Marañón hospital in Madrid, several data processing centres, the corporate headquarters of Red Eléctrica in Spain, the Royal Art Complex in Riyadh and the Military City for the US Army Corps of Engineers in Saudi Arabia.

We also continue to strengthen our presence in the operation and maintenance of infrastructures, where our subsidiary Rauros has made significant progress in Latin America.



Comprehensive remodelling project for the Gregorio Marañón Hospital, in Madrid



TYPSA has once again demonstrated its strength with solid organic growth and the consolidated trust of our clients



Pablo Bueno, Colegio de Caminos Award for Outstanding Engineer 2024



Satisfaction surveys show that 100% of our clients consider they would definitely trust or are very likely to trust TYPSA again for future work, reinforcing our commitment to excellence and continuous improvement.

In a global environment marked by technological transformation, TYPSA is still firmly committed to digitalisation. In 2024, we created the subsidiary TYPSA Digital Solutions (TDS), to coordinate and promote the Group's digital transformation. We have intensified investment in R&D+i, with a specific focus on the safe and effective incorporation of artificial intelligence into our processes. We can highlight the launch of the AlexandrlA project, conceived not only as a corporate tool, but as a cultural change: a philosophy of continuous improvement that places Al at the service of productivity, efficiency and secure information management.

The TYPSA Foundation for Development has continued its commendable work at Lake Albert University, in the Democratic Republic of Congo, where this year the number of students grew by 10%, reaching 525 students. The Foundation has also actively participated in projects in Benin, Haiti, Senegal and Spain, reaffirming its firm commitment to sustainable development and solidarity.

Looking to the future, we cannot ignore the new uncertainties that are looming over the global economy: the evolution of the price of oil, the reconsideration of large investments, the volatility of currencies or the increase in protectionist measures. Added to this are structural challenges, such as the difficulty in attracting talent to the sector, the undervaluation of our services in certain markets and political instability in some key regions.

Despite this, we remain very confident in the future. We know that the services we provide are essential for sustainable development, modernisation of infrastructures and improvement of the quality of life for millions of people. The exceptional results of 2024 demonstrate the strength of the TYPSA Group and our high capacity to adapt in complex contexts.

On behalf of the Board of Directors and the management team, I want to thank all the professionals at TYPSA for their efforts, commitment and talent, which make these achievements possible. To our shareholders, thank you for your continued trust. Together, we have built a solid foundation to optimistically face the challenges that 2025 presents us with.

Jack Rieno

PABLO BUENO TOMÁS

TYPSA Group President and CEO

Management report

Highlights of the year

MARKET ACTIVITY

This year, the Group 's activity has grown:

Revenue

13 %

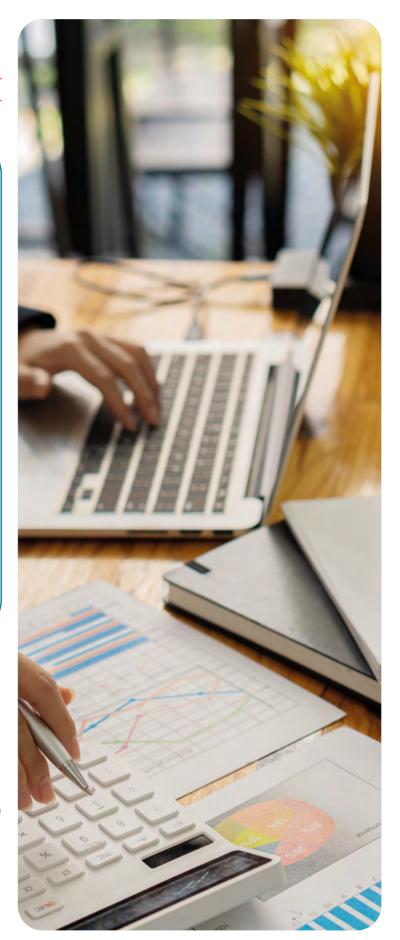
Contracts Awarded

13 %

Backlog

15 %

66 We are committed to our professionals and our clients, striving to enhance people's quality of life





UNITED STATES AND CANADA

High organic growth in California and Virginia, and diversification of activities in our traditional markets.

11% of the Group's

216

eople

offices

office in Canada

The demand for engineering, arquitecture and environmental services remains high.



SPANISH-SPEAKING LATIN AMERICA

In the second half of the year, reactivation of major public infrastructure tenders and concessions in Chile.

20 % of the Group's revenue

1,008

offic

laborato

laboratory in Peru

Our water, metro, and energy contracts continue in the Dominican Republic, while in Panama we have expanded into Public-Private Partnership (PPP) contracts.



BRAZIL

Launch of the Growth Acceleration Plan, with significant investments planned in transport infrastructure.

5% of the Group's revenue

334

ople

2 offices

New opportunities associated with the Sao Paulo State Concessions Programme.



SPAIN

A high volume of public tendering continues, with figures similar to the previous year.

22% 1 of the Group's revenue 3

laboratories

1,550 people

office

material laboratory

harbour laboratory

Important increase in our figures for Revenue and Contracts Awarded during this period.

EUROPE (Except Spain)

We are expanding our major contracts in the United Kingdom and diversifying our presence in Ireland with projects in the fields of energy, building and ports.

Increased involvement in transport infrastructure in Nordic countries and in renewable energies across Eastern Europe.



AFRICA

We operate in 21 countries across the continent, serving as the EIB's reference engineering firm in Africa.

We have strengthened our presence in Tanzania and Uganda, through participation in their key railway infrastructure programmes.



MIDDLE EAST

Opening of Riyadh metro lines 4 and 6, designed by TYPSA.

Significant opportunities with multilateral funds in Jordan, Iraq, and Egypt.



ASIA AND PACIFIC

Following elections in India, investment has been reactivated, mainly in rail projects.

offices

Increase of our activities in the areas of water, renewable energy and airports in Australia.





Key figures

Consolidated data and Group figures (in € million).

REVENUE						
	2020	2021	2022	2023	2024	2024 (USD)
Total	239.44	266.93	325.13	350.09	396.34	411.76
USA and Canada	21.18	34.34	31.48	34.36	42.68	44.34
Spanish-speaking Latin America	45.23	56.79	75.59	58.67	77.23	80.23
Brazil	8.72	10.00	15.37	18.00	19.20	19.95
Spain	52.10	53.36	60.55	66.49	88.99	92.45
Europe (excp. Spain)	36.13	38.55	55.27	67.34	61.40	63.79
Africa	12.67	14.89	17.65	16.36	13.27	13.79
Middle East	40.00	30.60	28.68	53.87	62.32	64.74
Asia and Pacific	23.41	28.40	40.54	35.00	31.25	32.47

CONTRACT AWARDS								
	2020	2021	2022	2023	2024	2024 (USD)		
Total	267.79	280.14	350.91	401.93	453.07	470.69		
USA and Canada	28.76	41.99	35.05	37.27	49.28	51.19		
Spanish-speaking Latin America	49.37	69.11	65.62	80.46	77.61	80.63		
Brazil	15.09	7.15	16.04	22.34	20.87	21.68		
Spain	49.49	59.49	72.56	86.50	109.44	113.70		
Europe (excp. Spain)	55.89	29.98	60.31	74.73	78.99	82.06		
Africa	13.34	13.22	23.04	14.96	15.87	16.49		
Middle East	27.67	19.08	46.72	57.28	65.24	67.78		
Asia and Pacific	28.18	40.12	31.57	28.39	35.77	37.16		

BACKLOG						
	2020	2021	2022	2023	2024	2024 (USD)
Total	320.77	330.37	362.77	403.12	465.31	483.41
USA and Canada	15.46	24.47	28.77	30.90	38.56	40.06
Spanish-speaking Latin America	42.52	56.11	50.97	72.46	73.22	76.07
Brazil	35.92	22.95	26.30	32.05	28.23	29.32
Spain	65.93	72.35	84.25	103.97	129.29	134.32
Europe (excp. Spain)	37.13	29.56	33.85	41.71	59.61	61.93
Africa	40.66	37.63	42.64	32.54	35.04	36.41
Middle East	37.46	27.88	47.69	48.15	54.06	56.16
Asia and Pacific	45.69	59.42	48.30	41.34	47.30	49.14

Equity						
	2020	2021	2022	2023	2024	2024 (USD)
	119.51	132.33	154.30	172.35	192.67	200.16
Total equity						
	2020	2021	2022	2023	2024	2024 (USD)
	115.39	130.10	153.71	173.80	193.33	200.86
Earnings bef	ore taxes					
	2020	2021	2022	2023	2024	2024 (USD)
	21.00	28.95	47.64	47.02	54.84	56.97
Earnings afte	er taxes*					
	2020	2021	2022	2023	2024	2024 (USD)
	14.12	19.39	35.13	34.75	40.57	42.15

*Attributed to the parent company

People					
	2020	2021	2022	2023	2024
No of people (at Dec. 31)	2,845	3,126	3,317	3,592	3,751
No of people (yearly average	e) 2,831	2,974	3,222	3,456	3,672

Equity / Total assets					
	2020	2021	2022	2023	2024
	0.59	0.55	0.55	0.59	0.62
Current assets / Currer	nt liabilitie	es			
	2020	2021	2022	2023	2024
	2.36	2.10	2.20	2.38	2.64
% Earnings after taxes	/Initial ne	et equity			
	2020	2021	2022	2023	2024
	13.3 %	17.0 %	27.4 %	22.9 %	23.9 %
% Earnings before taxe	es / Rever	nue			
	2020	2021	2022	2023	2024
	8.8 %	10.8 %	14.7 %	13.4 %	13.8 %
% Earnings after taxes	/Revenu	е			
	2020	2021	2022	2023	2024
	6.1 %	7.3 %	11.0 %	10.1 %	10.5 %
Revenue per person (i	n euros th	nousand)			
	2020	2021	2022	2023	2024
	84.58	89.75	100.91	101.30	107.94



Financial review

CONSOLIDATED ASSETS (in euros)	2024	2023
A) NON-CURRENT ASSETS	49,445,517.15	51,442,538.22
	3,707,206.10	5,168,154.23
II. Plant and equipment	28,576,821.52	28,412,852.04
III. Long-term investments in subsidiaries	14,433.56	32,194.98
IV. Long-term financial investments	7,385,455.64	9,495,334.72
V. Deferred tax assets	9,761,600.33	8,334,002.25
B) CURRENT ASSETS	261,015,347.21	240,539,059.69
I. Non-current assets held for sale	68,822.27	-
II. Inventories	13,111,798.63	13,095,496.44
III. Accounts receivable, work in progress and others	95,450,887.63	91,660,809.84
IV. Short-term investments in Group companies and associates	-	3,372.44
V. Short-term investments	3,010,546.54	1,004,305.11
VI. Prepaid expenses and other current assets	3,587,398.44	3,005,861.85
VII. Cash and cash equivalents	145,785,893.70	131,769,214.01
TOTAL ASSETS (A+B)	310,460,864.36	291,981,597.91
CONSOLIDATED EQUITY AND LIABILITIES (in euros)	2024	2023
A) TOTAL EQUITY	193,334,871.70	173,796,545.63
A-1) Equity	192,667,943.45	172,353,081.84
I. Share capital	2,400,000.00	2,400,000.00
II. Retained earnings	162,591,988.85	145,207,294.75
III. (Treasury stock)	(968,207.51)	-
IV. Net income attributable to the parent company	40,572,762.11	34,745,787.09
V. (Interim dividend)	(11,928,600.00)	(10,000,000.00)
A-2) Currency translation adjustments	(1,753,785.90)	(664,449.17)
A-3) Grants, donations, and bequests received	96,907.95	76,177.39
A-4) Minority interests	2,323,806.20	2,031,735.57
B) NON-CURRENT LIABILITIES	18,336,927.64	16,969,732.43
I. Long-term provisions	12,610,369.14	10,909,017.70
II. Long-term debt	3,686,028.86	3,717,878.49
III. Billing in excess of cost (long-term)	1,537,325.54	1,834,560.00
IV. Deferred tax liability	503,204.10	508,276.24
C) CURRENT LIABILITIES	98,789,065.02	101,215,319.85
I. Short-term provisions	1,907,014.28	1,572,915.26
II. Short-term debt	385,622.53	1,826,512.01
III. Billing in excess of cost	37,520,645.35	40,717,229.41
IV. Trade accounts payable and advanced billing	58,903,850.89	56,766,193.67
V. Accrued expenses and other current liabilities	71,931.97	332,469.50
TOTAL EQUITY AND LIABILITIES (A+B+C)	310,460,864.36	291,981,597.91



CONSOLIDATED PROFIT AND LOSS ACCOUNT (in euros)	2024	2023
A) CONTINUING OPERATIONS		
Operating revenue	396,338,423.30	350,091,021.52
Changes in inventories of developments in progress	9,874.82	234,548.24
Capitalised in-house work on fixed assets	-	15,823.50
Materials, services of third parties and subcontractors	(98,984,932.80)	(81,547,008.41)
Other operating revenues	2,461,783.47	2,145,569.14
Personnel costs	(197,282,644.42)	(173,650,369.40)
Other operating costs	(51,450,699.12)	(48,585,832.33)
Depreciation and amortisation	(4,901,000.65)	(4,570,119.32)
Surplus	9,495.56	1,652,386.47
Income from sale of assets	7,980.70	20,586.55
A-1) Operating income	46,208,280.86	45,806,605.96
A-2) Financial income	8,527,121.09	1,183,215.72
Share in the profits (losses) of companies accounted for using the equity method	100,808.98	31,400.38
A-3) Earnings before taxes	54,836,210.93	47,021,222.06
Income taxes	(13,368,028.02)	(11,812,257.86)
A-4) Net income from continuing operations	41,468,182.91	35,208,964.20
A-5) Consolidated net income for the year	41,468,182.91	35,208,964.20
NET INCOME ATTRIBUTABLE TO NON-CONTROLLING INTERESTS	895,420.80	463,177.11
NET INCOME FOR THE PERIOD ATTRIBUTABLE TO THE PARENT COMPANY	40,572,762.11	34,745,787.09

Corporate sustainability

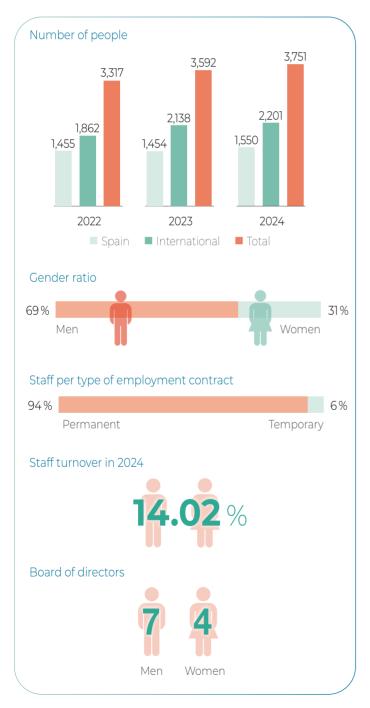
Our team



OUR PEOPLE: Our most valuable asset.

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

ANALYSIS AND INDICATORS





People by region

USA and Canada	*††††	216	6%
Spanish-speaking Latin America	†#†††##†#††† †#††####	1,008	27 %
Brazil	†††††††	334	9%
Spain	**************************************	1,550	41%
Europe (except Spain)	† †††	176	5%
Africa	ŤŘ	71	2%
Middle East	†††	153	4%
Asia and Pacific	?????	243	6%
TOTAL		3,751	100 %

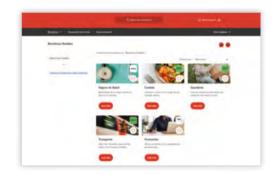


EMPLOYEE BENEFITS

Flexible and personalised employee remuneration plan -TYPSA BENEFITS-

Due to the positive results of this Flexible Remuneration Plan, in Spain, we continue to offer the opportunity for benefits in kind (dining cards, childcare vouchers, private health insurance, travel cards and training), adapted to suit personal requirements, generating significant savings for the employee. This type of remuneration allows employees to allocate up to 30% of their gross salary to the consumption of certain products or services at a price lower than the market rate, thanks to tax exemptions. This increases the employee's net compensation, while also contributing to employee loyalty and talent attraction.

The compensation and benefits structure in each of the countries where we operate is identical for all Group employees, adapted to the different local regulations. There is no discrimination or limitation of any kind based on gender.



Life and permanent disability insurance

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.

This insurance represents a saving for employees as it is funded by the company, supports employees' well-being and peace of mind, and strengthens their identification with the company.

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.).
- Contributing to employees' professional development through an international career.



OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM

In-house health and safety service

TYPSA has the technical expertise to manage occupational safety, ergonomics and applied psychosociology. Industrial hygiene and health monitoring are provided through an external prevention service.

The various regional offices, branches, and subsidiaries of the Group located outside Spain are managed in accordance with the preventive measures established in their respective geographic locations.

System improvements

- Renewal of the ISO 45001:2018 certification for occupational health and safety management systems, incorporating the Regional Office in the Canary Islands in 2024.
- In 2024, TYPSA Spain, as part of its commitment to workers' mental health, conducted a psychosocial assessment using the F-psico 4.0 methodology, carried out by specialised technicians from Quirón Prevención.
- Development of training in health and safety to support the integration of new technologies, such as the use of drones, in tasks that can offer a preventive advantage by avoiding or reducing workers' exposure to certain risks.

Accident rate statistics

This data corresponds to the TYPSA Regional Offices and the companies of the TYPSA GROUP that are within the scope of the ISO 45001 certification.



TRAINING

Strengthening our intellectual capital

- One of the Group's firmest commitments to its people.
- Essential for career progression and motivation.
- Strategic training plan for the use of applied AI tools.
- Annual and area-specific training plans.
- Maintenance and improvements by global training providers.
- Consolidating the TYPSA Learning platform to promote internal training and knowledge sharing amongst employees. New features such as the issuance of attendance and achievement certificates linked to exams



Expanding our knowledge allows us to better serve our clients and society >9

Training priority in:

Digitalisation and implementation of new technologies:

- Data Governance and Artificial Intelligence (AI) applied to engineering and architecture processes.
- Digital twins. Augmented virtual reality.
- Advanced BIM processes and tools. Collaboration platforms.
- Emerging technologies for software development and cybersecurity.

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.
- Transport and mobility planning.
- Strategic infrastructure consulting.

Sustainability of buildings, infrastructures and cities:

- Decarbonisation 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.



Miguel Mondría, Chief Technology Officer (CTO), at an internal Al seminar



The fight against corruption



Our INTEGRITY MANAGEMENT SYSTEM (IMS), enables us to pursue and consolidate an ethical corporate culture, prioritising regulatory compliance, transparency and integrity.

We maintain a strong commitment to integrity and transparency, improving our internal management procedures every year 39



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.
- Internal information system policy.
- Integrity management manual.
- Annual modern slavery statement and equality, diversity and inclusion statement.
- Financial and non-financial control procedures.
- ISO 37001 anti-bribery certification.
- Compliance Committee, working independently and reporting directly to the Board of Directors.

System improvements

- Adherence of the Spanish subsidiary MC2 to TYPSA's Integrity Management System.
- Certification of the Chile branch under ISO 37001 Anti-Bribery Management Systems standard.
- Extension of the integrity self-assessment tool to the Spanish subsidiary MC2 and the branches in Peru and Chile.
- Declaration of absence of conflicts of interest signed by the executives of all entities within the TYPSA Group.

Society



CLIENTS

SERVICE EXCELLENCE FOR CLIENTS: 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



Carlos Pérez, business development director in the Middle East, with a client at the Saudi Water Forum





Number of incidents dealt with and resolved

20<u>3</u>22 20<u>2</u>23 **20**24

SUPPLIERS

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

Systems and procedures

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.

Evolution subcontractors score

Subcontractor evaluation scores

28.22 28.63 **28.4**4

(Max. possible 10)



TYPSA'S MANAGEMENT SYSTEM

We operate AS ONE COMPANY from anywhere in the world.

TYPSA's ISO 9001 certified quality system has been in place for 29 years and is a common reference for all branches and subsidiaries.

Our ISO 14001 certified Management System has assured correct environmental performance for over 24 years.

System improvements

Carbon footprints certified and AENOR Verification Statement obtained for the greenhouse gas emissions inventory corresponding to 2022 and 2023.

Number of internal quality and environment audits

2p22 2p23 2p24

Internal quality and environment audit scores

28.22 28.23 28.24

(Max. possible 10)

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

Leadership in positioning the sector for the opportunities presented by regulatory modifications in climate change and sustainable energy, international mobility, digital transformation, sustainable cities, international cooperation, and development financina.



Elena Holgado, vicepresident of Aedip, at the Lean

- Important representation in the main Spanish, European, and international industry organisations: FIDIC. EFCA (Presidency). TECNIBERIA. MAFEX. and AEDIP.
- We are active in Spain's Professional Associations and professional institutions (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: the Mediterranean Water Institute, the Spanish Association of Tunnels and Underground Works (AETOS), the World Road Association (PIARC), the International Federation for Structural Concrete (FIB), and the Water Environment Federation (WEF).

Working with Universities

Collaboration Agreements for the Integration of Interns

Agreements continue to run with the main public and private universities in Spain, as well as with business schools and other educational institutions. Worthy of mention are: the Polytechnic University of Madrid (UPM), Polytechnic University of Valencia



Collaboration between Griffith University and the Group's

(UPV), Rey Juan Carlos University, European University, University of Valladolid, Francisco de Vitoria University, CEU San Pablo University, EAE Business School, Vocational Training Programmes of the Community of Madrid, EDEM Business School, University of the Basque Country, and University of Cantabria.

We also collaborate with universities and government clients in various international regional offices. Among the most notable are: Imperial College London, University College London, Sheffield University in the United Kingdom, University of Engineering and Technology (UTEC) in Peru, Peruvian University of Applied Sciences (UPC), Illinois Institute of Technology, Arizona State University Phoenix, and Griffith University in Queensland, Australia.

A total of 84 interns participated during the year.

Technical Collaborations

We collaborate with a large majority of universities which offer technical degrees in Spain, as well as with universities in the United States, Saudi Arabia, the United Kingdom, and Sweden.

- Member of the Advisory Board of the School of Civil Engineering (Escuela Técnica Superior de Ingeniería de Caminos, Canales y Puertos) at the Universidad Politécnica de Valencia.
- Collaboration with the Climate Change Professorship at the Universidad Politécnica de Valencia to jointly work on new algorithms for simulating the effects of climate change on infrastructure and hydro-economic models.
- Collaboration through an Industry PhD programme with the Universidad Politécnica de Catalunya for research on new technologies in tunnel engineering.
- Collaboration agreement signed by the subsidiary Internac with Nebrija University to deliver courses for the Civil Engineering undergraduate degree and the Master's in Civil Engineering.
- Continuation of the agreement with the Madrid School of Civil Engineering Harbour Laboratory, marking 17 years of teaching and innovation support through the TYPSA – Pablo Bueno Harbour Research Unit. This agreement strengthens improvement and modernisation plans for the laboratory's facilities. Over 200 students visited the facilities during the year.

- Collaboration with the Madrid School of Architecture to deliver the MEDIP master's degree (Comprehensive Project Management).
- Collaboration with UNED distance learning university to organise and teach the AETOS Master's Degree in Tunnels and Underground Works.
- Our subsidiary Green Blue Management collaborates with the Universities of Cantabria, A Coruña, the Universidad Politécnica de Valencia, and the Universidad Politécnica de Madrid, supporting innovation plans focused on monitoring and evaluating Sustainable Urban Drainage Systems, developed through pilot projects.
- The Swedish branch, TYPSA AB, collaborates with Stockholm's Royal Institute of Technology (KTH), giving classes on bridge design and tunnel engineering.





Awards granted by the Group

- Our subsidiary INTEMAC awarded the top three students from the School of Civil Engineering at the Universidad de Cantabria, who had the best academic records in Structural Engineering.
- TYPSA awarded the top students at the School of Civil Engineering, Universidad Politécnica de Madrid, who had the best academic records in Civil Constructions, Transport and Urban Services, and Hydrology.
- TYPSA Foundation for Development awarded the best Master´s thesis from the School of Civil Engineering, Universidad Politécnica de Madrid, in the area of Development Cooperation.



Íñigo de la Serna, vicepresident of TYPSA, presents the award to one of the top three students at the School of Civil Engineering, Universidad Politécnica de Madrid

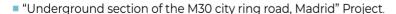
Awards and recognitions granted to the Group

The Group received three recognitions, being amongst the 50 best tunnel designs (50 Iconic Tunnels) built over the past 50 years, selected by the International Tunnelling and Underground Space Association on its 50th anniversary:

"Madrid Metro extension, carried out between 1995 and 1999" Project.

TYPSA participated significantly during this period, intervening in the design and supervision of 32km of lines and 15 stations, which include

- Design of El Lago to Principe Pío Line 10 underground section;
- Detailed design of Line 7 extension from Guzmán el Bueno to Virgen de la Paloma:
- Supervision of Line 4 extension from Esperanza to Virgen de la Paloma;
- Design review, and monitoring and supervision of quality assurance for the works of Line 9 extension to Arganda;
- Supervision of Line 8 extension from Campo de las Naciones to Barajas Airport.



TYPSA played a significant part in this project, and highlights include:

- Detailed design of the South By-Pass for the underground section of the M-30, which connects the intersection of the A-3 and the Avenida del Mediterráneo with the intersection of the A-42 on Prague Bridge, through two tunnels with a length of 4.3 km each, excavated with EPB tunnelling machine of inner diameter 15.2 m, which was world record holder in 2005 for size and power;
- Construction supervision of the underground section between Prague Bridge and the South Intersection, with 6.2 km of cut&cover tunnel;



Airport Station on Metro line 8



South By-Pass. Underground section of the M30, Madrid



Porto Maravhila, Rio de Janeiro, Brazil

- Construction supervision of the improvement works on the intersection of the M-30 with the A-3, with 2.2 km of cut&cover tunnel;
- Drafting of the Special Plan, design and construction supervision of the Madrid Rio project for the underground section of the M-30.

"Porto Maravilha Tunnel Complex in Rio de Janeiro" Project.

A new road system will connect the area between Santos Dumont airport and the area of the bus station, in an area of 500 ha. The system is composed of 5 main tunnels: two called Túneles de la Autopista, the Via Binária tunnel, the Morro da Saúde tunnel and the Providência tunnel, with a total length of 8 km, built partly with the new Austrian method and partly in cut&cover. The subsidiary ENGECORPS was recognised for carrying out the design and construction supervision.

Forum participation

- Conference on Geotechnical Asset Management Systems. Barcelona, February'24.
- Conference on Innovative Urban Solutions, ICEX-MWCC. Madrid, March'24.
- Transforming Transportation Conference, World Bank-WRI. Washington DC, March'24.
- Wind Europe 2024. Bilbao, March'24.



TYPSA stand at Wind Europe 2024, in Bilbao



Miriam Ruiz, Aitor Ezquerra and Joaquín Barba at the TYPSA stand, at Innotrans, Berlin



GBM and TYPSA environmental teams at the CONAMA

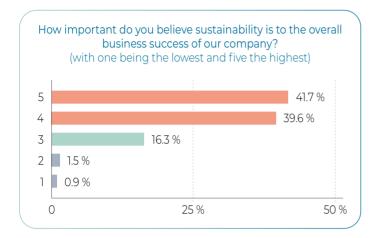
- World Tunnel Congress. Shenzhen, China, April'24.
- Saudi Water Forum. Riyadh, Saudi Arabia, April'24.
- Water Loss Congress, International Water Association (IWA). San Sebastian, April'24.
- IABSE Annual Congress. Manchester, April'24.
- Technical Seminars on Mediterranean Tunnels. Barcelona, May'24.
- XXI Annual Technical Conference on BIM Methodology in Rock Engineering. Madrid, May'24.
- Spain-Türkiye Business Forum, CEOE. Madrid, May'24.
- Global Offshore Wind Conference. Manchester, United Kingdom, June'24.
- XIII Spanish Dam Conference. Barcelona, June'24.
- XXI International Road Infrastructure Congress. Lima, August'24.
- Australian Geomechanics Society Symposium. Townsville, Australia, August'24.
- InnoTrans Rail Transport Congress. Berlin, September'24
- Annual British Tunnelling Society Conference. London, September'24.
- Spain Smart Water Summit. Madrid, September'24.
- Asian Development Bank visit. ICEX, Madrid, September'24.
- CEOE–Central American Bank for Economic Integration (CABEI) Business Forum. Madrid, September'24.
- IX National Congress of the Spanish Technical Association for Ports and Coasts. A Coruña, October'24.
- AETOS 50th Anniversary Conference. Madrid, October'24.
- Australia High-Speed Rail Conference, ICEX. Madrid, October'24.
- ICEX Multilateral Workshops. São Paulo, Brazil, October'24.
- Saudi Arabia-Spain Business Forum, Spanish Chamber of Commerce. Madrid, November'24.
- CoMotion Conference. Los Angeles, November'24.
- Rail Live. Zaragoza, November'24.
- National Congress of the Environmental (CONAMA). Madrid, December'24.

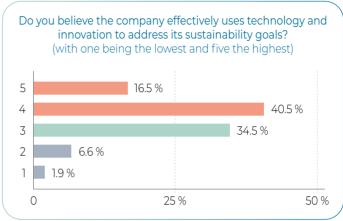
Environment



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

SUSTAINABILITY SURVEY FOR EMPLOYEES





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

TYPSA has two main strategies to fight climate change:

- From a corporate point of view, calculating and verifying the corporate carbon footprint since 2013, also registered on the National Carbon Footprint Registry of the Ministry for the Ecological Transition, obtaining, not only recognition for the calculation, but also for having achieved a reduction over the years.
- In parallel, a project strategy developed by the Division of Sustainability and Environmental Assessment, integrating the climate change variables in all project phases, with the aim of achieving both mitigation of GHG emissions and incorporating climate change adaptation measures, with the sole objective of developing resilient infrastructures.



Evolution of the carbon footprint in Spain (tCO2eq) and ratio in relation to the activity index per employee:

2022 - 2.41 tCO2eq/employee

2023 - 2.24 tCO2eq/employed 3,008¹ - 2.34 tCO2eq/employee

1 - Provisional and uncertified footprint

The carbon footprints for the years 2022 and 2023 have been submitted to the Registry of the Ministry for the Ecological Transition and Demographic Challenge, and are currently awaiting resolution.

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

TYPSA 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 2020 and 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 they both were exceptions.



Progress of electric power, paper and water consumption:

ELECTRIC POWER consumption (kWh) progress								
	2019	2020	2021	2022	2023	2024		
Spain	1,707,002	1,608,320	1.737,884	1,845,976	1,775,082	1,649,233		
Peru	248,440	216,700	254,783	334,994	453,217	414,843		
UAE	55,196	38,606	37,438	17,169	19,852	18,384		
Saudi Arabi	a -	-	-	49,688	33,956	58,241		
Mexico	-	-	-	121,336	147,011	228,337		
Sweden	=	=	-	-	4,893	7,404		

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 RAUROS is also certified as renewable.



PAPER consumption (kg) progress								
	2019	2020	2021	2022	2023	2024		
Spain	15,801	9,791	8,801	9,785	12,813	3,991		
Peru	6,056	2,528	2,678	2,789	1,563	1,364		
UAE	102	162	137	-	65	35		
Saudi Arabia	-	-	-	32	30	34		
Mexico	1,334	1,805	2,684	1,769	2,124	1,577		
Sweden	-	-	-	7	7	7		
UK	-	-	-	5	13	28		
Australia	-	-	-	9	23	6		



WATER consumption (m³) progress							
	2019	2020	2021	2022	2023	2024	
Spain	3,763	2,826	3,181	3,396	4,169	3,864	
Peru	2,294	1,633	2,437	3,107	3,778	3,131	
UAE	156	119	43	-	-	<u> </u>	
Saudi Arabia	-	-	-	1,294	-	<u> </u>	

Innovation



STRATEGIC COMMITMENT TO INNOVATION, DIGITALISATION, AND DIGITAL SERVICES

In 2024, a qualitative leap in innovation investment was made with the creation of the subsidiary **TYPSA Digital Solutions** (TDS), which now has more than 60 professionals dedicated to digital and innovative projects to drive the Group's digital transformation. TDS develops new tools based on BIM, digital twins, and artificial intelligence to facilitate decision-making, optimise internal processes, and maximise project profitability. Services focus on four key pillars:

- BIM Excellence. Advanced BIM consultancy
- Digital Twins
- Custom software for city and infrastructure lifecycle
- Data governance enhancement

TDS's activity strengthens the implementation of the 2024–2025 Strategic Plan for Innovation and Digitalisation, which is focused on process automation, knowledge management, and the development of new tools powered with artificial intelligence (AI) for the Group. Special emphasis has been placed on the integration of AI into our processes and tools, without compromising information security.

A major innovation this year is the launch of **AlexandrIA**, an intranet-based platform designed to centralise and facilitate access to personalised Al agents within TYPSA. Leveraging advanced functionalities to improve efficiency and productivity in daily operations, while ensuring a secure and reliable environment for handling critical information. This platform reinforces the role of engineers as strategic decision-makers by allowing technology to automate operational tasks, and also enabling agile project launches which can later be scaled for larger impact.

In addition, the **Odyssey** tool has been developed and implemented to streamline the management and monitoring of qualitative objectives across the Group's business units. The tool provides indicators to assess performance in fulfilling quality and integrity targets, and also includes metrics for new goals related to innovation, digitalisation, and sustainability. Tracking these indicators strengthens transparency and ensures meaningful progress for the Group in these key areas.







INNOVATION PILLARS IN PROJECTS

TYPSA has a long-standing track record in the development of research, development, and innovation projects applied to our core activities, coordinated by the **R&D+i Management Committee**. Our management system encourages us to innovate today to enhance the efficiency, sustainability, and quality of our projects for a better tomorrow. This activity is reflected in the following indicators:

Innovation
as the core of our activity

62

self-financed ongoing innovation projects

23

completed projects

19

new projects approved

5

innovation awarded projects

2.3

million euros invested in 2024 With three strategic pillars we bring value in our consulting, engineering and architectural services.

1. ADVANCED COMPUTING TECHNOLOGIES IN BUILDING AND INFRASTRUCTURE PROJECTS

We generate unique and highly relevant knowledge to face the most ambitious global challenges. The following developments stand out:

- PYTHAGORAS: platform for standardising, organising knowledge and ensuring the quality of calculations for the design of structures.
- ACOM-SR-2: new processes for model construction and geotechnical calculation using the PLAXIS software.
- **ESTRATYCAD:** platform for the management of geological and geotechnical information in 3D from borehole logs, trial pits and testing.
- FLOATYP-WAVE y FLOATYP-WIND: expansion of capacities for the design of installations for the use of wave energy, development of computational fluid dynamics (CFD) models and design of floating platforms.



PVGRAd 2.0: development of the Kairos module, which incorporates a climate database with predictions on climate change scenarios, calibrated using fuzzy logic and developed in collaboration with the Universidad Politécnica de Valencia.

The TYPSA group has obtained a second patent in the USA associated with its **PVGRAD** platform for optimising the design and production of energy in large-scale photovoltaic plants. The new invention is implemented via new marching algorithms to find the optimal preferred solution in photovoltaic plants on undulating terrain.

BIM-TUNEL: improvement of the modelling resolution of underground work, taking advantage of past experiences in order to define more efficient methodologies.

2. DIGITAL SOLUTIONS FOR IMPROVING TECHNICAL CAPABILITIES

We develop useful tools for our business, which allow our teams to work more efficiently.

- SERAPIS: improvement of collaboration capabilities and the management of BIM knowledge.
- GIO: rebranding of the TYPSA-BIM-PM platform and updated with the assisted preparation of reports with generative AI.

3. INDUCED INNOVATION

We also innovate to provide imaginative, cutting-edge technological solutions that meet the needs of our clients. Some examples of this innovation to address specific project challenges are:

- HSB-24: solving complex problems in the design of high-speed railway lines.
 - Advanced numerical modelling in 2D and 3D.
 - Risk assessment and assessment in railway installations.
 - Design projection considering the maintenance of the railway system during the works.
- **SURFPARK-24:** advanced designs for recreational wave parks.
 - Innovative design for waterproofing the lagoon using a multilayer system, resistant to deformation of the terrain in the face of dynamic wave loads.
 - Generation of complex surfaces using specialised software.
- TYPSA-WPSP-24-2: advanced designs for the deployment of offshore renewable energy.
 - Gravity foundation design for next-generation high-power wind turbines.
 - Methodologies for the analysis of detailed laboratory test results for the correct estimation of loads under metocean conditions.
 - Complex 3D geotechnical models for analysing the behaviour of foundations in areas with variable geology with the presence of rock outcrops.

Contribution to the SDGs



TYPSA contributes to Sustainable Development Goals (SDGs) through its policies and management systems, its business areas, and the TYPSA 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 SDG'S AND MAIN ACHIEVEMENTS





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

OUR COMMITMENT

Promote technical education in developing countries.

ACHIEVEMENTS

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

- Progressive increase in the number of scholarships granted in the civil engineering and agronomy faculties.
- Preparation of the UNILAC master plan and the design of the Aula Magna, which will enable academic events that are currently held outdoors to take place indoors.
- Continuation of premiums for teachers residing in Mahagi to ensure their permanence in UNILAC and an increase in the level of teaching.
- Continuation of the European mobility programme of the Universidad Politécnica de Madrid (UPM) for students and teachers of UNILAC (Erasmus+).
- Submission of a proposal to the EU "Capacity Building" programme to strengthen UNILAC's management capabilities and quality assurance system, in consortium with UPM and two other African universities.



UNILAC campus



Teachers' residence at UNILAC

UNILAC University, Mahagi (DRC)	2020-2021	2021-2022	2022-2023	2023-2024
Enrolled students	368	416	477	525
Scholarships awarded through the Foundation	163	176	213	231



SDG 6 - CLEAN WATER AND SANITATION

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

TYPSA has continued its efforts in **digitalisation** to support public administrations in improving efficiency in the management and in the life cycle analysis of water infrastructures. The most important technological commitment is the expanded use of BIM and GIS tools, with a focus on open source tools.

The design capabilities of hydraulic models of urban wastewater networks have experienced significant improvements. Thanks to the use of Infoworks ICM software, which allows a detailed and accurate simulation, and access to longterm historical rainfall data, we are now building models that reflect reality with great fidelity.

Given the size of the models, the Group has incorporated specialised supercomputing equipment, which allows the handling of large amounts of data and complex calculations very quickly. This high-performance equipment improves detail and reduces simulation and calculation times, allowing engineers to obtain more accurate results in less time. Furthermore, the ability to process data at high speed makes it easier to implement advanced and sophisticated algorithms that would be unfeasible with conventional computers. This approach is transforming the way complex research is conducted, optimising resources and improving overall efficiency in solving scientific and technical problems for water and sanitation.

Teams	2021	2022	2023	2024
People trained in BIM in the water sector	48	57	63	70
People specialised in the management of dam safety and breakage risk analysis projects	23	40	38	54



SDG 7 - AFFORDABLE AND CLEAN ENERGY

OUR COMMITMENT

Back renewable and clean energy as energy generation business lines.

ACHIEVEMENTS

TYPSA continues to focus on improving 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. This year, a global climate database has been integrated with forecasts up to the year 2100 calibrated with fuzzy logic developed by the Universidad Politécnica de Valencia. This tool, internally called Kairos, a separate interface to PVGRAD, allows access and calibration of climate data, providing more accurate estimates.

In the area of offshore installations, we highlight the FLOATYP-WAVE innovation project, where the design of the first wave energy prototype installed on the Mediterranean coast in Spain through Computational Fluid Dynamic (CFD) modelling has been completed. The prototype not only aims to harness wave energy, but also to provide crucial data for future developments in sustainable marine technology. The successful implementation of this system can open up new opportunities to generate clean energy and contribute to the global goal of reducing dependence on fossil fuels.

In addition, TYPSA is strengthening its knowledge and capabilities in **battery storage**, as it is a system that hybridises with intermittent renewable generation sources, improves grid stability and contributes to the sustainability of the energy mix.





Installation of the wave energy device at the Port of Valencia

Renewable energy activity	2021	2022	2023	2024
Renewables innovation projects	10	7	7	11
Renewable energy we design and install (in MW)	21,757	44,195	48,503	52,240



SDG 8 - DECENT WORK AND ECONOMIC GROWTH

OUR COMMITMENT

Ensure respect for human rights, ethical business behaviour, integrity, health and safety, and equality, diversity and inclusion in TYPSA and its supply chain.





ACHIEVEMENTS

TYPSA continues to advance in the analysis, management and mitigation of risks associated with its activity and that of its subcontractors. In particular, the following improvements to its Occupational Health and Safety System:

- Carrying out the psychosocial assessment using the F-psico 4.0 methodology for TYPSA in Spain, carried out by specialised technicians from Quirón Prevención.
- Health and safety training, to adapt to new technologies, such as the use of drones in tasks that can offer a preventive advantage by avoiding or reducing workers' exposure to certain risks.
- Review of the safety and health risk assessments of the company's workplaces and adoption of the corresponding prevention and control measures.
- Modification of the functions and responsibilities procedure, including the figures of regional health and safety managers and the coordinators of Occupational Health and Safety and ISO 45001.

Follow-up on certifications	2021	2022	2023	2024
Group companies certified to ISO 45001 standards	9	11	12	12*

^{*} Renewal of the ISO standard 45001:2018, and expansion of scope, incorporating the Regional Office in the Canary Islands



SDG 9 - INDUSTRY, INNOVATION AND INFRASTRUCTURE

OUR COMMITMENT

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

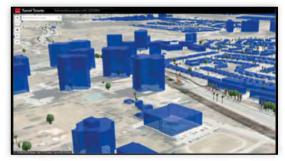
ACHIEVEMENTS

In 2024, TYPSA Digital Solutions (TDS) was created, a subsidiary dedicated entirely to technological services to drive the Group's digital transformation, such as developing tools to facilitate decision-making, optimise internal processes and maximise the profitability of projects. TDS also acts as a provider of digital services specialising in architecture, engineering and construction for clients outside the Group. Four key areas of development have been defined, related to the application of BIM and digital twins, software development and data governance.

With more than 60 experts, TDS is positioning itself as a key player in the digital transformation of the sector, positively impacting the efficiency and quality of TYPSA projects, while expanding to new markets.

The TYPSA R&D+i Committee counts on the capabilities of TDS to develop technological solutions applied to priority innovation projects. This close collaboration allows us to progress with agility incorporating new technologies to be more efficient and competitive.





Innovation projects	2021	2022	2023	2024
New R&D projects approved	17	16	13	19
Innovation projects completed	23	47	139	179



SDG 11 - SUSTAINABLE CITIES AND COMMUNITIES

OUR COMMITMENT

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





ACHIEVEMENTS

After the flooding in Valencia in October 2024, TYPSA has strengthened measures and capacities in emergency management and climate disaster prevention in urban areas, including:

- Early office evacuation and teleworking protocol.
- Fundraising through the TYPSA Foundation to help those affected.
- System for delivering cleaning supplies from the nearest offices.
- Collaboration with public infrastructure bodies for emergency contracts in critical infrastructures.

Furthermore, TYPSA is developing a collaborative application based on the experience gained from the management of information during this crisis, which can be exported to other cities. GEOdana relies on crowdsourcing and crowd reporting tools for the massive collection of geospatial data through citizen participation, in order to improve understanding of the phenomenon, accelerate emergency response and promote more resilient communities.

Likewise, we continue to contribute to the deployment of Sustainable Urban Drainage Systems (SUDS), through the Group company Green Blue Management (GBM). The first green infrastructure and sustainable drainage plan for a municipality in Spain has been presented, and the GIS tool has been improved for the selection of optimal sites for the implementation of SUDS. We have also been involved in research projects to increase knowledge about SUDS runoff treatment capacity in dense urban environments

Sustainable urban infrastructure improvement capabilities	2021	2022	2023	2024
Sustainable city and infrastructure R&D projects	16	17	17	21
People working exclusively on SUDS	7	8	8	8



SDG 12 - RESPONSIBLE CONSUMPTION AND PRODUCTION

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

The efficient management and maintenance of infrastructures is increasingly requiring attention from public administrations. We continue to focus on the capture of structural and geotechnical behaviour data in real time, the application of analysis tools and support for strategic decision making for operation and maintenance. Thanks to this, we help investors and infrastructure managers to anticipate future needs, prioritise investments, optimise available resources, increase service availability and quality, and extend useful life. On the other hand, IoT technology, predictive models based on artificial intelligence and the creation of digital twins make it possible to anticipate structural failures, optimise maintenance and ensure operational continuity. In addition, cybersecurity is of key importance by protecting critical systems from possible attacks, reducing risks that could paralyse essential services.

In the area of construction site management, TYPSA has reinforced the **GIO tool**, which captures images through mobile devices without the need for an internet connection, synchronises and organises large volumes of documents, analyses data, generates reports and supports decision-making on site. This year, GIO has introduced new functionalities, including the addition of complete reports of completions and non-conformities, as well as advanced queries for quality, environmental and health and safety inspections.



TYPSA participation at the Digital Twins seminar



Infrastructure damage analysis	2021	2022	2023	2024
R&D projects in IoT and sensorisation	2	3	3	5
Number of monitored critical structures	10	10	40	45



SDG 13 - CLIMATE ACTION

OUR COMMITMENT

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





TYPSA participates at the I Sustainable and Resilient Roads

ACHIEVEMENTS

Continuing with TYPSA's Sustainability Action Plan, in 2024, progress was made in integrating sustainability concepts across various disciplines within the TYPSA Group. Particular progress has been made in the following ways:

- Specific sustainability working groups have been established for different disciplines, both internal and externally.
- Participation in sustainability areas at conferences and seminars.
- Development of innovation projects to incorporate new tools and procedures, facilitating decision-making and incorporating sustainability criteria from an early stage.
- Sustainability objectives to be established at the beginning of each year for global, technical and transversal management areas, and reviewed throughout the year.

In addition to integrating climate change considerations into its own projects, the TYPSA Group also offers climate change consulting services to private clients worldwide, thereby supporting the achievement of SDG 13 on climate action.

Specialised technical training courses	2021	2022	2023	2024
People with professional sustainability qualifications (Envision, LEED, Breeam, etc.)	6	46	49	52



SDG 16 - PEACE, JUSTICE AND STRONG INSTITUTIONS

OUR COMMITMENT

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

ACHIEVEMENTS

TYPSA's commitment to integrity and anti-corruption was further strengthened in 2024 through the following measures:

- Adhesion of the Spanish subsidiary MC2 to TYPSA's Integrity Management System.
- Certification of the Chile Branch under ISO 37001 Anti-Bribery Management System.
- Extension of the integrity self-assessment tool to the Spanish subsidiary MC2 and the branches in Peru and Chile.
- Conflict of interest declarations signed by executives of all TYPSA Group entities.





The Compliance Committee visit the TYPSA office in Chile

Average anti-corruption system self-assessment score (in % correct answers)	2021	2022	2023	2024
Assessment for directors	90.1 %	92.6 %	93.0 %	93.0 %
Assessment for staff	90.6 %	95.8 %	88.6 %	88.9 %

Featured activity

Road design and supervision

Road design and supervision involves the planning, design, construction, and subsequent maintenance of these roads, to ensure safety, efficiency, and durability. This has been one of the main activities of the Group's companies from the beginning.

In the USA, we carried out the detailed design for the expansion and improvement of the SR303L road between Avenue 51 and the I-17 highway, in Phoenix, remodelling and upgrading to a full freeway configuration, together with the design of a new multi-level interchange; the design and engineering support services during the construction of new roadway in the industrial area surrounding Chandler Airport in Arizona; and detailed design services to upgrade and widen the I-10 highway in Tucson, between Kino Blvd. and Country Club Drive, including the remodelling of the interchanges between these roads and the connection with State Route 210. Additionally, we have completed the design for the renovation and improvement of the junction between the I-10 highway and the SR-143 in Phoenix, which is now operational.



Intersection I-10 and SR-143 (Broadway bend), Phoenix, Arizona, USA

In the Dominican Republic, we carried out the preliminary design and preparation of tendering documentation for the improvement of a 19 km stretch of the Juan Pablo Duarte highway, and the construction of the new 68 km San Pedro-Miches road, financed by the Central American Bank for Economic Integration (CABEI).

In Brasil, feasibility studies together with functional, preliminary, and detailed designs are being carried out for the new connecting road between Planalto Paulista and Baixada Santista, in the metropolitan region of São Paulo. The new highway will increase the capacity of the mountain stretch of the Sistema Anchieta-Imigrantes, which connects Gran São Paulo with the southern coast of the State and the Port of Santos. Also in Brasil, we are involved in the detailed design for the improvement of several roads in the state of Paraná, with a total length of 605 km.



Planalto Paulista and Baixada Santista junction, São Paulo, Brazil

In Chile, we provided tender support services for the Route 5 highway concession to improve the 223 km section Santiago-Los Vilos; and for the Route 68 concession for capacity increase on the 140 km long section Santiago-Valparaíso-Viña del Mar.

In Saudi Arabia, the preliminary design has been carried out for the D-22 road in the Trojena region, NEOM. The 6.5 km long dual carriageway will provide safe and improved access to the region and to the different areas currently under construction.

In India, we are responsible for the comprehensive project management, construction and operation of two twin tunnels connecting the Eastern Express highway and the Western Express highway in Mumbay, with a total length of 13.3 km.



Juan Pablo Duarte highway, Dominican Republic

In Portugal, we are involved in various detailed designs such as the connection between the IC-35 in Sever do Vouga and the IP-5, district of Aveiro. The 11 km long stretch includes four junctions with the existing road network, two bridges, with lengths of 900 m and 450 m, and a 390 m long tunnel. We are also involved in the Estremoz bypass, on the IP-2 road in the Évora district; and the access to the new bridge over the Ribeira Grande, in Fronteira, Portalegre district.



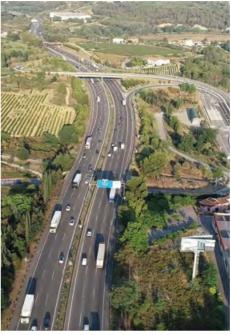
Current state of the A42, prior to the three-lane extension

In **Spain**, we carried out preliminary and detailed design for the widening of a 24 km stretch between the Matorell and Vilafranca Centro intersections of the AP-7 motorway in Barcelona; for the remodelling of the junction between the AP-7 and the A-7 roads in Torreguadiaro, Cadiz; the Fuenmayor bypass on the N-232 road, in La Rioja; the Rekalde bypass, in Bilbao; the A-42 motorway expansion on the section between the Parla Norte and Casarrubuelos intersections, Madrid; the widening of the B-10 motorway, Ronda Litoral, Barcelona; and for the widening of the CV-60 road between Castelló de Rugat and Terrateig, Valencia. Additionally, we drew up the preliminary studies for the Algeciras outer ring road on the A-7 motorway in Cadiz, and for the conditioning of the C-28 road in Sorpe (Alt Àneu), Lleida.

In the area of **road supervision**, we carried out in **Norway**, the quality inspection of structures and the main road to connect Sotra Island with Bergen, with a new 9.4 km stretch, 24 km of access roads, a 900 m suspension bridge, 22 bridges and viaducts, and four twin-tube tunnels; in Paraguay, the construction supervision of Route PY21 road surface and maintenance works on a 33 km stretch that connects Route PY7 with Puerto Indio, on the Parana River; in Guatemala, we have completed the upgrade for the Escuintla – Puerto Quetzal motorway on a 40 km section; and in Tanzania, the design review and construction supervision of the upgrade of the Lusahunga to Rusumo road on a 92 km section of the central corridor of the country.

In **Spain**, we provided Health and Safety advisory and coordination services for National Highways Authority works, in Murcia, and for the works to take the A-5 motorway underground, between Padre Piquer Avenue and Batán, in Madrid.

Futhermore, TYPSA provides **support services to institutions**, in expansion, conservation and upgrade programmes for the transport networks, and the adaptation and rehabilitation of infrastructures.



AP-7 motorway. Barcelona

In Paraguay, we are in charge of the implementation management of an upgrade and maintenance programme for paved routes, encompassing various works along 146 km, contracted based on service levels, with financing from the Development Bank of Latin America; and in the Chad Republic, we are providing support services for the management of construction contracts and supervision of the N'Djamena-Moundou-Koutéré road corridor. These are rehabilitation and maintenance contracts, with an obligation for results, of a 579 km stretch, including resettlement action plans, environmental management, and reinforcement of the technical skills of the beneficiary, financed by the European Investment Bank.



Yamena-Moundou-Koutéré road, Chad Republic

Infrastructure operation and maintenance management

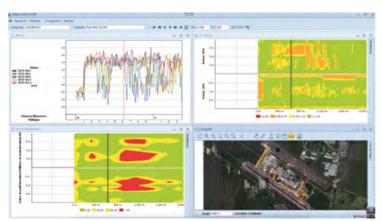
The management and maintenance of infrastructure are crucial for its safety, efficiency, and sustainability, playing a decisive role in its durability, cost reduction, regulatory compliance, and ultimately in economic, social, and environmental development, as well as in the quality of life of citizens. The TYPSA Group, through its specialised subsidiaries, is involved in this activity across different types of infrastructure, contributing expertise, experience, and the integration of advanced technologies.

In the field of road infrastructure, we are experts in pavement survey techniques and in the development of expert management systems, primarily based on our knowledge of testing methods and on the ÍCARO system, our own inhouse development. This system is customised in each case, according to the specific needs of each client.

In Mexico, we carried out the road network information system management in the state of Aguascalientes, with the implementation of the ICARO system on a 1,200 km section; and the assessment of service level indicators in the Mexiquense Outer Circuit, a 118 km long ring road in the metropolitan area of Mexico City.



ICARO system. Implemented across the road network belonging to the Mexican General Secretariat of Transport. 45,000 km



DÉDALO system in ASUR, Airport Group managing 9 airports in Mexico

In Chile, road asset management and maintenance systems for the 18,000 km long National Road Network are being developed, with the implementation of a new information system to replace the current ones; also being carried out is the study and update of methodologies for the control and management of the paved and unpaved road conditions in the country's road network; and the study on updating traffic measurement points and their allocation on the road network to obtain a much more reliable database for use in the modelling process.

In **Uruguay**, we are implementing the road asset management system for the 9,000 km national road network, integrating them into the ICARO management system, and customising according to specific needs. This is also being carried in Peru for the non-concessioned national road network; and in Brazil the ICARO Pavement Management System is being implemented in 7 road concessions, with a total of 4,000 km of roads, with asphalt and concrete surfaces.

In Spain, our involvement continues in the pavement survey programme on the State Road Network, which covers a total of 15,000 km, collecting surface characteristics of the pavement and incorporating into the ÍCARO-WEB management system; we are updating the Provincial Council of Bizkaia's 1,250 km long road network management system; and we are implementing a road management system for the 790 km long network of the Provincial Council of Girona. Additionally, we are carrying out the comprehensive management of the structures of the provincial roads of the historical territory of Bizkaia, including the inspection and instrumentation of structures and the development of a comprehensive bridge management application.

In the airport sector, the TYPSA Group also has its own system, developed in-house, for the management of pavements, DÉDALO, which we are using in Mexico for the 9 airports of the South-East Airport Group, and for 13 airports in the centre and north of the country, managed by the Central-Northern Airport Group, using high-performance equipment to ensure the safety of airport operations, as well as to aid in decisionmaking of the improvement, conservation, rehabilitation or extension works of the pavements.

In the rail sector, in Spain, we carried out the periodic inspection and management of geotechnical elements in the Euskal Trenbide Sarea railway network, to detect possible risks and identify the need for emergency actions; and in the port area, we provided support services in the implementation of the Port Maintenance and Conservation Plan at the Cartagena port, with 41 piers and breakwaters, and a total area of 200 ha.

Conservation, emergency, and road safety actions

Conservation, emergency actions, and safety are three interrelated concepts focused on ensuring the functionality of infrastructure, keeping it in good condition, preventing its deterioration, and extending its lifespan.

In the USA, we provided engineering design services to rehabilitate approximately 3.5 miles of streets within and adjacent to the Wagon Wheel neighbourhood in Southern Orange County, California; the pavement rehabilitation on the US Route 60 highway, in Globe, and the State Business 40 highway, in Flagstaff, both in Arizona, which include improvements in drainage, signage, guardrails, and accessibility, and have an impact on heritage and culture; and the planning studies for interventions on four bridges in Yavapai County, Arizona, assessing the strengthening, widening or replacement, within the historic context of the bridges, and the extensive environmental compliance efforts, hydraulic modelling, and alternative roadway alignments.

In Saudi Arabia, we carried out the conceptual and detailed design for the repair and upgrade of the 55 North highway in the NEOM mountainous region, including the repair or replacement of 31 bridges with structural deficiencies, and improvements in the level of road safety and service of 112 km of dual carriageway; and the design and support in tendering documentation to adapt road safety elements in the accesses to the new city for entertainment, sports and culture of Qiddiya.



Road maintenance work in Portugal

In **Portugal**, we prepared the road safety study on the EN-14 road, in Porto, in terms of its geometry, drainage, pavement, signage and road safety equipment, and the accident rates of the last 5 years.

In **Spain**, we provided the detailed design for several sections of the Aragonese Autonomous Road Network, including surface pavement renovation, structural rehabilitation, comprehensive conditioning, and operational support; the design for surface and structural rehabilitation, capacity increase and road safety improvements for the Murcia National Highways Authority;

the sesign and construction supervision of emergency works due to landslides at the exit of tunnel 62 of the León-La Coruña railway line, with a false tunnel to extend the existing one; construction management and supervision of waterproofing, land consolidation and repair on Madrid Metro Line 7B, between the stations of Hospital del Henares and San Fernando; and health and safety coordination services during the maintenance and upgrade of Adif´s railway lines on the conventional network and the metric gauge network, covering 3,850 km of track in the east-northwest area.



Pavement renovation in the Aragon Regional Network, Spain

Due to the mayor flooding in the Valencia Region in October, TYPSA carried out numerous interventions related to damaged or destroyed infrastructure. These include road networks (viaducts on the A-7, local and regional roads), and railways (Metrovalencia 's South Valencia rail complex), port facilities (Cullera port), hydraulic infrastructures (Bueso dam), sanitation systems (Pinedo system), restoration of public water supply (Castellón and Teruel provinces), and even the removal of solid waste, bulky items, and vegetation debris from the Albufera lake and canals.



A-7 road. Rehabilitation of infrastructures affected by the Valencia floods

Strategic infrastructure consulting

Advising governments, developers and financiers in decision-making for projects involving large-scale financing operations, long-term contracts and schemes with private sector participation, is increasingly becoming a central activity for the Group's companies.

In Spain, TYPSA provides services as independent technical advisor to several financial entities in six of the eleven concessions of the Extraordinary Road Plan of Aragon, which is being developed through public-private collaboration schemes, carrying out technical analysis of the projects, reviewing investment and maintenance estimates, and identifying and assessing technical risks. In the Valencia Community, we are advising on the financing process of a concession for a new fleet of 125 electric buses for regional passenger transport, including technical due diligence for the acquisition and operation of the fleet, associated risk analysis, and the monitoring of compliance with the contractual obligations.

In Indonesia, TYPSA has carried out for the Jakarta Metro (MRT) a comparative analysis of international best practices in urban rail transport systems to identify reference models for financing, investment and operating costs, and asset management models, including recommendations for the network's expansion.



Yakarta Metro

In Africa, the Group companies provided support services to the European Commission for the improvement of planning, financing, maintenance and sustainability of road transport on the continent, incorporating climate resilience, management and financing practices for the road asset network, strengthening coverage in rural areas, as well as training and training of African institutions. In Uganda, we were engaged in the audit of the improvement and rehabilitation works on 105 km of the Moyo-Yumbe-Koboko road, for the Uganda National Roads Agency, including the management of timelines, financing, and quality assurance, and also social and environmental problems.

In Panama, we managed the Public-Private Partnership (PPP) contract for the rehabilitation, improvement, and maintenance of the 246 km long East Pan American Highway, including the review, verification, and analysis of the technical, legal, and financial aspects of the contract, carried out using performance indicators.



East Panamerican Road, Panama

In **Ecuador**, we were the independent technical consultants for the IDB, reviewing the design of a new private hospital, assessing its technical feasibility, regulatory compliance, and the risks associated with the construction and operation phases.



Infographic of a new hospital in Ecuador



Moyo-Yumbe-Koboko road, Uganda

Sustainable mobility

The companies of the TYPSA Group support and participate in policies and strategies aimed at achieving sustainable urban mobility, providing citizens with access to clean, energy efficient public transport optimised by the use of technology.

In **Brazil**, we provided support services and environmental supervision for the Santo André Sustainable Urban Mobility Plan in the Metropolitan Region of São Paulo, which involves the study of new transport modes and corridors for a population of approximately 700,000 inhabitants.

In the **USA**, we embarked on the second phase of the detailed design for the Metro G-Line Busway improvement works in the San Fernando Valley, in Los Angeles. The line is 29 km long and the scope includes the design of two overpasses, two aerial stations and the future conversion to a light rail transit system.



Overpass with elevated station on the BRT line G, Los Ángeles, USA

In **Türkiye**, we have prepared the Sustainable Urban Mobility Plan in the city of Trabzon, home to a population of 300,000. The Plan included the diagnosis of the current situation, the analysis of alternatives and an action plan to guarantee the technical, economic, environmental and social sustainability of the city. We have also planned and developed a series of intermodal corridors to transfer freight from road to rail, favouring and encouraging intermodality.



City of Trabzon, Türkiye

In Ireland, we have carried out the preliminary design for the implementation of the new bus corridors and active travel in the city of Cork, integrating 18 km of bus lanes and cycle tracks, along three corridors in the metropolitan area of the city.

In **Spain**, we led the strategic planning study of the Spanish nodes of the trans-European transport network (TEN-T), including the characterisation, definition of functional areas and proposal of coordination and optimisation models. We also carried out the study of intermodal transport terminals in Catalonia, analysing locations and making proposals for the development of four of them.





Pedestrian and cycle bridge over the Bilbao estuary, Bizkaia

In Bizkaia, we have signed a framework agreement with the Bilbao city council for the provision of support services in municipal mobility infrastructures, and we carried out the construction supervision of the works on the pedestrian and cycle bridge over the Bilbao estuary, between Barakaldo and Erandio, which opens to allow large boats through, and which is completed with the extension of the Altzaga park.

The Metropolitan Transport/Sustainable Mobility Plans for Córdoba and the Bay of Cádiz are currently being developed. In the Córdoba area, they are complemented by a study on the electrification of metropolitan buses.

Rail design and construction supervision

In Europe, TYPSA continues to play an outstanding role in the development of the HS2 high-speed project, which will link London with the main cities in the north-west of the United Kingdom and will connect the country with the continent. Following participation in the tunnel sections leaving London, TYPSA is working on different sections between London and Birmingham, providing design and construction engineering support services.



Reconfiguration of the B441 road with the building of the Kineton bridge to integrate the HS2 rail infrastructure

In Portugal, we are in charge of the detailed design of the Pocinho-Barca d'Alva railway section renovation, part of the Douro line. The 27 km long electrified double track has 4 stations, 2 tunnels and 4 bridges. We are also working on the technical and environmental feasibility study of the new Vale do Sousa railway line, a new section that will connect the Douro



Duero line. Pocinho-Barca d'Alva section, Portugal



New Vale do Sousa railway line, Portugal

line with the city of Felgueiras, with an approximate length of 37 km and 8 stations, together with the modernisation of the North Line between Braço de Prata and Sacavém, and between Ovar, Espinho and Gaia.

In Ireland, we have prepared the design for the DART+South West Line on the Dublin commuter network, to upgrade and extend 20 km of electrified track serving the suburban area out to Kildare. We are also preparing the preliminary design and providing support in the administrative approval of the Cork commuter rail network improvement project. Over 60 km of rail network on the Mallow-Cork, Cork-Middleton and Cork-Cobh lines, are upgraded, with trains powered exclusively by batteries. The scope includes 8 stations, depots, and a maintenance workshop.



Station design for the Cork regional rail network, Ireland

In Sweden, we worked on the preliminary design for capacitybuilding infrastructure for the Norge-Vänerbanan line between Öxnered and Göteborg in Älvängen, which includes a new holding and turnaround track, and signage renewal.

In Norway, collaboration is underway with the Norwegian rail network authorities on the works at Moss station, part of the Sandbukta-Moss-Såstad project.

In **Canada**, we provided specialised advice on the reinforcement of the railway slab in Union Station, Toronto. The slab, almost a century old, supports the current commuter and freight rail traffic, and a dynamic study has been carried out that will allow adaptations to future traffic, increasing the speed of trains and the level of service of the city's commuter network, the most congested in the country.

In the **USA**, we are involved in the detailed design of the track superstructure and catenary for the high-speed rail line connecting Merced and Bakersfield, California. The 171-mile section is part of the first high-speed rail system in the country, connecting the main towns of California.



Work on the first high-speed rail line in California, USA

In **India**, we carried out the construction supervision of the works on the Digras-Palshi section on the Yavatmal-Nanded line in Maharashtra State, including construction management of the 68 km section of infrastructure and superstructure.

In **Africa**, we carried out the design review, construction supervision and project management of the works on the railway line from Tabora to Kigoma, in Tanzania. The section is 506 km long, with standard width electrified track, and will be constructed in the design-build modality.



Work at Moss station, Norway. Image: © Bane Nor

In **Spain**, we are drafting the preliminary and detailed design for the 23 km Piérnigas-Pancorbo high-speed section, which is part of the connection between Burgos and Vitoria-Gasteiz; the preliminary study of the Antequera-Granada-Almeria railway section, with standard gauge and part of the Mediterranean Corridor; the design of the traction substations and associated autotransformation centres for the electrification of the Teruel-Sagunto railway line, in the Cantabrian-Mediterranean corridor; and the preliminary design of a mobile railway bridge for access to the Port of Seville container terminal and rail yard.

In the field of railway construction supervision, we were involved in the integration of high speed railway infrastructure in Valencia, a fundamental milestone in the development of the Mediterranean Corridor, taking the railway accesses to the Joaquín Sorolla and Valencia Nord stations underground; and construction supervision of the works of the intermodal and logistics terminal of Valencia-Fuente San Luis; and the construction management and environmental support services for the intermodal platform in the Parc Sagunt II logistics area, in Sagunto.

In Barcelona, we carried out the renovation works of the Montcada Bifurcación railway station, reorganising tracks and platforms at the station, together with a parking area to the north, to house the regional trains coming from the Francia station; and the completion and commissioning of the new rail access to terminals T1 and T2 at Barcelona Airport.

In Palencia, we have commenced construction supervision of the rail track duplication work and detailed design for the electrification of the Las Arenas-Vilecha stretch, part of the north-northwest high-speed corridor, Palencia, which includes the duplication of 41.5 km of track.

In the Basque Country, we continue supervising the Altzola railway bypass works on the Bilbao-Donostia line, involving a double-track tunnel; as well as the new railway station at Usurbil, Gipuzkoa, with a new building over the tracks; and the new passenger building at Irún station, Gipuzkoa, also built over the existing tracks.

Other supervisory activities include the comprehensive renovation of the section between Guillarei station, Pontevedra, and the Portuguese border; and that of the new railway viaduct over the River Ebro on the 700 m long high-speed section between Castejón and the Pamplona Region, with pre-stressed concrete box girders, constructed using a combination of in situ methods and successive cantilevers.

Metropolitan systems

In Sweden, TYPSA continues to provide support services on the extension of the Stockholm Metro Blue Line and this year has begun construction management and supervision of the works of the 11 km stretch from Kunstragarden to Nacka and Söderort, with 7 new stations, including mechanical and electrical installations, and complete railway systems. TYPSA is also designing the ventilation and fire safety systems on the Akalla-Barkabay section; and detailed design and support services have commenced for the tender and construction of the new yellow line between Fridhemsplan and Älvsjö, with an 8 km long twin-tube tunnel using TBM, and three stations excavated in deep caverns.

In the United Arab Emirates, we are carrying out the design review and update for the 10 km long light rail line 1 project in Abu Dhabi, including the review of LRT technology, updating the preliminary design and preparing documents for the tender.

In Brazil, we have drafted the preliminary design for the duplication of the Metropolitan train line 7 (Ruby) in São Paulo, consisting of a 56 km stretch between the stations of Barra Funda and Jundiaí which divides to separate freight traffic from that of passengers; and we carried out the supervision and quality control of the extension of the 3.3 km long São Paulo metro line 4 (yellow), which includes the new stations of Vila Sônia and Largo do Taboão.

In the USA, we are carrying out the detailed design for the extension of the light rail transit in Phoenix, Arizona. The 1.4 mile (2.3 km) long extension, from downtown Phoenix towards the west, is part of the Valley Metro Railway System.



Phoenix light metro, Arizona, USA

In Mexico, we supervised the detailed design, execution of the works, equipment and commissioning of line 4 of the metropolitan area of Guadalajara, state of Jalisco, with a length of 21 km and 8 stations.



Work at El Cuervo station and access to the elevated roundabout. Guadalajara Metro, Mexico

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



Los Alcarrizos station. Santo Domingo metro line 2C, Dominican Republic

In Canada, we carried out the detailed design and construction supervision for the tunnels in the Eglinton Crosstown West Extension in Toronto, with a 6.3 km long twin tunnel, including the tunnel boring machine launch and extraction shafts, and the cross passages between tunnels. We were also involved in the detailed design and construction supervision of the elevated viaduct, which, with a length 1.5 km, is the elevated continuation of the twin tunnel.

In Australia, we continue support services for the tunnel works and the five-station excavation sites on the 11 km long twin tube section between The Bays and Sydney Olympic Park, on the Sydney Metro West Line.

In **India**, TYPSA leads the consortium for the general consultancy of the comprehensive detailed design and construction management of the metro networks of the cities of Kanpur, with two lines of 32 km in total and 30 stations; and Agra, with two lines, 29 km total length and 27 stations. In the latter, the first 7 km long stretch between Jama Masjid and Taj East Gate was successfully inaugurated with 6 stations, 3 underground and 3 elevated.



Agra Metro, India

In **Spain**, TYPSA is carrying out the construction management and supervision of the extension of the Madrid metro line 11 between Plaza Elíptica and Conde de Casal, passing under the M30 and the River Manzanares, with two new stations and another three stations interconnecting with metro lines 1, 3 and 6, surburban railway and AVE high-speed train tracks; the construction management and supervision of the Barcelona metro line 8 extension, between the stations Plaça d'Espanya and Gràcia, carried out with an EPB tunnelling machine and with three new stations excavated in deep caverns, including the inspection of possible damage to nearby homes. At the Gràcia station, which acts as an interchange with the Vallés line, we carried out the architectural and MEP design; and



Works on Bilbao metro line 5. Galdakao-Hospital section



Works for the extension of Malaga metro line 2, Spain

on the Bilbao metro, construction supervision of the works on line 5, Galdakao-Hospital section, including the execution of the Hospital station and its three access ramps, and three lines under the River Nervión.

We are also carrying out the construction management and supervision of the renovation of the signage and automatic train protection systems on the single-track sections of lines 1 and 2 of the Metrovalencia network; the construction supervision of the Málaga Metro line 2 extension, Guadalmedina-Hilera section, through 700 m of false tunnel, with an underground station at Hilera and the redevelopment of the affected area; and the comprehensive project and construction management of the completion of the tramway system to Alcalá de Guadaíra, in Seville, including railway systems, electrification, architecture and MEP systems, workshops and garages, manufacturing and supply of mobile equipment, and supervision of the commissioning.

Airport expansion and modernisation

The expansion of airport infrastructure in Saudi Arabia is undergoing significant developments and TYPSA is playing an important role is such progress. King Khalid International Airport in Riyadh one of the largest in the world, is currently experiencing substantial expansion efforts aimed at reaching a capacity of 70 million passengers per year. TYPSA continues to support Rivadh Airports Company in the preparation of analysis, preliminary and detailed design, and tender documentation, for both the construction and modernisation of terminal buildings, and the expansion of airfields.



King Khalid International Airport. Riyadh, Saudi Arabia

Additionally, TYPSA has updated the master plans for King Fahd International Airport in the region of Dammam, Al Ahsa Airport in Al Hofuf, and Al Qaisumah Airport in Hafar Al Batin.



King Fahd International Airport. Riyadh, Saudi Arabia

TYPSA is also involved in the expansion and modernisation of Medina airport, designing and implementing the new baggage handling system (BHS) for domestic and international flights, in terminals T1 and T2, in response to forecasted capacity increase from 9.5 to 18 million passengers per year in 2033. Airfield capacity evaluation and an update of the general airport planning have also been carried out.

In Brazil, comprehensive project management and supervision of the expansion and improvement of 11 airport complexes across the states of São Paulo, Mato Grosso do Sul, Pará and Minas Gerais is being carried out. A team of 100 people will be involved over a 5 year period, in the drafting of the terms of reference for the contracts, design review, and construction supervision.

In Chile, designs for improvement and modernisation of several existing airports are under way by TYPSA. These projects include updating passenger terminals and control towers, improving runways and taxiways, and developing surrounding areas. Notable projects include Mataveri 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 Araucania region. Plans for investment in new buildings and improved access at Pucon Airport are also anticipated in preparation for an upcoming concession.

In Peru, work continues in collaboration with Lima Airport (LAP) on renovation and improvement projects, within a framework agreement focused on activities within the airfield.



Framework Agreement with LAP. Jorge Chávez International Airport. Lima, Peru

Port infrastructure activities

Port infrastructure investment is part of the Group companies' activities, in the areas of planning, design and construction supervision, as well as in the study of the impact on the natural, economic and social environment.

In **Uruguay**, supervision of the expansion works at the Nueva Palmira port terminal for bulk liquid cargo, together with that of the expansion of the mineral operation facilities, is underway.

In **Brazil**, engineering services for maintenance and improvement works were provided for the breakwater pier of reinforced concrete caissons in the Port of Açu, state of Rio de Janeiro, and the detailed and functional design of the access roads to the Port of São Sebastião, state of São Paulo, with a 12-span 305 m long viaduct.

In **Peru**, we led the construction supervision at the multipurpose north terminal of El Callao port, in the bulk goods area, with 12 vertical silos, two continuous unloaders, a container storage yard and access for rolling cargo; and in Honduras, the detailed design of the elements necessary for the permanent and safe docking of a Floating Gas Storage Unit (FSU) in Puerto Cortés.



Port of Callao, Lima, Peru

In the **Democratic Republic of Congo**, we carried out the preliminary design for the development of the port of Kalundu, on Lake Tanganyika, to reorganise and modernise the port and its access, as well as the extension of the existing breakwater and pier...

In **Angola**, a study has been prepared that includes the development and improvement of the marine and land elements of a new multipurpose terminal in the port of Luanda, as well as a marina and a cruise terminal, along with the master plan of the land-side area. We also drafted the master plan for a military complex to accommodate new naval and educational facilities for the army.



Port of Palma de Mallorca, Mallorca, Spain

In **Spain**, we collaborated with the various port authorities in the different areas within their jurisdiction. In Cartagena, we have carried out the design and construction management of the new magnetic calibration station in Trincabotijas, where the new multi-influence signature acquisition systems for Navy vessels will be installed, as well as installing the submarine power and data cable for the sensors; the design of the Espalmador urban developments, with a floating dock, a breakwater dam, and a gantry crane for ship repair; and the construction supervision of a new 190 m long shelter dam. In Seville, the upgrade and adaptation of the Delicias dock for use by recreational vessels; and in Palma de Mallorca the works to improve access, surfaces, and road connections in the Poniente and Paraires docks for ferries and cruise ships.

In **Portugal**, we have developed the preliminary study and detailed design of the container inspection and control area (pre-gate) within the Port of Sines expansion, district of Setubal, together with the port accessibility study, both for rail and road, and the necessary maritime works.



Port of Sines, Portugal

Design, maintenance and conservation of dams

Design together with activities related to the exploitation and conservation of dams for supply, irrigation, mining or hydroelectric production, are a traditional part of the business of the TYPSA Group companies.

In the **Dominican Republic**, we carried out the design and analysis review, and the construction supervision of the Las Placetas hydroelectric project, consisting of three dams, a transfer tunnel between two of them, two loading tunnels and two engine houses, with a total installed capacity of 89.2 MW.

In Brazil, construction support services and complementary studies were provided for the heightening of the Itabirucu dam, in Itabira, state of Minas Gerais. The 85 m high compacted earth dam is used for the storage of mineral washing waste from the Conceição Mine; and the owner's engineering during the renovation and modernisation of the Ilha Solteira and Jupiá hydroelectric power plants, with the disassembly and assembly of 3+3 generating units. The Ilha Solteira plant has an installed capacity of 3,444 MW, being the largest in the state of São Paulo and the sixth largest in Brazil. The Jupiá plant has an installed capacity of 1,551 MW.



Juipá power plant, Brazil

In Honduras, we have conducted the feasibility study and prepared the preliminary design of a regulating dam in the lower basin of the River Choluteca. The basin is the largest in the Corredor Seco region, with a total area of 7,440 km². The works include a drinking water system, an irrigation system, flood control and channelling works.

In Chile, we carried out the feasibility study and preliminary design of La Chupalla dam in the Valparaíso region. The dam, constructed with loose materials and a concrete face, is 132 m high and 510 m long. The reservoir has a capacity of 56 hm³ and aims to address the drought that has been affecting the region for years.



Andevalo Reservoir, Hueva, Spain

In **Spain**, we were involved in the maintenance, conservation, operation and risk analysis of the dams Ojos, Mayes, Algeciras, Crevillente and Pedrera for the Tajo-Segura inter-basin water transfer, in Alicante and Murcia; and the reservoirs of La Fuensanta, Cenajo, Talave and Camarillas, in Albacete and Murcia, for the regulation of the water from the Tajo-Segura transfer; likewise, we carried out the operations, maintenance, and documentation updates for 7 dams in the Duero basin, providing technical support and advice in maintenance and conservation tasks, monitoring, inspection and surveillance, and construction control; as well as the maintenance and safety control services for the dams and associated facilities managed by the Catalan Water Agency; and the risk governance management, adaptation to climate change, and prioritisation of investments in security for state dams in the Duero basin.

The design for the upgrade of the bottom drainage of the Taibilla Canal, in Albacete, has been prepared, to restore discharge and regulatory functions, with a view to maintaining the ecological flow of the Taibilla River; and we carried out the construction supervision of the intake improvement works for the Andévalo reservoir, Huelva, which will allow for an additional 112 hm³ to be available for use during periods of scarcity. The infrastructure includes a pumping station and a 11km long pressure pipeline to supply of 1.4 m^3/s .

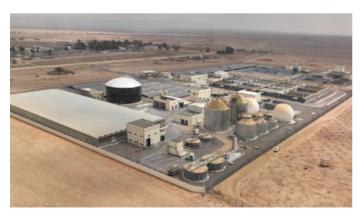
Water treatment and purification

In relation to **drinking water treatment and supply**, in **Saudi Arabia**, as part of the programme led by Saudi Water Partnership Company to ensure the supply of drinking water and the treatment of wastewater throughout the country, TYPSA has completed the supervision of the implementation of the Jubail 3B desalination plant, with a capacity of 570,000 m³/day, and of the Yanbu 4 plant, with a capacity of 450,000 m³/day. Construction supervision continues at the Shuaibah 3 desalination plant, and supervision has commenced at the Rabigh 4 plant, both with a production capacity of 600,000 m³/day and both located on the Red Sea coast. All using the same desalination technology through inverse osmosis, and under a PPP scheme.

In **Brazil**, Engecorps has drawn up the preliminary design of the wash water recovery system for filters, and sludge treatment and disposal, at the Casa Grande drinking water treatment plant, with a production capacity of 4 m³/s which provides drinking water to approximately one million inhabitants in the metropolitan area of São Paulo.

In **Spain**, we carried out the construction supervision of the repair works at the Bajo Almanzora desalination plant, Almeria, with reverse osmosis technology and a production capacity of 45,000 m³/day, which was temporarily decommissioned due to the St. Wenceslas flood in September 2012; and the preliminary design of the new Bajo Almanzora II desalination plant, with a desalinated seawater production capacity of 90,000 m³/day.

We also supervised in Almeria the design, and the works to improve energy performance of the Carboneras desalination plant together with the operation and maintenance of the plant during the first year of operation. The plant has 12 reverse osmosis lines with an annual desalinated water production of 42 hm³. The same services were provided for the Torrevieja desalination plant upgrade (Alicante), which has 16 reverse osmosis lines with a production of 80 hm³/year which will be increased by another 40 hm³/year with the addition of 5 new production lines; and the desalination plant in Águilas-Guadalentín, Murcia, which will be increased to 70 hm³/year.



Tabuk-2 treatment plant, Saudi Arabia



Madinah-3 treatment plant, Saudi Arabia

We provided monitoring, surveillance and technical advice for the exploitation of 9 desalination plants operated by Acuamed in the Mediterranean arc, in the provinces of Castellón, Valencia, Alicante, Murcia and Almería, with a combined production of 920,400 m 3 /day.

With regard to wastewater treatment plants, in Saudi Arabia, we supervised the Madinah-3, Tabuk-2 and Buraydah-2 plants, with a flow of 200,000, 90,000 and 150,000 m³/day respectively, with continuous Sequencing Batch Reactor (SBR) technology, and the use of cogeneration and solar energy to reduce energy consumption.

In **Brazil**, Engecorps is carrying out the studies and projects to implement the circular economy model, to reduce the environmental impact and dependence on the extraction of natural resources, at the wastewater treatment plants (WWTP) of Barueri, São Miguel, Suzano and ABC, in the metropolitan region of São Paulo. The WWTP of São Miguel will treat an average flow of 5,500 l/s, that of Barueri will be expanded to a flow of 22,500 l/s making it the largest plant in the country, and one of the largest in Latin America. Likewise, Suzano WWTP treats an average flow of 1,500 l/s for 720,000 inhabitants and the ABC WWTP, of 3,000 l/s for 1,400,000 inhabitants.

We carried out the detailed design for the Teresópolis wastewater treatment plant expansion, in the state of Río de Janeiro. The plant uses biological treatment with NEREDA® technology and has an average flow rate of 305 l/s. We are also participating in the detailed design of a recycled water production plant in Vitória, in the state of Espírito Santo, which will supply 450 l/s of recycled water for industrial use.

In **Tunisia**, we provided the support services for the tender and contracts, and the construction supervision of a new wastewater treatment plant in Djedeida, with an activated sludge biological treatment system with a capacity of $15,200 \, \text{m}^3/\text{day}$.

Supply, sanitation and drainage

In Peru, TYPSA is carrying out the evaluation of alternatives and the detailed design of the urban storm drainage of the city of Paita, Piura department, and Chiclayo, Lambayeque department, implementing sustainable drainage measures, both structural and for green infrastructure, to cope with the floods caused by the heavy rainfall from the "El Niño" climate phenomenon, affecting 450,000 inhabitants. We are also preparing the design of the urban drainage system for the Tambopata sector in the Madre de Dios department, which affects 117,000 inhabitants and includes retaining tanks, lamination and infiltration structures, and 200 km of pipes.

In Panama, we carried out the project and construction management of Arraijan Este's sanitary sewer system, in the province of Panama West, including the collector system, mains and home network connections, as well as a wastewater treatment plant for 85,000 inhabitants.

In El Salvador, the study of alternatives and detailed design was carried out for the water supply and sanitation infrastructure in the communities adjacent to Lake Coatepeque, for a population of 70,000 inhabitants.

In Costa Rica, we continue working on the unmetered water reduction and energy efficiency programme to reduce leakage losses and improve efficiency in the provision of drinking water services in the metropolitan area of San José and in seven of the country's main systems.

In Brazil, we provided support services for management and construction supervision of new and rehabilitation works for water supply and sanitation in 37 municipalities in the



SUDS in Reus. Tarragona, Spain



Apodi Branch. Integration of the River San Francisco, Brazil

São Paolo metropolitan area; and the design-build of the Transparaiba-Cariri Branch water supply system, Paraiba state, to supply water to 20 towns through the construction of a 375 km pipeline network and a treatment plant; and support in the review of studies, designs and for the contract management within the scope of work of the Federal District Environmental Sanitation Company. In addition, engineering services are provided for the monitoring and supervision of the execution of the Apodi Branch (Section IV). part of the project to integrate the River São Francisco with the northern northeastern river basins. This section includes 115 km of canals, aqueducts, tunnels, dams, and pumping stations, affecting a population of 540,000 inhabitants.

In Saudi Arabia, we carried out the detailed design for a drinking water supply line for touristic development in the Trojena region, north of NEOM, with a length of 45 km, ending in a 60,000 m³ tank.

In Spain, we provided support services in the planning, design and construction management to improve and expand primary and secondary sanitation networks in the Bizkaia region, within a framework contract that includes 89 municipalities, with a total population of 510,000 inhabitants. We continue to carry out design supervision for the stateowned company ACUAES, preparing review reports for preliminary and detailed designs, environmental impact studies, and specific technical reports for actions that include water treatment plants, canals, water supply and sanitation pipelines, and power supply lines, among others.

Our participation is key in the development of the Sustainable Urban Drainage Techniques (SUDS), applied in a pilot plant located in the wastewater treatment plant of Meco, in the new Fuenlabrada Exhibition Centre ("Parque Ferial"), and in the Madrid Nuevo Norte project. We have also prepared the Master Plan of Sustainable Urban Drainage Systems for Reus, and the design and construction management of one of these systems in the former riverbed of the Escorial ravine. This is the first SUDS exclusive master plan in Spain, accompanied by a basic design guide and a proposal for a municipal ordinance.

Hydrological planning and water management

Hydrological planning and water management are processes aimed at the efficient and sustainable use of water resources, risk prevention, and the mitigation of the adverse impacts of floods. The Group's companies maintain significant activity in these areas.

In Brazil, the structuring is under way of the Public-Private Partnership (PPP) for the untreated water adduction service of the integration project of the São Francisco River with the Northeast Watersheds, with the aim of safeguarding water supply for the northeastern semi-arid region, which includes parts of eight states of the country; we have concluded our support services on the framework for the concession of usage rights of water resources in the state of Paraíba, with a view to increasing efficiency of its implementation by the governing body of the state water resources policy; we updated the Paranaiba River Basin Water Resources Plan, in the Goias, Mato Grosso do Sul and Minas Gerais states; and we have prepared a proposal for classification of surface water masses and a groundwater monitoring programme in the Verde Grande river basin, Minas Gerais, covering an area of 31,410 km².

In **Chile**, we carried out the diagnosis of the hydrometric network together with the hydrological and hydraulic study to determine flood maps and warning thresholds in the Mataquito and Maule river basins, as a planning tool to face extreme weather events; in **Peru**, we are completing supervision of the flood defence works on the Cañete and Huaura Rivers, with the construction of 52 km of dikes and the channelling of four streams.

In Albania, we developed flood risk management plans for the Erzen, Ishem, Shkumbin, Seman, and Vjosa river basins, including feasibility studies for the prevention measures to be implemented.



River Vjosa, Albania

In **Spain**, we are reviewing and monitoring the 2022-27 Hydrological Plan for the Júcar river basin, in accordance with the provisions of the Water Framework Directive. The total surface area of the river basin territory is 42,735 km², with 390 surface water and 105 groundwater masses. Likewise, we continue with the operation, maintenance, and conservation of the river flow monitoring network of the Galicia-Costa River Basin District, for real-time flood and drought management.

We are providing support services for the implementation of flood risk management plans in the Guadiana and Tajo River Basin Districts, in accordance with the European Directive on the assessment and management of flood risks, together with the detailed design of flood protection elements along the Jucar River, in the regions of Ribera Alta and Baja, Valencia, which have a high risk of flooding.



River Paranaíba passing through Itumbiara. Goiás, Brazil



River Maule Valley, Chile

Architecture and building

In Saudi Arabia, we are preparing the engineering and architectural design of the King Salman Park Community Buildings complex in Riyadh. The scope covers 17 buildings in King Salman Park destined for a variety of uses, including police station, civil protection and Red Crescent facilities, a cultural centre, two sports centres, other public service buildings, buildings for operation and maintenance of the park and two large car parks with a total of 120,000 m².

In Mexico, the Group 's companies are carrying out the design of MEP systems, Mechanical, Electrical and Public Health, for the remodelling of the Four Seasons hotel in Mexico City, with 8 above-ground floors and 2 basement levels, 244 rooms and a total built area of 48,831 m², and that of the Susurros residential complex, in Punta Mita, state of Navarit, which consists of 5 buildings with a total of 10,890 m², which are part of a hotel complex.

We also operate in the field of industrial building, being involved in the project management of a new beverage processing plant in Veracruz which has a production capacity of 5Mhl/year; and the design for the expansion of the industrial vegetable oil production plant in Monterrey, Nuevo León.

In Panama, we carried out the comprehensive architecture and engineering detailed design of the new 53,600 m² Faculty of Medicine of the University of Panama, and the new 25,600 m² headquarters of the Civil Aeronautical Authority; and in Belize, the master plan, preliminary and detailed design of residential building for workers at the Four Seasons hotel, in Cayo Chapel, consisting of 11 three-story buildings with a total built area of 13,369 m².

In Spain, amongst our work we can highlight the design of the Technological Centre for Development and Experimentation (CETEDEX) new main campus for research purposes in Jaén, consisting of five independent buildings, with a built area of 20,000 m² and developed areas of 60,000 m²; the comprehensive detailed design and construction management of the works



Data processing centre and headquarters of Quetta in Tres Cantos. Madrid, Spain



Susurros residential complex in Punta Mita. State of Navarit, Mexico

at the data processing centre and corporate headquarters of Quetta in Tres Cantos, Madrid; and the conceptual design and fit test of two 34 MW data centres in Calamocha, Teruel, powered by wind and solar energy, with TIER III requirements for availability and redundancy.

In the hospital sector, we can highlight the comprehensive detailed design for the remodelling of the Gregorio Marañón General University Hospital in Madrid, given its innovative design to integrate the building into the city, increasing the current building to 200,000 m² and its capacity to 1,600 beds; and the supervision of the rehabilitation works at La Paz University Hospital, also in Madrid, to repair structural and facade deficiencies.

In the transport sector, the construction supervision is being carried out of the passenger building upgrade at Sants station, Barcelona. The building will be extended on the side of the Països Catalans square, creating a new boarding area for high-speed rail and a new access to commuter trains. The station surroundings will also be redeveloped.

In the sports facilities sector, we carried out the detailed structural design and construction supervision of the completion of the new Valencia FC Nuevo Mestalla stadium, with a capacity for 70,000 spectators.

In the residential sector, we carried out the design of MEP systems, Mechanical, Electrical and Public Health, and the construction management of the first phase of the Mirador del Conde residential complex in Adeje, Tenerife, with 75 terraced houses, on a plot of 16,000 m²; and the construction supervision of the foundation and structural works, and quality control of the execution of the new headquarters of the special delegations of the State Agency for Tax Administration and of the Ministry of Economy and Finance in Valencia, a building with three basement floors and nine floors above ground, with a total constructed area of 53,360 m²; and the construction supervision and quality control of the expansion and upgrade of the Navalcarnero elderly care facility, Madrid.

Urban development

In **Saudi Arabia**, TYPSA is responsible for the overall integration of Ministry of Defence transformation initiatives being developed as part of Vision 2030, which includes a new military city, the modernisation of the National Defence University and a new Joint Forces Command. Project management tasks are being carried out, including the development of the master plan, infrastructure design, building design review, programme management plan and communication programme.

Likewise, we are preparing the Urban Development Plan for the Yanbu, Umluj, Alwajeh and Duba regions. The development of regional and local plans for the four areas will add value to the large adjacent projects (NEOM, Amaala, Red Sea, Al Ula and Jubail-Yambu), maintaining urban and cultural identity, safeguarding the natural environment, and creating high quality urban environments, avoiding excessive growth.



Master plan in Saudi Arabia

In the **USA**, we conducted the localisation and surveying of impacted utilities for the design of the new railway and road infrastructure at Barstow International Gateway Dry Port, California. This state-of-the-art rail facility covers an area of 18 km², and will serve the Burlington Northern Santa Fe Railway (BNSF). Scope includes the mapping of approximately 45 km of underground public utility networks.

In **Ghana**, with the aim of boosting the country´s economic development, we are carrying out the comprehensive management of the Greater Kumasi Industrial City project, which includes project review, construction supervision and support services during construction.

In **Spain**, as part of the growth plans for the city of Madrid, TYPSA is participating in the design and construction management of the important developments that are being carried out. In the area known as Southeast Developments, TYPSA is engaged in the project management, construction management and

site supervision of Los Berrocales and Cañaveral developments and corresponding infrastructure services, as well as the supervision of the first phase of the urban development Los Cerros. In addition, studies are underway for the Sectorisation Plan of the 'Nueva Centralidad del Este'.



Urban development in Los Berrocales, Madrid



Urban development in Los Cerros, Madrid

Within the railway and urban development project known as Madrid Nuevo Norte, TYPSA 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 management of railway works and actions across the entire station area.

In Barcelona, TYPSA is carrying out project management and support services for construction management for the redevelopment of the Rambla de Barcelona, transforming the area between the streets of Santa Madrona and Canaletes, improving connectivity between the Gothic Quarter and El Raval. Likewise, construction supervision and management of the works to cover and integrate the area occupied by the large shaft used in the works on metro lines 4 and 9, in La Sagrera neighbourhood, next to the high-speed train station, is underway.

Environmental protection and pollution control

Environmental protection, mitigation and adaptation to the effects of climate change, and alignment with the basic principles of sustainable development are the subject of studies, evaluations and projects of the Group's companies around the world.

In the USA, work has been carried out aimed at pollution prevention in infrastructure construction, as well as preserving the natural environment and cultural heritage. In Arizona, we led the environmental services for the construction of two new 425 m bridges over the Gila River. on Interstate 10 highway, on Indian Community lands, preparing the Environmental Management Plan, which includes commitments for sensitive cultural resources, hazardous materials, and water pollution; and the study of existing cultural resources for the Canyon Heritage Lookout Project, in the Kaibab National Forest, recording archaeological findings in an area of 48.5 km². Likewise, we have provided environmental and technical field services for BNSF Railway structure replacement/rehabilitation projects across Arizona, New Mexico and California. The scope of work includes the monitoring of compliance with regulations on material discharge, flood-risk zones, and turtle populations.



Xochi highway, Corredor de las Flores.

In Guatemala, we prepared the design of adaptation measures to achieve climate resilience objectives on the Xochi Highway, part of the Corredor de las Flores; and in the Dominican Republic, we carried out the comprehensive rescue plan for the Ozama and Isabela Rivers, to reduce river water contamination, and to strengthen climate change resilience.



Interstate 10 highway. Arizona, USA

In Brazil, we have prepared a proposal for the classification of surface water bodies and a groundwater monitoring programme in the 31,410 km² Verde Grande river basin, Minas Gerais; and the vulnerability and climate risk analysis of 7 road concessions, defining adaptation measures to improve resilience to climate change.

In Costa Rica, we conducted an analysis of historical and current climate trends to develop regionalised climate scenarios based on IPCC projections, to assess the vulnerability and climate risks associated with urban development projects.



River Ozama passing through Santo Domingo, Dominican Republic



River Green, Minas Gerais, Brazil



Coastal region of Benin

In **Benin**, we have conducted the strategic environmental assessment for the coastal zone, part of the Master Plan for resilience investment in West Africa coastal areas, funded by the World Bank.

In **North Macedonia**, we provide support for the implementation of priority actions for mitigation of the effects of climate change, aligning national policy with the EU's long-term climate action strategy through the formulation of an action plan.

In **Spain**, we provided support services for the environmental assessment of plans and projects to process strategic plans, designs and works undertaken by Canal de Isabel II, Madrid; we prepared the Special Protection and Conservation Plan for the usage and activities of the Nervión-Ibaizabal and the Cadagua basins, in Bilbao; we supervised the maintenance, conservation and environmental restoration on the banks and channels of public watercourses within the scope of the Cantabrian Hydrographic Confederation; and we led the coordination of the landscape, hydromorphological and biodiversity restoration project in urban sections of the River Huerva, Zaragoza, in collaboration with the Biodiversity Foundation.



Nervión-Ibaizabal river basin passing through Bilbao

In noise pollution protection projects, we have created strategic maps and Noise Prevention Action Plans on the roads of the national network in Andalusia and Ceuta, and, at the detailed design drafting phase, we have developed the Noise Prevention Action Plans for the regional road networks of La Rioja, Aragon, Castilla y León, Extremadura, and Castilla-La Mancha.

In the area of water pollution control, we developed bathing water profiles and the operation of surface and groundwater quality monitoring networks in the Guadalquivir river basin, with more than 350 bodies of surface water and more than 200 of groundwater; the operation of surface and groundwater quality networks in the Segura basin consisting of more than 177 areas of surface water and more than 63 of groundwater; groundwater status monitoring programme in the Júcar basin, with 105 bodies of groundwater, including additional control of protected areas; and the analysis of the quality of the water discharged by the wastewater treatment systems in Castilla-La Mancha to ensure compliance with established quality standards.



Collection of surface water samples in Guadalquivir

Renewable energy

TYPSA and the Group companies are participating in the development of large solar photovoltaic and wind power projects, by evaluating implementation, the master plan, detailed engineering, environmental, social, hydrological and geotechnical studies, and obtaining permits and authorisations.

In solar energy, in Spain, we are involved in the development, engineering and construction management of large photovoltaic solar power stations such as those of Carmonita Sur in Badajoz, Alcores in Seville, and Terrer in Zaragoza. Within Europe, in Finland, with limited resource availability due to its latitude, TYPSA participates in the feasibility study, conceptual design and support for the tendering of the 100 MW Utajärvi photovoltaic solar park; in **Portugal**, services include accompaniment of the hybridisation of 6 wind farms with 8 solar photovoltaic plants, reaching power of 330 MW to add to the solar plants installed in the country.



Utajärvi solar park, Finland

In the USA, private clients continue to place their trust in TYPSA for the development of civil, electrical and structural engineering services in three solar photovoltaic parks located in Texas, Indiana and Arizona, which total more than 600 MW.

In Saudi Arabia, within the framework of the roadmap set out by the Vision 2030 Plan, TYPSA is participating in the development of 6 photovoltaic plants, which will have a total capacity of 11 GW.

In Latin America, important contracts continue to be added to our portfolio, such as the detailed design of three solar parks in Mexico, totalling 200 MW; in the Dominican Republic, detailed design of the Coastal photovoltaic solar plant on the outskirts of the city of San Pedro de Macoris, with 131 MWp installed power; in Uruguay, technical services for the performance evaluation of 6 solar photovoltaic plants in Paysandú with a total power of 70 MW; in Peru, the feasibility study of two 100 MWp photovoltaic solar power



Solar park in Mexico

plants in the Locumba district; and in Chile, detailed design of the Andes III solar park, in the Antofagasta region, with a total power of 176 MW.



Andes III solar park, Chile

In wind energy, during 2024, TYPSA has continued providing services to extend the life span of more than 1 GW distributed in wind farms in Spain, Portugal and Mexico. In Spain, we support the construction of a renewable generation cluster in the Rueda Sur complex, Zaragoza, with 188 MW of total installed power and we provided support for the tendering of the wind farms Barranco del Agua I and II, and Carrugueiro.

In Saudi Arabia, TYPSA participates in the development of three large wind power plants of 131 km², 442 km², and 204 km², establishing itself as leading consultant of this type of service in the country.

In Romania, design for the Pestera II wind farm, with a total capacity of 396 MW has been carried out, together with the tendering support services for the Vacareni wind farm.

The majority of the onshore wind farms in Europe are approaching the end of their design life, making expansion now necessary, and we are supporting the main European

developers in the design of verification and repair solutions of wind turbines foundations to extend lifespans and ensure operational continuity.

Offshore installations, with wind and solar energy together with that of waves, and the design of underwater transmission lines, represent an area of expertise requiring high technology and in which TYPSA is present in the preparation of conceptual designs and detailed engineering, or owner´s engineering.

The **United Kingdom** has the highest development of offshore wind energy. TYPSA collaborates with one of the industry's leading developers, in owner's engineering, for the development of two parks in the Irish Sea, on a multigigawatt scale. In Scotland, the conceptual design for a floating offshore wind farm in Bellrock has been carried out; and in **Ireland**, the design of a gravity-based foundation was developed for a 450 MW wind farm with 15 MW turbines, on the west coast. The site has water depths ranging from 23 to 50 metres, and extreme wave conditions exceeding 27 metres in height.

In Saudi Arabia, owner 's engineering has been provided to review the submarine power cable connecting Susha Island with the continent in the NEOM region. TYPSA, who had prepared the detailed design, has been commissioned with the review of the detailed engineering, together with the support services during the manufacture and installation to energise the island, forming part of a project to energise 33 islands.



Horizontal drilling in NEOM to install submarine cable. Saudi Arabia

TYPSA also stands out as a key player in the growing world of floating photovoltaic solar energy and has carried out the analysis, technical evaluation and engineering design of a 25 MWp floating solar plant in **France**.

As for **energy storage** facilities, the rapid fall in battery prices, especially those of lithium, has driven the implementation of these systems. TYPSA participates in the owner's engineering and design in projects such as those in the Condor, Nightwalk, Peregrine and Atlas in California, **USA**, which total 1,600 MW of power in batteries with a capacity of 3,000 MWh; at Bluegrass solar plant in **Australia**, with 60 MW and 120 MWh lithium-ion batteries; and in **Chile**, in several of the largest projects in the country, such as Andes Solar II and IV, with 150 MW of batteries with capacity for three hours.

In **Spain**, TYPSA has been involved in the engineering of 47 stand-alone battery energy storage systems (BESS), with a total rated capacity of approximately 250 MW with 4-hour duration.

In energy transmission and distribution, in Spain, TYPSA continues to participate in the owner's engineering in preparing bidding specifications for tenders, contract support services, validation of engineering and construction management of evacuation nodes for the main energy developers, such as Carmona 220/30 kV, Ébora 220/30 kV, Ayora 400/138 kV or Almodóvar del Río 220/30, which integrate several transformer positions with capacity from 50 to 100 MVA and multiple line positions for integration with the transport network.



Carmona electrical substation, Seville, Spain

Irrigation infrastructure

In Chile, TYPSA is involved in numerous studies, projects and programmes aimed at increasing water availability and improving water management for farmers and consumer organisations at the request of the National Irrigation Commission. TYPSA's participation is remarkable in the design and construction supervision of the infrastructure works necessary for these purposes.

In the Nublé region, TYPSA is responsible for the control, management and surveillance of the 50 km long Laja-Digiillin canal, which taking water from the Laja River and discharging it into the Diguillin River, irrigates 44,630 ha. In the province of Diguillín, we are reviewing and adapting the distribution channel system of the Zapallar reservoir project. The reservoir has a capacity of 80 hm³ to irrigate 10,000 ha, among other uses, and the system will consist of more than 70 channels with a total length of approximately 150 km. Also ongoing is the management of the citizen participation process and the regular provision of information to communities, authorities and institutions on the status of the reservoir project.



Laja-Diguillín Canal. Ñuble region, Chile

In the Araucania region, design and construction supervision is underway for the Las Vertientes-Púa irrigation improvement works, with a 200 km network of canals, providing water for irrigation to 8,000 ha. Also in this region, design and construction supervision of the Imperial Canal irrigation system improvement works is being carried out. The 25 km long canal joins the cities of Temuco and Nueva Imperial and aims to irrigate 6,000 ha.

We are also carrying out the feasibility study for La Chupalla reservoir, in the Valparaíso Region, to irrigate 4,500 ha, and the evaluation review of the Codegua reservoir with a capacity of 3,000 ha, in the O´Higgins region.

In the Dominican Republic, we are carrying out the project for the rehabilitation and commissioning of the main canal Monsieur Bogaert and the irrigation canal of Villa Vásquez, in the basin of the River Yaque del Norte, with a total length of 47 km.

In Spain, TYPSA participates in the maintenance of the Calanda-Alcaniz and Caspe canals, in the provinces of Zaragoza and Teruel, which serve the irrigable areas of the same name in the Guadalope river basin. TYPSA is also supervising the construction of a regulating reservoir in the Bardenas Canal, Zaragoza. The 275,000 m³ reservoir will collect the excess volume from the canal and thus improving water management.



Works at the regulating reservoir in the Bardenas canal, Zaragoza

Likewise, the monitoring and supervision is being carried out for the construction works on the Mola irrigation canal bypass, which connects to the main infrastructure of the Aragón and Cataluña Canal, as well as the corresponding intake and drainage works. In Alicante, TYPSA is also supervising the construction of the new pipeline on the left bank of the Júcar-Vinalopó interbasin water transfer, which distributes the water from the Toscar reservoir to the irrigation communities of Vinalopó.



Pipeline construction in the Júcar-Vinapoló inter-basin water transfer

We are also collaborating with the Mancomunidad de Canales del Taibilla, in the field of project supervision, certifications, and settlements, as well as the drafting of specifications and reports on the application of current legislation and regulations. In Albacete, we are providing support services for the renovation of the gate system and its operating mechanism, the redesign of the spillway, and the restoration of the Liétor weir basin.

Supporting financial institutions in development programmes

Our support for international financial institutions in development programmes focuses on strengthening countries' capacity to implement projects that promote economic growth, social development, and environmental sustainability through responsible investment practices.

In **Ghana**, we were involved in the preparation of an Environmental and Social Management Plan within the framework of a project to establish a Circular Economy Centre in the country. The objective being to provide a baseline for effective gender equality and youth participation in the project.



Rice collecting in Ghana

In **Chad**, we participated in the Food and Nutritional Security Programme, which reflects the strategic guidelines set out in the "Vision 2030 Plan, the Chad we want", relating to food safety, nutrition, agricultural production, access to drinking water, sanitation, and rural mobility.

In **Morocco**, we provided support services for the implementation of the environmental and social action plan in the Guelmim-Rio Nun region, aimed at improving access to drinking water for rural communities and the recycling of treated wastewater for irrigation reuse.

In **Senegal**, we carried out the inventory, registration and formalisation of land rights in the Grand Dakar area, including the formalisation of 120,000 property titles, which include individual, family or collective occupancy rights in rural and peri-urban areas.

In **Burundi**, we have conducted the analysis of the current state of agribusiness value chains in Burundi, part of the Great Lakes Trade Facilitation Project, and focused on agricultural and fishery products with high growth and export potential in the region.

In Malawi, we provided support services for the conservation, restoration and regeneration of natural resources and ecosystem diversity in the country, with the overall objective of improving land use planning, watershed management, soil and forest cover conservation and regeneration, together with the development of multisectoral natural resource management capacities.



River Shire, Malawi

In **South Sudan**, we supported the implementation of the Green and Resilient Economic Programme, for increased food and nutritional safety, promoting the green economy and improving resilience to crisis situations.

In Jordan, support was provided in the development of a green, sustainable and socially inclusive economy in the country, within the framework of the action plan for green growth and economic recovery following COVID-19, strengthening the circular economy, biodiversity and nature conservation in the areas of industrial production, transport, energy, water and agriculture.



Olive collecting in Jordan

In Vietnam, we provided support for the EU-Vietnam Womenled Green Partnership Support Facility. The objective was to promote the role of women in green transition processes with a gender perspective, and specifically their involvement in decision-making processes on climate change and environmental conservation policies and actions.

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