

TOLL ROADS  
DIVISION

2023 Revenue: €1.256 B

Cintra, Ferrovial's Toll Roads business unit, is engaged in the development, financing and operation of toll road infrastructure projects and car parks. Cintra manages over 1,169 kilometers of toll roads under 21 concessions in 10 countries in North America, South America, Europe and Australia. Approximately 96% of Cintra's value is concentrated on North America's operations.

cintra



AIRPORTS  
DIVISION

2024 Revenue: €91 M

Ferrovial Airports is one of the World's leading private airport investors, developers and operators, with assets in the United Kingdom, United States and Turkey.

ferrovial  
airports

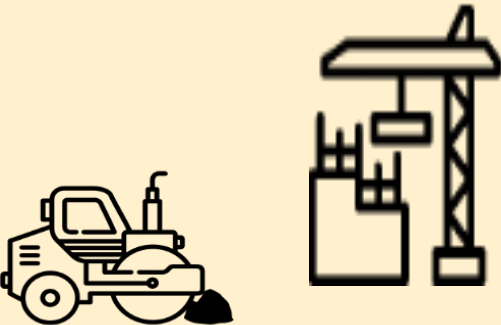


CONSTRUCTION  
DIVISION

2024 Revenue: €7.234 B

Ferrovial Construction is a leading Spanish construction company that designs, develops, finances, and operates construction projects, including all types of public and private works and, most notably, the construction of public infrastructures.

ferrovial  
construction

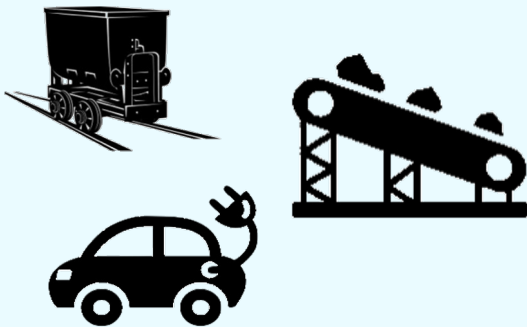


SERVICES & MOBILITY  
DIVISION

2024 Revenue: €296 M

Ferrovial seeks business opportunities beyond its traditional construction, toll road, and airport activities, focusing on projects that respond to changing needs and habits of urban communities for (1) the circular economy such as solid waste management via Thalia in the U.K., (2) the construction of water and wastewater treatment plants in Texas and (3) vehicle electrification.

ferrovial  
services

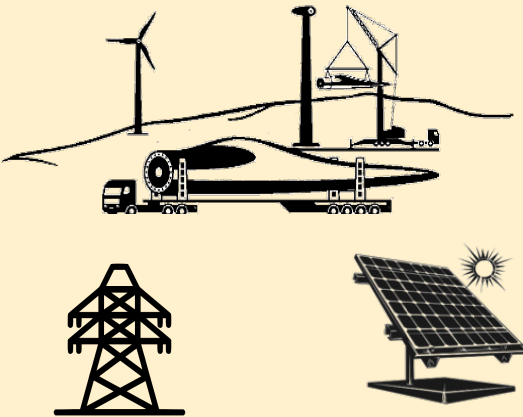


ENERGY  
DIVISION

Partial 2024 Revenue: €270 M

The energy division is involved in (1) energy transition projects, maintaining a commitment to the development of sustainable, innovative, and efficient solutions, and (2) energy infrastructure projects, including transmission lines and renewable energy generation plants.

ferrovial  
energy





### Outside Relationships

Regulators	Capital	Suppliers	Customers
<b>Key Categories of Regulation</b> <ul style="list-style-type: none"><li><b>Environmental Protection</b> (regulation regarding environmental pollution prevention, waste management, resource conservation)</li><li><b>Employment, Labor, Health, and Safety</b> (regulation regarding rights and working conditions of workers, including working hours, equal opportunity, holidays, annual leave, wages, and occupational health and safety)</li><li><b>Taxation</b> (regulation regarding corporate income, payroll, withholding, and other taxes)</li><li><b>Public Contracts and Procurement</b> (in the U.S. and various other jurisdictions, public contracting and procurement for infrastructure projects, such as toll roads, airports, energy generation and storage, waste management, facilities, mining services, and car-sharing or floating systems, generally follow a Public-Private Partnership (PPP) model, under which long-term agreements are established between the government and private partners, allowing the private sector to deliver, finance, and manage public services through capital assets while sharing the associated risks and rewards.)</li><li><b>PPP PUBLIC PRIVATE PARTNERSHIP</b></li><li><b>Airport Regulation</b> (United Kingdom: airport operations are governed by the Department of Transport, the Civil Aviation Authority (CAA), and the Competition and Markets Authority (CMA), with international aviation safety, aerodrome operations, noise restrictions, and ground handling. Heathrow Airport is subject to price caps on certain charges, while other UK airports operate under a mix of regulated and non-regulated revenue models; and United States: airports like JFK operate under federal, state and municipal laws, with oversight from the Federal Aviation Administration, Transportation Security Administration, and Committee for Economic Development, covering aviation safety, environmental compliance, security screening, airport and airline operations and operational matters such as aircraft certification and noise and access restrictions)</li><li><b>Business Conduct Regulation</b> (prohibition against bribery of government officials and enforcement of anti-money laundering regulations)</li><li><b>Toll Road Regulation</b> (in the U.S., the Federal Highway Administration (FHWA) plays a key role. While there's a general prohibition on tolls on publicly-funded highways, there are exceptions for projects administered by states or public authorities that enable them to impose tolls under specific conditions, such as tolling for congestion pricing, toll revenues are typically restricted to covering project costs, debt service, and maintenance, though some programs allow for broader use. States generally have the authority to set toll rates, but federal oversight ensures compliance with regulations and proper use of funds.)</li><li><b>Construction Regulation</b> (the regulation of infrastructure project construction varies by country but typically requires environmental assessments, compliance with safety standards, and anti-corruption laws. Local, state and provincial regulations further specify construction processes, including zoning, land use, and permit requirements, alongside industry-specific standards for safety and environmental impact.)</li><li><b>Energy Regulation</b> (Spain: energy generation and storage regulation is administered by the Ministry for Green Transition, the National Commission for Markets and Competition, and Red Eléctrica de España, while environmental laws govern the planning and operation of energy infrastructure. Permits also require compliance with public authorization laws, and Chile: regulation governing electric service, transmission systems, tariffs, and environmental protection and impacts)</li></ul>	<b>Business Regulation</b> <ul style="list-style-type: none"><li>Bond and Working Capital Financing</li><li>Cross Currency Swaps and Interest Rate Hedges (U.S. Dollar, Canadian Dollar, Chilean Peso and British Pound Sterling)</li><li>Project Financing</li></ul>	<b>Concession Grants</b> <ul style="list-style-type: none"><li><b>North America Operations</b><ul style="list-style-type: none"><li>U.S. Concession Grants (Texas Department of Transportation, Virginia Department of Transportation, Board and North Carolina Department of Transportation)</li><li>77 Mobility Consortium (Cintra, Aberdeen Global, and John Laing Group)</li><li>Federal Loans: The projects may secure a federal government loan for a portion of project costs; in the U.S., under the Transportation Infrastructure Finance and Innovation Act (TIFIA) program, the U.S. Department of Transportation offers favorable loans for large-scale infrastructure projects.</li><li>Canada Concession Grant (Infrastructure Ontario Agency of the Province of Ontario)</li><li>Private Activity Bonds: Tax exempt bonds designed to attract private investment in infrastructure or public projects.</li><li>State Funding: States and provinces will contribute funding to support the development and construction of public projects, in the case of the I-77 toll road concession, the North Carolina Department of Transportation (NCDOT) contributed \$95 million.</li><li>Queensland Government (Transport &amp; Main Roads)</li><li>PRO INVERSION (Ministerio de Infraestructura y Transportación de Chile)</li><li>ANI (Agencia Nacional de Infraestructura de Argentina)</li></ul></li><li><b>Toll Road Customers</b><ul style="list-style-type: none"><li>Motorists</li><li>Government Employees (including military, police, and public safety workers)</li><li>Enterprises with Vehicle Fleets (utilities, trucking companies, e-commerce delivery companies, car rental companies)</li></ul></li><li><b>International Operations</b><ul style="list-style-type: none"><li>Concession Grants in International Markets (National Roads Authority of Ireland, Ministerio de Transporte y Movilidad Sostenible, Ministry of Transport and Public Works of the Slovak Republic, Queensland Department of Transport and Main Roads, Victoria Department of Transport, Promotion Agency of Peru, National Infrastructure Agency of India, Colombia National Infrastructure Agency, Transport for London)</li><li>NRA (National Roads Authority of Ireland)</li><li>Queensland Government (Transport &amp; Main Roads)</li><li>PRO INVERSION (Ministerio de Infraestructura y Transportación de Chile)</li><li>ANI (Agencia Nacional de Infraestructura de Argentina)</li></ul></li></ul>	<b>Key Categories of Regulation</b> <ul style="list-style-type: none"><li>Construction, Building, Finance, Operate, and Maintain Toll Roads for a Fixed Period of Time (in exchange for payment to the owner of concession fees—e.g., rent for the location, a percentage of Ferrovial's sales revenue, or a combination of the two)</li><li>Concession Agreements Granting Ferrovial the Rights to Design, Build, Finance, Operate, and Maintain Toll Roads for a Fixed Period of Time (in exchange for payment to the owner of concession fees—e.g., rent for the location, a percentage of Ferrovial's sales revenue, or a combination of the two)</li><li>Sales of Rights to Use Toll Roads under the Authority of Concession Agreements (via the collection of tolls)</li></ul>

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### Ferrovial SE (a European public liability company under Netherlands law—"Societas Europaea")

#### Debt Structure

Debt (€10.09 Billion @ 12/31/2024)		Credit Ratings: BBB (S&P), BBB (Fitch)	
Infrastructure Projects	Corporate	Infrastructure Projects	Corporate
Toll Roads: €7.95 B	Construction: €103 M	Airports: €94 M	Energy: €211 M
Other: €47 M	Corporate Bonds: €2,292 B (0.54%-4.375%)	Syndicated Facility: €252 M	Euro Commercial Paper: €249 M
	Credit Lines: €60 M	Other Borrowings: €36 M (construction, airports & others)	

#### Governance

**Board of Directors**

Rafael del Pino (Chair, E)	Oscar Fajul (Vice-Chair, E, A)	Ignacio Madrdejós (E)
Maria del Pino (E)	José Fernando Sánchez-Junco (Independent, E, N)	Philip Bowman (Independent, A)
Hanne Sørensen (Independent, N)	Bruno Di Leo (Independent, N)	Juan Hoyos (Independent, E)
Gonzalo Urquijo (Independent, A, N)	Hildegard Wortmann (Independent)	Alicia Reyes (Independent, A)

**Committees:**

- Audit and Control (A), Executive (E) and Nomination and Remuneration (N)

**Management Committee**

CEO: Ignacio Madrdejós	CEO of Energy: María José Esteruelas	Chief Investment Officer: Ignacio del Pino
Chief Information and Innovation Officer: Dimitris Bountolos	CEO of Construction: Ignacio Gastón	Chief Strategy Officer: María Teresa Pulido
CEO of Airports: Luke Bugeja	Chief Legal and Compliance Officer and Secretary: Geerte Hessen	CEO of Cintra: Andrés Sacristán
Chief Human Resources Officer: Carlos Cerezo	CEO: Ernesto López Moro	

#### Operations

##### Toll Roads (Cintra) Division (2024 Revenue: €1,256 B)

Cintra, Ferrovial's Toll Roads business unit, is engaged in the development, financing and operation of toll road infrastructure projects, such as the North Tarrant Express (NTE) 1-2 and NTE35W TExpress Lanes and LBJ managed lanes in Texas, 1-77 in North Carolina, and I-66 in Virginia. Cintra offers synergies with Ferrovial's construction business unit to build complex green field projects with Cintra as licensee and Ferrovial Construction as the construction affiliate.

**U.S. Toll Roads**

U.S. Toll Road operations focus on the private development of transportation infrastructure such as the North Tarrant Express (NTE) 1-2 and NTE35W TExpress Lanes and LBJ managed lanes in Texas, 1-77 in North Carolina, and I-66 in Virginia. Cintra offers synergies with Ferrovial's construction business unit to build complex green field projects with Cintra as licensee and Ferrovial Construction as the construction affiliate.

**Texas Concessions**

- NTE 1-2 (63% stake in 13.2 mile highway in the Dallas-Fort Worth Texas area, concession ends in 2061)
- NTE 35W (53.7% stake in a three-part concession to construct and operate 13.2 mile toll-free highway and two managed lanes linking downtown Fort Worth, Texas with surrounding residential and business areas)
- LBJ (54.6% stake in the LBJ concession to operate 13.2 miles of 6 managed lanes in Dallas, concession ends in 2061)

**North Carolina Concession**

(72.2% stake in I-77 express lanes in North Carolina, connecting the metropolitan area in the Northern part of Charlotte with the residential area of Lake Norman over a distance of 26 miles; the concession expires in 2069)

**Virginia Concession**

(55.7% stake in I-66 toll free lanes and express lanes between Capital Beltway and Gainesville (Virginia); the concession began in 2016, and it expires in 2086)

**407 Express Toll Route (ETR)**

King's Highway 407 is a tolled 400-series highway in the Ontario province of Canada. It is the fourth largest expressway in Ontario's 400-series network (after highways 417, 400 and 401). The route spans the entire greater Toronto area, including its suburbs of Brampton and Mississauga, and ending in Carington.

Cintra holds its interest via the Umbrella Roads joint venture with Intergo Holding.

##### Airports Division (2024 Revenue: €91 M)

Ferrovial Airports is one of the World's leading private airport investors, developers and operators, with assets in the United Kingdom, United States and Turkey.

**United Kingdom Operations**

Ferrovial Airports division has a portfolio of four airports in the United Kingdom: Heathrow (25%) and the three that make up the AOS Group (50%) - Aberdeen, Glasgow, and Southampton. Additionally, the Airports division is developing a network of vertiports in the United States and the United Kingdom.

**Heathrow Airport** (53.5% stake Heathrow Airport Holdings Ltd., which operates in Europe's busiest airport hub. Ferrovial has agreed to sell this stake to RDEM and the public investment fund)

**U.S. Operations**

Ferrovial Airports owns a 49% stake in a partnership that will design, build and operate the New Terminal One at John F. Kennedy International Airport in New York City.

**Turkey Operations**

Ferrovial Airports owns a 16% stake in a company that manages the concession at Dalaman International Airport in Turkey.

**Capabilities**

Ferrovial provides support to its airport portfolio as follows:

- Financial Reporting Monitoring
- Business Planning Periodic Review
- Financial and Technical Analysis of Capital Projects
- Asset Management Techniques
- Master Planning Periodic Review
- Own Health and Safety Standards
- Customer Experience Initiatives
- Operational Improvement Initiatives
- Stakeholder Management (regulators, political bodies, unions)
- Recruitment of Top Management
- Communications and Social Media
- Development of Innovation Projects

##### Construction Division (2024 Revenue: €7,234 B)

Ferrovial Construction is a leading Spanish construction company that designs, develops, finances, and operates construction projects, including all types of public and private works and, most notably, the construction of public infrastructures.

**Ferrovial Construction**

Ferrovial Construction engages in all areas of construction in the Spanish market and internationally. It designs and builds (1) all types of infrastructure projects, (2) non-residential buildings, and (3) residential projects. Through Cadagua, Ferrovial Construction provides engineering and construction services for water treatment plants (mainly for seawater desalination plants), as well as sewage treatment, water purifications, and waste management plants.

**Budimex**

Budimex is a key player in the infrastructure market (roads, railways, airports, bridges, and other civil works) and general construction market (industrial, residential and non-residential). In Poland, however, Budimex has been systematically diversifying by acquiring projects other than roads, participating in public-private partnerships, and managing infrastructure and facilities projects. Budimex has also increased its exposure to hydro and military markets and reduced exposure to real estate. Budimex employs 500+ people and is listed on the Warsaw Stock Exchange.

**Webber**

Webber specializes in the construction of transportation-focused infrastructure works (roads, highways, bridges, and airport runways) in Texas, where it is the leading transport infrastructure contractor. Virginia, North Carolina and Florida. Through its Pepper Lawson Construction subsidiary, Webber also specializes in water infrastructure.

##### Services & Mobility Division (2024 Revenue: 296 M)

Ferrovial seeks business opportunities beyond its traditional construction, toll road, and airport activities, focusing on projects that respond to changing needs and habits of urban communities for (1) the circular economy such as solid waste management via Thalia in the U.K., (2) the construction of water and wastewater treatment plants in Texas and (3) vehicle electrification.

**Services**

The Services Subdivision focuses on the management of a circular economy activities (i.e., a production and consumption model that incentivizes the sharing, leasing, reutilizing, repairing, renewing, and recycling of already-existing raw materials and products throughout their life cycle). Ferrovial Services operates solid waste management plants in the United Kingdom, provides services to large-scale copper mines in Chile, and provides auxiliary services to clients in Spain and U.S. water facility construction services.

**United Kingdom Solid Waste Management Centers**

(Ferrovial has a concession contract with four different local authorities and has the capacity to treat 800,000 tons per year)

**Cambridgeshire** (Waterbeach Waste Management Park recycles, composts and treats "black bag" waste)

**Milton Keynes** (the Milton Keynes Waste Recovery Park/Thalia unit extracts and treats food and organic waste in an anaerobic digester to generate renewable energy and create a compost-like material for use on brownfield sites)

**Isle of Wight** (Ferrovial has completed final testing on a 44,000 ton energy from waste, EFW, plant)

**Mining Services in Chile** (services to large-scale copper mining industry, such as maintenance, protection and management of the electrical loop)

**Chile Power Transmission Projects**

Transchile Charra (operates and maintains a 220kV double-circuit line in southern Chile, measuring 204 kilometers long with a nominal capacity of 300 MVA per circuit; serves 300,000 homes)

Centella (operates and maintains a 220kV double-circuit line in northern Chile, measuring 250 kilometers long with a nominal capacity of 300 MVA per circuit)

Tap Mauro (operates and maintains a 220kV double-circuit line in northern Chile, measuring 250 kilometers long with a nominal capacity of 300 MVA per circuit)

**Spain and U.S. Projects**

El Berrocal Solar PV (a solar photovoltaic plant commercial operation in Seville with a peak capacity of 50 MW and an estimated annual production of 104,2 GWh)

Misae Solar (photovoltaic solar energy project in Texas)

Other Projects (Ferrovial has a portfolio of other power generation projects in their early stages of development)

##### Energy Division (Partial 2024 Revenue: €270 M)

The energy division is involved in (1) energy transition projects, maintaining a commitment to the development of sustainable, innovative, and efficient solutions, and (2) energy infrastructure projects, including transmission lines and renewable energy generation plants.

**Energy Solutions Subdivision**

In 2021, the Energy Solutions Subdivision was created. Originally, the business was housed under the Construction Business Division until a restructuring in January 2024. The Energy Solutions Subdivision is dedicated to the construction of energy infrastructures and focused on three areas: (1) renewable energy generation and storage, (2) energy transmission, and (3) energy efficiency projects.

**Energy Infrastructures Subdivision**

Ferrovial's Energy Infrastructures subdivision operates a transmission line acquired in 2016 in Chile, has another (the Centella project) under construction, and operates a transmission line. In Spain, Ferrovial has a 50 megawatt-peak (MWp) photovoltaic plant in commercial operation, located in Seville, as well as a portfolio of generation projects in their early stages of development.

#### Corporate Matters

**Equity Structure**

**Treasury Share Purchase/Buyback Program**

Authorized: 30 M shares up to a Maximum Amount of €600 M  
Expiration: 05/30/2025  
Remaining: 22.8 M shares up to €338 M

**Ordinary Shares**

Share Capital: 729.6 M shares  
Treasury Shares: 7.75 M shares

#### Finance and Accounting

Accounting, Investor Relations, Treasury, Financial Reporting, Tax, Risk Management and Insurance, Financial Planning & Analysis, Investments, Market Research, Investment Portfolio Oversight and Management

#### Human Resources

Talent Acquisition (e.g., STEM-trained skilled labor, including civil, industrial and computer engineers), Compensation and Benefits, Employee Engagement and Culture, HR Strategy and Operations, HR Information Systems, Employee Management, Career Development, Employee Health, Safety and Wellness, Corporate Social Responsibility

#### Information and Innovation

Information Technology (IT infrastructure, equipment, cybersecurity, and software applications and licenses), Open Innovation, Technology, Change Management and Transformation Programs (B2C, B2B, and B2G environments), Digitalization, Communications, Brand Management, Internal Communications, Media Relations, Public Relations, Special Events

#### Legal

Transaction Support, Legal Operations (includes government contracting, contract management, documents retention, and matters relating to Netherlands domicile), Corporate Governance and Board Secretary, Ethics & Compliance (including anti-bribery law compliance), Intellectual Property, Regulatory Affairs (includes export controls and trade sanctions), Litigation Management, Privacy

#### Key Company Data (as of 12/31/2024)

**Business Overview:** Ferrovial S.E. is one of the world's leading infrastructure developers. The company was founded as a construction group focusing on railway infrastructure and later expanded its business into other activities including toll roads, airport management, and energy infrastructure. Ferrovial has been active internationally for over 40 years and operates across seven core geographic markets comprising Spain, the United States, the United Kingdom, Canada, Poland, Chile, and India with over 24,000 employees. Ferrovial's experience in the infrastructure assets has enabled it to develop specialized knowledge in urban congestion management, which is advantageous in "managed lane" projects where users of toll roads pay variable rates depending on congestion levels at any given time.

**Share Data**

U.S. Stock Exchange  
NASDAQ Ticker Symbol: FER

Share Price: \$44.45 (03/03/2025)

Earnings Per Share (Trailing 12 Months): \$4.63

Forward Annual Dividend: \$0.84/share

Market Capitalization: \$31.4B (03/03/2025)

Resources

Employees: 25,501

Headquarters: Amsterdam, Netherlands

Construction Order Book: €16,755 B

Main Markets (by revenue): Canada & U.S. 38.5%, Poland 23.2%, Spain -17.3%, and U.K. 8.8%

Local Suppliers: 40,000+ (95%+ of local purchases)

Mission: To develop and operate sustainable, innovative, and efficient infrastructures creating value for Ferrovial's stakeholders, making the world more open, connected, and sustainable.

**Financial Highlights**

Profit & Loss Statement

Revenues: €8,515 B

Total Operating Expenses: €7,524 B

Materials Consumed: €1,05 B

Other Operating Expenses: €4,88 B

Personnel Expenses: €1.6 B

Operating Profit: 665 M

Net Profit: €460 M

Financial Position

Total Assets: €28,999 B

Total Liabilities: €20,879 B

Long-Term Debt: €10,092 B

Equity: €8,12 B

Cash Flow

From Operations: €1,293 B

Used From Investing: €1,293 B

Used in Financing: €(2,591) B

Financial Returns

Return on Equity: 5.66%

#### Key Developments

**Ferrovial Begins Trading on Nasdaq:** In December 2024, Ferrovial sold its stake in FGP Topco Limited, a direct shareholder of Heathrow Airports Holdings Limited, which is the owner of Heathrow Airport in London for €2.0 billion. The stake was sold to third parties managed by Adrian Farrow and The Public Investment Fund.

### Outside Relationships

Customers	Suppliers	Capital	Regulators
<b>Securities Law Regulation, Stock Listing and Corporate Law Requirements</b>	<b>Significant Shareholders</b> <ul style="list-style-type: none"><li>Del Pino Family and Affiliates</li><li>Rijn Capital BV (Rafael del Pino Calvo-Sotelo) (21.33%)</li><li>RIN CAPITAL</li></ul>	<b>Professional Service Firms</b> <ul style="list-style-type: none"><li>Ernst &amp; Young LLP (audit services)</li><li>EY</li><li>Izertis (advertising services)</li><li>izertis</li><li>Twentyfirst Century Group (lobbying services)</li><li>Latham &amp; Watkins LLP (legal services in connection with SEC share registration)</li><li>Microsoft Azure (cloud computing, storage, and data analytics services platform)</li></ul>	<b>Securities Regulators</b> <ul style="list-style-type: none"><li>U.S. Securities and Exchange Commission (regulation of offers and sales of securities, material event disclosure and financial reporting requirements; recordkeeping requirements under anti-bribery law)</li><li>Stock Exchanges (listing, maintenance and corporate accountability rules for trading of shares in Europe, Spain and the U.S.)</li><li>EUROSTOCK</li><li>BOLSA DE MADRID BME X</li><li>Nasdaq</li><li>Key Institutions (Lazard Asset Management: 5.0%, BlackRock: 3.58%, Bank of America: 3.1%, KfW: 2.5%, KfW: 2.5%, KfW: 2.5%)</li><li>LAZARD</li><li>BlackRock</li><li>Public (44.1%)</li></ul>
<b>Equity Capital</b>			
<b>Dividends and Common Stock Repurchases</b>			
<b>Professional Services</b>			
<b>Energy Customers</b> <ul style="list-style-type: none"><li>Renewable Energy Related Construction</li><li>Project Owners in the Energy Sector (generation and storage, energy transmission, energy efficiency projects)</li><li>red eléctrica</li><li>iberdrola</li><li>Electricity Generation and Transmission</li><li>Chilean Energy Generation, Distribution and Transmission Companies (under the supervision of the National Electricity Coordinator of Chile)</li><li>GRUPOSISA</li><li>Large Industrial Users</li><li>Wholesale Electricity Market (utilities, energy traders, large industrial consumers, independent power producers and retail electricity providers/resellers)</li></ul>			
<b>Sales of Engineering, Construction, Installation, and Maintenance Services for Equipment</b>			
<b>Sales of Electricity Transmission Services</b>			
<b>Wholesale Sales of Electricity</b>			
<b>Services &amp; Mobility Customers</b> <ul style="list-style-type: none"><li>U.K. Municipalities (owners of solid waste centers, hotels, museums, warehouses, factories, retail shops, and sports facilities and (2) residential buildings in Spain and Poland)</li><li>Electric Vehicle Owners (private and public entities that exploit mineral resources in Chile such as copper)</li><li>Chilean Mining Industry</li><li>COBOLCO</li><li>MINISTRO DE MINERÍA</li></ul>			



## GLOSSARY

**Airport Infrastructure:** Airport infrastructure encompasses the facilities and systems that support air travel, ensuring the efficient movement of passengers, cargo, and aircraft. It includes runways, taxiways, terminals, control towers, hangars, and maintenance facilities. Other critical components include security systems, baggage handling, fuel supply, navigation aids, and ground transportation links. Airports are designed to accommodate different aircraft sizes, manage air traffic, and provide services such as customs, immigration, and passenger amenities. Proper planning and maintenance of airport infrastructure are essential for safety, efficiency, and seamless global connectivity.

**Bridge Infrastructure:** Bridge infrastructure refers to the structures designed to span physical obstacles, such as rivers, valleys, or roads, to facilitate transportation. It includes various components like decks, piers, abutments, cables, and supports, ensuring stability and durability. Bridges can be made from materials like steel, concrete, or wood and come in different types, such as beam, arch, suspension, and cable-stayed bridges, each suited for specific load requirements and environmental conditions. Proper maintenance and engineering are essential to ensure safety and longevity.

**Building Refurbishment:** Refers to the process of renovating, restoring, or upgrading an existing structure to improve its functionality, aesthetics, and efficiency. It may involve structural repairs, interior redesign, energy efficiency upgrades, or modernization of building systems such as plumbing, electrical, and HVAC. Refurbishment can range from minor renovations to extensive overhauls, preserving the building's integrity while adapting it to contemporary standards. This process enhances property value, extends the building's lifespan, and can contribute to sustainability by reducing waste and energy consumption compared to new construction.

**Circular Economy:** Refers to an economic model designed to minimize waste and maximize resource efficiency by keeping materials, products, and resources in use for as long as possible. By reusing, repairing, re-manufacturing, and recycling them. It contrasts with the traditional linear economy, which follows a "take-make-dispose" approach.

**Compliance:** Refers to the act of adhering to laws, regulations, industry standards, and internal policies that govern an organization's operations. This includes compliance with legal requirements (such as labor laws, data protection regulations, and financial reporting standards), ethical guidelines, and contractual obligations. Effective compliance helps businesses mitigate risks, avoid legal penalties, protect their reputation, and build trust with stakeholders.

**Concession:** A concession agreement is a legal contract between a government or a property owner (the grantor) and a private company (the concessionaire), where the concessionaire is given the right to operate, manage, or develop a service, facility, or resource for a specified period. In exchange, the concessionaire typically agrees to pay fees, a percentage of revenue, or meet other contractual obligations. This agreement is often used for infrastructure projects, such as toll roads, airports, or public utilities, where the private sector takes on the risk and investment for construction or operations, with the government or public body retaining ownership or control. The goal is to leverage private investment while ensuring public service or resource availability.

**Concession Grant:** A concession grant is a financial arrangement where the grantor provides a lump sum payment to the concessionaire. **Concession / License Fees + Percentage of Revenues:** This is another common payment structure where the concessionaire pays a fee and a percentage of the revenues generated from the project.

**EW:** Refers to Energy from Waste (EW), a process where non-recyclable waste is burned to create heat, which is then used to generate electricity. It's a way to reduce the amount of trash going to landfills while also producing a source of renewable energy.

**Electric Carsharing:** Electric carsharing is a mobility service that allows users to rent electric vehicles (EVs) on a short-term basis, typically through a mobile app. It promotes sustainable transportation by reducing emissions, traffic congestion, and the need for private car ownership. Carsharing fleets consist of fully electric or plug-in hybrid vehicles, charged at designated stations or through home charging. Users can pick up and drop off cars at fixed locations or within a designated area in free-floating systems.

**Energy Efficiency:** In the context of public infrastructure, energy efficiency refers to the implementation of technologies, designs, and policies that reduce energy consumption while maintaining or improving service delivery. This includes optimizing lighting, heating, cooling, and transportation systems in public buildings, streets, and utilities. Energy-efficient infrastructure involves smart grids, LED street lighting, high-performance public transit, and sustainable water treatment facilities.

**Energy Storage:** refers to the capture and retention of energy for later use, helping balance supply and demand in power systems. It enables efficient utilization of renewable energy sources like solar and wind, enhances grid stability, and provides backup power during outages. Common energy storage technologies include batteries (such as lithium-ion and solid-state), pumped hydro, flywheels, compressed air, and hydrogen storage. These systems play a crucial role in improving energy efficiency, reducing reliance on fossil fuels, and supporting the transition to a more sustainable energy future.

**Energy Transmission Line:** An energy transmission line is a high-voltage infrastructure used to transport electricity over long distances from power generation sources to substations and distribution networks. These lines, typically made of conductive materials like aluminum or copper, form the backbone of the electrical grid, enabling efficient energy transfer while minimizing power losses. Transmission lines can be overhead (supported by towers) or underground, with alternating current (AC) and direct current (DC) systems used depending on distance and efficiency needs.

**Equity:** Equity represents the ownership interest in a company. It is the residual value of assets after deducting liabilities. For companies, equity includes common stock, retained earnings, and additional paid-in capital. It reflects the shareholders' stake in the business and can be increased through profits or investments. Equity is an important measure of a company's financial health and is commonly used in valuation and investment analysis.

**Extrusion:** An extruded product is a long piece of aluminum that has been shaped and treated to be used for structural or decorative purposes. The process of creating an extrusion involves heating a billet of aluminum alloy, forcing it through a die, and then cooling the resulting piece. A large profile is a profile that is larger than the normal profile used in processes industries such as the construction, public/private transportation, and commercial railway/freight industries.

**Forming Systems:** Refers to the temporary or permanent molds used to shape and support concrete until it hardens and gains sufficient strength to be self-supporting. These systems are essential in cast-in-place concrete construction and are designed to provide stability, maintain the desired shape, and ensure the quality of the final structure.

**Grantor:** In the context of public infrastructure projects, a grantor refers to the government entity that grants, conveys, or transfers rights, assets, or privileges to an infrastructure developer, known as the grantee.

**Hospital Infrastructure:** Hospital infrastructure refers to the physical and organizational framework that supports healthcare delivery within a medical facility. It includes essential components such as buildings, patient care units, operating rooms, emergency departments, intensive care units (ICUs), diagnostic labs, and medical equipment. Additionally, it encompasses utilities like water supply, electricity, ventilation, sanitation, and digital health systems.

**Hydraulic:** Refers to the use of liquids, typically oil or water, to transmit power or generate force through pressure. In hydraulic systems, fluid is pumped through sealed channels to move pistons or actuators, enabling tasks like lifting, pushing, or rotating heavy objects with precision. This principle is widely used in machinery such as car brakes, construction equipment, and industrial machines, where efficient, controlled force is essential.

**Industrial Infrastructure:** Refers to the essential facilities, systems, and services that support manufacturing, production, and industrial activities. It includes factories, warehouses, power plants, transportation networks, water and waste management systems, and telecommunication networks. Additionally, it encompasses utilities such as electricity, gas, and raw material supply chains.

**Luminaire:** A luminaire is a complete lighting fixture that includes a light source, housing, electrical components, and mounting hardware. It is designed to control and direct light efficiently while providing protection and aesthetics. Luminaires come in various types, including ceiling lights, wall-mounted fixtures, streetlights, and industrial lighting systems, and can use different technologies such as LED, fluorescent, or incandescent bulbs. They play a crucial role in illumination for residential, commercial, and public spaces, enhancing visibility, safety, and ambiance.

**Maritime Infrastructure:** Refers to the physical and organizational structures that support maritime transportation, trade, and activities. It includes ports, harbors, docks, shipyards, navigation channels, breakwaters, lighthouses, and offshore structures such as oil rigs and wind farms. These facilities enable the movement of goods and people, support commercial shipping, naval operations, and fishing industries, and contribute to global trade and economic growth.

**Metro Infrastructure:** Refers to the physical and operational systems that support urban rapid transit networks. It includes subway tunnels, elevated tracks, stations, signaling systems, power supply, ventilation, and rolling stock (trains). Additionally, it encompasses maintenance facilities, ticketing systems, and passenger amenities.

**Office Infrastructure:** Refers to the physical and technological facilities that support a functional and efficient workplace. It includes buildings, workspaces, furniture, communication networks, IT systems, security measures, utilities (electricity, water, HVAC), and amenities such as conference rooms, cafeterias, and parking.

**Private Equity:** Refers to investments made directly into private companies or in public companies with the intent of taking them private. These investments are typically made by private equity firms, institutional investors, or high-net-worth individuals, aiming to generate high returns through strategic management, operational improvements, and eventual exit strategies such as selling the company or taking it public.

**Photovoltaic Plant:** A large-scale solar power facility that converts sunlight into electricity using photovoltaic panels. These plants consist of numerous solar modules, inverters, and grid connections to generate and distribute renewable energy efficiently. PV plants can be ground-mounted or integrated into buildings and are a key component of sustainable energy systems, helping reduce reliance on fossil fuels and lower carbon emissions while providing clean electricity to homes, businesses, and industries.

**Public-Private Partnerships (PPP):** A Public-Private Partnership (PPP) is a collaborative arrangement between government entities and private sector organizations. It combines the resources, expertise, and efficiency of both sectors to deliver public infrastructure, services, or projects. This partnership typically involves sharing risks and responsibilities, with the aim of leveraging each party's strengths to achieve mutual benefits and better outcomes for the public.

**Railroad Infrastructure:** Refers to the physical and technical systems that support rail transportation, enabling the movement of passengers and freight. It includes tracks, bridges, tunnels, stations, signaling systems, and maintenance facilities. Key components such as rail ties, ballast, overhead electrification, and switching mechanisms ensure safe and efficient train operations. Modern railroad infrastructure incorporates high-speed rail, automated signaling, and energy-efficient designs to improve connectivity and sustainability. Proper maintenance and investment in rail infrastructure are crucial for enhancing transportation efficiency, safety, and economic development.

**Residential Buildings:** Residential buildings are structures designed for people to live in, ranging from single-family homes to multi-story apartment complexes. They provide shelter, comfort, and essential living spaces such as bedrooms, kitchens, bathrooms, and living areas. Residential buildings vary in architectural styles, materials, and sizes, often incorporating modern amenities, energy-efficient systems, and security features.

**Solar Panels:** Devices that convert sunlight into electricity using photovoltaic (PV) cells. Made from semiconductor materials like silicon, they absorb sunlight and generate direct current (DC) electricity, which can be converted into alternating current (AC) for use in homes, businesses, and industries. Solar panels are widely used for renewable energy generation, reducing reliance on fossil fuels and lowering carbon emissions.

**Subcontractors:** Refers to a company or individual hired by the general contractor (or main contractor) to perform specific tasks or specialized work on a construction project. Subcontractors typically have expertise in a particular trade and are responsible for completing portions of the overall project under the supervision of the general contractor.

**Toll Roads:** Highways or expressways where drivers pay a fee for access, helping fund construction, maintenance, and infrastructure improvements. Tolls can be collected manually at booths, electronically via transponders, or through automated license plate recognition systems. These roads are often used to reduce congestion, provide faster travel routes, and support transportation infrastructure without relying solely on public funding.

**Tunnel Infrastructure:** Refers to underground passageways designed for transportation, utilities, or drainage systems. Tunnels facilitate the movement of vehicles, trains, pedestrians, and essential services such as water, gas, and telecommunications beneath natural or urban obstacles like mountains, rivers, and cities. Constructed using advanced engineering techniques, they enhance connectivity, reduce congestion, and improve efficiency in transportation and utility networks.

**Vertiports:** Refers to a specialized airport designed for vertical takeoff and landing (VTOL) aircraft, such as electric air taxis and drones. These facilities are typically smaller, more compact than traditional airports, tailored to accommodate the needs of urban air mobility by providing takeoff, landing, and charging infrastructure for these innovative, eco-friendly aircraft.

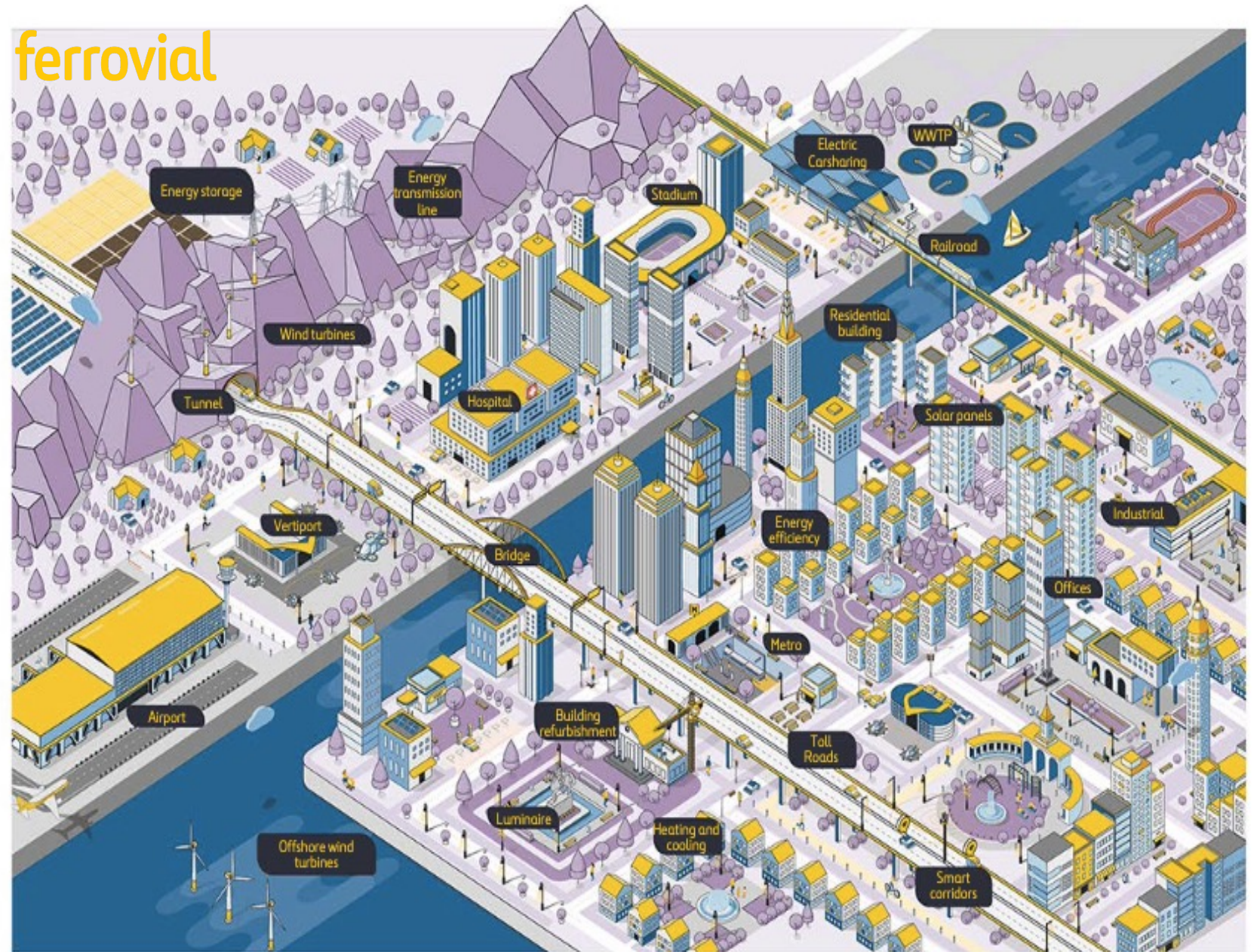
**Waste Management:** Refers to the collection, transportation, processing, recycling, and disposal of waste materials in an efficient and environmentally responsible manner. It includes various methods such as landfill disposal, incineration, composting, and recycling to minimize environmental impact and promote sustainability. Effective waste management helps reduce pollution, conserve resources, and maintain public health by ensuring proper handling of household, industrial, and hazardous waste.

**Wastewater Treatment Plant (WWTP):** A facility designed to treat and process wastewater from households, industries, and businesses before releasing it back into the environment. It removes contaminants, organic matter, and harmful substances through physical, chemical, and biological treatment processes. Key stages include primary treatment (sediment removal), secondary treatment (biological decomposition of pollutants), and tertiary treatment (advanced filtration and disinfection). WWTP infrastructure refers to the physical and technological systems that support the treatment and management of wastewater. It includes key components such as intake systems, screening facilities, sedimentation tanks, aeration basins, biological treatment units, filtration systems, disinfection facilities, sludge processing units, and effluent discharge structures. Advanced WWTP infrastructure may also incorporate energy recovery systems, membrane filtration, and water reuse technologies.

**Wind Turbines:** Wind turbines are structures that convert wind energy into electricity through the use of rotating blades connected to a generator. As the wind turns the blades, kinetic energy is transformed into mechanical power, which is then converted into electrical energy. Wind turbines come in various sizes and types, including onshore and offshore models, and are a key component of renewable energy systems.

## BUSINESS MODEL

Ferrovial is a global infrastructure company focused on the development and operation of infrastructure, with main presence in the transport sector. The company business model is based on an integrated platform with the objective of developing infrastructure projects with high value creation. Ferrovia's activity is carried out through four business units: Toll Roads, Airports, Construction and Energy.



Is focused on the development of congestion-relief solutions, particularly in North America. The division leverages its expertise in transportation infrastructure engineering to develop greenfield assets while minimizing risk and benefiting from synergies through our construction subsidiary, and through the capability to operate and manage the concession for the remaining life-cycle of the asset.

Source: Ferrovia 2023 Annual Report

It facilitates air transport by improving people's connectivity. The company has more than 25 years of operational expertise managing airports worldwide. It is currently developing the New Terminal One (NTO) concession at JFK airport which is expected to open by 2026. Recently, the company announced the planned divestment of its 25% stake in Heathrow airport, aligned with company's capital allocation strategy of rotating mature assets.


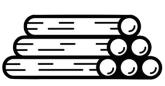














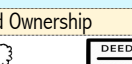





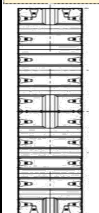
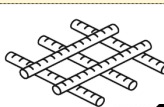


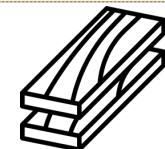
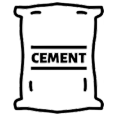

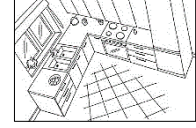








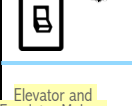














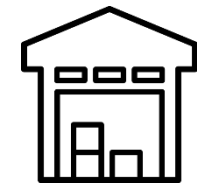








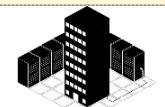




























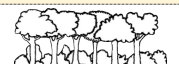



















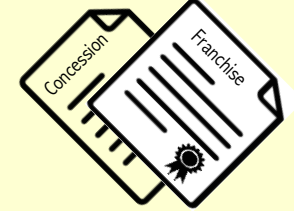


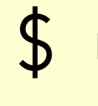
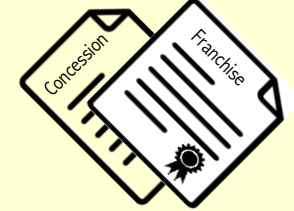


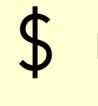
The energy division is focused on the development of projects for the energy transition. The company is dedicated to providing innovative solutions for the promotion, construction, and operation of energy generation and transmission infrastructures, as well as for energy efficiency.

Is a key pillar of Ferrovia's value creation. It supports all the concession businesses with end-to-end technical, engineering and production capabilities making the company more competitive when bidding new infrastructure projects. Throughout the development of a project, the division is able to manage risks from the bidding and design phase up to the project delivery.



Markets		1	Upstream		2	Midstream	3	Downstream
Three Markets. The building and construction industry serves three consumer markets: (1) homebuilding for single-family residences, (2) commercial real estate for business enterprises, such as retail stores, office buildings, multifamily residential developments, hospitals, and industrial facilities, and (3) infrastructure, which entails the construction of large-scale public works of a government or business enterprise, such as roads, bridges, airports, and utility systems. The industry consists of three sectors: upstream (land, materials and equipment), midstream (construction), and downstream (sales and financing).		Land, Materials and Equipment. The upstream sector of the building and construction industry focuses on land, materials and equipment used to build homes, buildings and infrastructure. • Land Acquisition and Lot Development. This sector involves purchasing undeveloped land that will be developed into finished lots for residential and commercial building construction, obtaining permits, sub-dividing land into parcels, and grading and clearing the land. • Raw Materials. Various raw materials are used in the building and construction industry, such as metal, trees, stone, crude oil, and sand that will ultimately be fabricated or refined into building materials (e.g., aggregates, bricks, forming systems, cement, plastics, ceramic facing and floor tiles, composites, glass, metal, asphalt, precast concrete, sealants, paint and coatings, adhesives, and waterproofing compounds and wood).		Materials Fabrication, Heavy Equipment, Tools, Work Vehicles, and Appliances. The upstream sector also encompasses the procurement of heavy construction equipment (e.g., bulldozers, excavators, and cranes), tools such as drills, hammers, and jackhammers, work trucks and other vehicles, and household appliances. Transportation and Distribution. The building and construction industry relies heavily on the transportation and distribution/dealer sector, which are vital in acquiring, financing, transporting, and warehousing the raw materials and finished building materials, heavy equipment, tools, and vehicles and moving them to construction sites.	Leading players in key segments of the Upstream sector are: • Raw materials producers: U.S. Steel, Nucor, Schnitker Steel, Commercial Metals • Materials fabricators: Novelis, Norsk Hydro • Heavy Equipment Makers: Caterpillar, John Deere • Tool Companies: Illinois Tool Works, Stanley Black & Decker, Makita, TTI (Milwaukee) • Transportation Companies: Union Pacific, BNSF, CSX, Norfolk Southern • Distributors: Wesco International, Grainger, Fastenal, thyssenkrupp, United Construction	The Midstream sector encompasses the construction of residential homes, commercial real estate buildings and facilities, and infrastructure. The construction industry is a vital part of the U.S. economy, accounting for 4.3% of U.S. Gross Domestic Product (GDP) by itself, ranking twelfth amongst all industries. As of January 2023, the U.S. construction market was valued at \$1.96 trillion. Approximately 7.8 million people are employed by the construction industry (2.9% of the U.S. workforce), including employees and workers of general contractors, subcontractors, government agencies, architectural and engineering firms, and lenders and title insurance companies.	Leading players in key Midstream segments are: • Residential Construction: D.R. Horton, Lennar, PulteGroup, NVR, Taylor Morrison, Toll Brother • Commercial Construction: Bechtel, Turner, JE Dunn Gilbane, Whiting-Turner, Fluor, DPR, Skanska • Infrastructure Construction: Bechtel, Fluor, Cintra/Ferrovial • Engineering Firms: Bechtel, Fluor, Black & Veatch, Balfour Beatty • Architectural Firms: Gensler, Perkins and Will, HKS, Perkins Eastman • Construction Lenders: Bank OZK, Goldman Sachs, Wells Fargo Bank, UMB, Starwood Property Trust	The largest industry in the U.S. is the real estate, renting and leasing industry, which contributes to 13% of the GDP. This Downstream sector encompasses the process of taking a completed home, commercial building, or infrastructure facility and putting it in the hands of an individual homebuyer, commercial enterprise, government agency (private government-sponsored contractor), or utility owner. In other words, this sector focuses on the sale, renting and leasing of homes and commercial real estate and the maintenance and furnishing of these properties and infrastructure projects. Leading players of key Downstream segments are: • Residential Real Estate Brokers/Leasing Agents: Coldwell Banker Real Estate, Century 21, RE/Max, Keller Williams Real Estate • Commercial Real Estate Brokers/Leasing Agents and Property Managers: CBRE, Jones Lang LaSalle (JLL), Cushman & Wakefield, Sodexo, Walker & Dunlop • Infrastructure Operation and Maintenance: Ferrovial/Cintra, Kiewit, Plenary Infrastructure • Mortgage Lenders: Freedom Mortgage, Rocket Mortgage, Loan Depot, United Shore, PennyMac, Caliber Home Loans • Insurance Companies: Nationwide, USAA, Allstate, State Farm
HOMEBUILDING  General. The homebuilding market in the U.S. consists of the construction and sale of residential homes across the country.  Geographic Markets. The U.S. homebuilding market is subdivided into multiple regions: Northwest, West, Southwest, Midwest, South Central, Northeast, East, and Southeast.  Homebuyer Categories. Homebuilders market and sell a broad range of homes to discrete categories of homebuyers, including:  • Entry-level or First-time Homebuyers on a tight budget. Because buyers are focused on affordability, these homes are typically smaller in size and have basic finishes and features. • Move-up Buyers, who are looking to upgrade from their first home to a larger, more luxurious residence. This category of buyer accounts for the majority of home sales. These homes often have more square footage, higher-quality finishes, and more amenities than entry-level homes. • Active Adult focuses on older homebuyers who are looking for homes that cater to their unique lifestyle needs. These homes may be smaller than traditional homes, but often feature one-level living, low-maintenance exteriors, and amenities such as community centers, swimming pools, and fitness centers. • Luxury appeals to buyers in the search of higher-end move-up and luxury homes. These homes often have larger square footage, unique architectural details, premium materials and finishes, and advanced technology and amenities.		METAL PRODUCTION		STRUCTURAL STEEL AND OTHER METAL FABRICATION		HOMEBUILDING MARKET		INDIVIDUALS
		WOOD PRODUCTION		LUMBER AND TIMBER FABRICATION				
		STONE, CLAY AND ROCK PRODUCTION		CONCRETE, BRICK AND STONE FABRICATION				
COMMERCIAL REAL ESTATE  General. Commercial real estate (CRE) is real estate (i.e., land or buildings) intended to generate a profit, either from capital gains or rental income. Also known as commercial property, investment property or income property, CRE includes office buildings, medical centers, hotels, shopping malls, retail stores, multifamily housing buildings, farmland, warehouses, and parking garages.  Commercial Real Estate Categories. CRE is commonly divided into seven categories:  • Multifamily: includes apartment complexes or high-rise apartment buildings. Generally, anything larger than a fourplex is considered commercial real estate. • Office buildings: includes single-tenant properties, small professional office buildings, downtown skyscrapers, and everything in between. • Retail Shops/Restaurants: includes pad sites on highway frontages, single-tenant retail buildings, inline multi-tenant retail, small neighborhood shopping centers, larger community centers with grocery store anchor tenants, lifestyle centers that blend both indoor and outdoor shopping, "power centers" with large anchor stores such as Best Buy, PetSmart, OfficeMax, and shopping malls that usually house many indoor stores. • Industrial: includes manufacturing plants, warehouses, large R&D facilities, cold storage, distribution centers, and data centers. • Hospitality: includes hotels, public houses, restaurants, cafes, stadiums, sports venues, nightclubs, amusement parks, and movie theaters. • Healthcare: includes medical centers, hospitals, nursing homes, and dispensaries. • Education: includes schools, colleges, and universities.		CRUDE OIL AND NATURAL GAS PRODUCTION AND REFINEMENT		PETROCHEMICAL PRODUCTS MANUFACTURING		COMMERCIAL REAL ESTATE DEVELOPMENT MARKET		COMMERCIAL ENTERPRISES
		SAND PRODUCTION		GLASS AND WINDOW MAKING				
INFRASTRUCTURE  Hard infrastructure encompasses physical systems that are critical to running a modern, industrialized economy, including transport systems such as roads and highways, and telecommunications services, such as telephone and broadband networks.  The key sectors in the hard infrastructure construction market are: • Railways and Subways (e.g., structures, buildings, land, and equipment to support the rail lines) • Roads (e.g., highways, public roads, including toll roads, tunnels, and bridges) • Electricity and Power (e.g., coal-, nuclear- and gas-fired electrical generation facilities, solar and wind energy farms, hydroelectric facilities, and distribution networks) • Water and sewerage (e.g., sewers, water treatment plants, pumping stations, reservoirs, and distribution systems) • Airports (e.g., hangars, terminals, control towers, runways, and parking garages) • Prisons • Street lighting		ELECTRICAL AND OTHER COMPOENNTS PRODUCTION		ELECTRICAL GOODS, TOOLS, HEAVY MACHINERY AND WORK VEHICLE ASSEMBLY		INFRASTRUCTURE DEVELOPMENT MARKET		GOVERNMENT CONCESSIONAIRES, FRANCHISEES AND LICENSEES
		LAND OWNERSHIP		LOT DEVELOPMENT		ferrovial cintra ferrovial construction ferrovial airports ferrovial services ferrovial energy		



U.S. Building and Construction Industry: Simplified													
Markets		1 Upstream			2 Midstream			3 Downstream					
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<p><b>COMMERCIAL REAL ESTATE</b></p> <p>General. Commercial real estate (CRE) is real estate (i.e., land or buildings) intended to generate a profit, either from capital gains or rental income. Also known as commercial property, investment property or income property, CRE includes office buildings, medical centers, hotels, shopping malls, retail stores, multifamily housing buildings, farmland, warehouses, and parking garages.</p> <p>Commercial Real Estate Categories. CRE is commonly divided into seven categories:</p> <ul style="list-style-type: none"><li>Multifamily: includes apartment complexes or high-rise apartment buildings. Generally, anything larger than a fourplex is considered commercial real estate.</li><li>Office buildings: includes single-tenant properties, small professional office buildings, downtown skyscrapers, and everything in between.</li><li>Retail Shops/Restaurants: includes pad sites on highway frontages, single-tenant retail buildings, inline multi-tenant retail, small neighborhood shopping centers, larger community centers with grocery store anchor tenants, lifestyle centers that blend both indoor and outdoor shopping, "power centers" with large anchor stores such as Best Buy, PetSmart, OfficeMax, and shopping malls that usually house many indoor stores.</li><li>Industrial: includes manufacturing plants, warehouses, large R&amp;D facilities, cold storage, distribution centers, and data centers.</li><li>Hospitality: includes hotels, public houses, restaurants, cafes, stadiums, sports venues, nightclubs, amusement parks, and movie theaters.</li><li>Healthcare: includes medical centers, hospitals, nursing homes, and dispensaries.</li><li>Education: includes schools, colleges, and universities.</li></ul>		<p><b>HOMEBUILDING</b></p> <p>Entry-level</p>  <p>Active Adult</p>  <p>Move-up</p>  <p>Luxury</p>  <p><b>COMMERCIAL REAL ESTATE</b></p> <p>Multifamily</p>  <p>Retail</p>  <p>Office</p>  <p>Industrial</p>   <p>Hospitality</p>    <p>Health</p>  <p>Education</p>  <p><b>INFRASTRUCTURE</b></p> <p>Transportation</p>      <p>Utilities</p>     <p>Prisons</p>  <p>Pipelines</p>  <p>Container Ports</p>  <p>Street Lighting</p>  <p><b>BOND</b></p>  <p><b>PERMIT</b></p>  			<p><b>INDIVIDUALS</b></p> <p>Home Sales</p>   <p>Mortgage</p>  <p>Home Insurance</p>  <p>Home Consumption</p>  								
<p><b>INFRASTRUCTURE</b></p> <p>Hard infrastructure encompasses physical systems that are critical to running a modern, industrialized economy, including transport systems such as roads and highways, and telecommunications services, such as telephone and broadband networks.</p> <p>The key sectors in the hard infrastructure construction market are:</p> <ul style="list-style-type: none"><li>Railways and Subways (e.g., structures, buildings, land, and equipment to support the rail lines)</li><li>Roads (e.g., highways, public roads, including toll roads, tunnels, and bridges)</li><li>Electricity and Power (e.g., coal-, nuclear- and gas-fired electrical generation facilities, solar and wind energy farms, hydroelectric facilities, and distribution networks)</li><li>Water and sewerage (e.g., sewers, water treatment plants, pumping stations, reservoirs, and distribution systems)</li><li>Airports (e.g., hangars, terminals, control towers, runways, and parking garages)</li><li>Prisons</li><li>Street lighting</li></ul>		<p><b>REAL PROPERTY</b></p> <p>Land Ownership</p>   <p>Lot Development</p>   			<p><b>COMMERCIAL ENTERPRISES</b></p> <p>Property Leasing/Management</p>   <p>Commercial Insurance</p>   <p>CRE Consumption</p>         <p>Rent</p>   								
<p><b>GOVERNMENT CONCESSIONAIRES, FRANCHISEES, AND LICENSEES</b></p> <p>Operation</p>  <p>Maintenance</p>   <p>Fees and Royalties</p> 		<p><b>GOVERNMENT CONCESSIONAIRES, FRANCHISEES, AND LICENSEES</b></p> <p>Operation</p>  <p>Maintenance</p>   <p>Fees and Royalties</p> 											



Markets	1	Upstream	2	Midstream	3	Downstream
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The upstream sector also encompasses the procurement of heavy construction equipment (e.g., bulldozers, excavators, and cranes), tools such as drills, hammers, and jackhammers, work trucks and other vehicles, and household appliances.</p> <p>Transportation and Distribution. The building and construction industry relies heavily on the transportation and distribution/dealer sector, which are vital in acquiring, financing, transporting, and warehousing the raw materials and finished building materials, heavy equipment, tools, and vehicles and moving them to construction sites.</p> <p>Leading players in key segments of the Upstream sector are:</p> <ul style="list-style-type: none"><li>Raw materials producers: U.S. Steel, Nucor, Schnitker Steel, Commercial Metals</li><li>Materials fabricators: Novelis, Norsk Hydro</li><li>Heavy Equipment Makers: Caterpillar, John Deere</li><li>Tool Companies: Illinois Tool Works, Stanley Black &amp; Decker, Makita, TTI (Milwaukee)</li><li>Transportation Companies: Union Pacific, BNSF, CSX, Norfolk Southern</li><li>Distributors: Wesco International, Grainger, Fastenal, thyssenkrupp, United Construction</li></ul> <p><b>FABRICATION AND ASSEMBLY</b></p> <p><b>Structural Steel and Other Metal Materials</b></p> <p>Aluminum Products: ALSCO, Novelis, RYERSON, Hydro, Steel Products: Tenaris, TIMKEN, United States Steel, RYERSON, NUCOR, Forming Systems: Western Forms, meva, FFI, WTE</p> <p><b>Lumber and Timber</b></p> <p>Weyerhaeuser, MiTek, IDAHO FOREST GROUP, SIERRA PACIFIC INDUSTRIES, HAMPTON LUMBER, Georgia-Pacific, CANFOR, West Fraser</p> <p><b>Concrete, Brick and Stone</b></p> <p>Concrete: PETERSON MANUFACTURING COMPANY, sidley, EASI-SET BUILDINGS, PLASTI CHEMIE, Vertriebsgesellschaft mbH, Brick: Classic Packaging Company, General Shale, ACME BRICK, Stone and Quartz: Vulcan Materials Company, Martin Marietta, LAFARGE, Lehigh Hanson, HeidelbergCement Group, CEMEX</p> <p><b>Petrochemical Products</b></p> <p>Asphalt and Roofing: Johns Manville, CARLISLE, Insulation: Johns Manville, DUPONT, Johns Manville, Dow, CertainTeed, Shell, INEOS, DOW, B- BASF, LYB, LyondellBasell, MOHAWK, NOVA Chemicals, Paint/Coatings: NIPPON PAINT, AkzoNobel, Benjamin Moore, SHERWIN-WILLIAMS, D- BASF, We create chemistry, Sealants: GE, DUPONT</p> <p><b>Glass and Windows</b></p> <p>Auto: FUYAO GLASS AMERICA, GENTEX CORPORATION, Safelite, AutoGlass, SMR, Windows, Doors, Facades: pella, SIERRA PACIFIC, VIRACON, JELD-WEN, Andersen, Kolbe, Optical Fiber: CORNING, TTI, Housewares: Anchor Hocking, Gallo Glass</p> <p><b>Electrical Goods, Tools, Heavy Machinery, Vehicles</b></p> <p>Electrical Goods Makers: SIEMENS, HUBBELL, EATON, Schneider Electric, PHILIPS, Tools Firms: EMERSON, ITW, Bosch, DREMEL, DEWALT, STANLEY, CRAFTSMAN, Milwaukee, Ryobi, Whirlpool, Electrolux, Haier, Appliance Makers: SAMSUNG, LG, Heavy Machine &amp; Vehicle Makers: CATERPILLAR, JOHN DEERE, Kubota, VOLVO, Construction Equipment: Ford, HONDA, STELLANTIS, NISSAN, TOYOTA, Elevator and Escalator Makers: thyssenkrupp, Schindler, OTIS, KONE, MITSUBISHI ELECTRIC</p> <p><b>Heavy Machinery and Work Vehicle Dealers</b></p> <p>Heavy Machinery: JOHN DEERE, UNITED Construction &amp; Forestry, Work Vehicles: RITCHIE BROS. Auctioneers, United Rentals, Cleveland Brothers, CAT, RUSH TRUCK CENTERS, INTERNATIONAL, SUN STATE, LAURENCE TRANSPORTATION SERVICES</p>	<p>The Midstream sector encompasses the construction of residential homes, commercial real estate buildings and facilities, and infrastructure. The construction industry is a vital part of the U.S. economy, accounting for 4.3% of U.S. Gross Domestic Product (GDP) by itself, ranking twelfth amongst all industries. As of January 2023, the U.S. construction market was valued at \$1.96 trillion. Approximately 7.8 million people are employed by the construction industry (2.9% of the U.S. workforce), including employees and workers of general contractors, subcontractors, government agencies, architectural and engineering firms, and lenders and title insurance companies.</p> <p>Leading players in key Midstream segments are:</p> <ul style="list-style-type: none"><li>Residential Construction: D.R. Horton, Lennar, PulteGroup, NVR, Taylor Morrison, Toll Brothers</li><li>Commercial Construction: Bechtel, Fluor, Cintra/Ferrovial, Engineering Firms: Bechtel, Fluor, Black &amp; Veatch, Balfour Beatty</li><li>Architectural Firms: Gensler, Perkins and Will, HKS, Perkins Eastman</li><li>Construction Lenders: Bank OZK, Goldman Sachs, Wells Fargo Bank, UMB, Starwood Property Trust</li></ul> <p><b>HOMEBUILDING</b></p> <p>Lennar, Toll Brothers, Meritage Homes, PulteGroup, Taylor Morrison, NVR, Clayton Properties Group, LSI Homes, D-R Horton, kb HOME</p> <p><b>COMMERCIAL REAL ESTATE</b></p> <p>Multifamily: MILL CREEK, PEOPLE • PLACES • RELATIONSHIPS, ALLIANCE RESIDENTIAL COMPANY, Blackstone Real Estate Income Trust, CLAYTON Building Solutions, GREYSTAR, Trammell Crow Company, RELATED, DHI COMMUNITIES by D-R Horton, Quatterra</p> <p>Retail: SIMON MALLS, S I T E, Brookfield Properties, Westfield, KIMCO</p> <p>Office: Blackstone Real Estate Income Trust, PROLOGIS, JLL, CBRE, Hines, CBRE, CLARION PARTNERS, TISHMAN SPEYER, PROLOGIS</p> <p>Industrial: LIBERTY PROPERTY TRUST, STARWOOD CAPITAL GROUP, Blackstone Real Estate Income Trust, CBRE, CLARION PARTNERS, TISHMAN SPEYER, PROLOGIS</p> <p>Hospitality: IHG, SERVICE PROPERTIES TRUST, PARK HOTELS &amp; RESORTS, THE CARLYLE GROUP, HOST HOTELS &amp; RESORTS, Blackstone Real Estate Income Trust, Hospitality Properties Trust, RYMAN, a REAL ESTATE INVESTMENT TRUST</p> <p>Health: Catholic Church-Controlled, Trinity Health, Ascension, CommonSpirit, VA, Lifepoint Health, HCA Healthcare, U.S. Department of Veterans Affairs</p> <p>Education: HARRISON STREET, GREYSTAR, AMERICAN CAMPUS COMMUNITIES, LANDMARK PROPERTIES, VESPER HOLDINGS</p> <p><b>INFRASTRUCTURE</b></p> <p>ferrovial, SKANSKA, Turner, BECHTEL, AECOM, Balfour Beatty, Kiewit, FLUOR</p>	<p>The largest industry in the U.S. is the real estate, renting and leasing industry, which contributes to 13% of the GDP. 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In other words, this sector focuses on the sale, renting and leasing of homes and commercial real estate and the maintenance and furnishing of these properties and infrastructure projects.</p> <p>Leading players of key Downstream segments are:</p> <ul style="list-style-type: none"><li>Residential Real Estate Brokers/Leasing Agents: Coldwell Banker Real Estate, Century 21, RE/MAX, Keller Williams Real Estate</li><li>Commercial Real Estate Brokers/Leasing Agents and Property Managers: CBRE, Jones Lang LaSalle (JLL), Cushman &amp; Wakefield, Sodexo, Walker &amp; Dunlop</li><li>Infrastructure Operation and Maintenance: Ferrovial/Cintra, Kiewit, Plenary Infrastructure</li><li>Mortgage Lenders: Freedom Mortgage, Rocket Mortgage, Loan Depot, United Shore, PennyMac, Caliber Home Loans</li><li>Insurance Companies: Nationwide, USAA, Allstate, State Farm</li></ul> <p><b>INDIVIDUALS</b></p> <p><b>Home Sales</b></p> <p>Realty Agencies: RE/MAX, Zillow, kw KELLER WILLIAMS, HOMESERVICES OF AMERICA, COLDWELL BANKER, Title Insurers: Chicago Title, DH1 TITLE AGENCY, LENNAR TITLE, OLD REPUBLIC TITLE, Fidelity National Title, Home Lenders: CHASE, UNITED SHORE, Rocket Mortgage, Bank of America, TRUIST, WELLS FARGO</p> <p><b>Home Insurance</b></p> <p>State Farm, Allstate, AIG, USAA, Liberty Mutual, GEICO, Nationwide, Amica, TRAVELERS, Progressive</p> <p><b>Home Consumption</b></p> <p>Home Decor: Target, Walmart, HomeGoods, Furniture Makers: SMITH STICKLEY, Bassetts, Furniture Retailers: Ashley, RC Willey, Jordan's, Pottery Barn, Appliance Retailers: Amazon, Lowe's, Wayfair, Costco, Best Buy</p> <p><b>COMMERCIAL ENTERPRISES</b></p> <p><b>Property Brokerage</b></p> <p>TRANSWESTERN, BERKADIA, CUSHMAN &amp; WAKEFIELD, NEWMARK, JLL, CBRE, NAI Global, AVISON YOUNG, MATTHEWS REAL ESTATE INVESTMENT SERVICES, STREAM, TCN WORLDWIDE REAL ESTATE SERVICES</p> <p><b>Property Management</b></p> <p>sodexo, ISS, CBRE, savills, Cushman &amp; Wakefield, NEWMARK, Colliers International, WALKER &amp; DUNLOP, Marcus &amp; Millichap</p> <p><b>Workplace Furniture</b></p> <p>Steelcase, urbanoffice, HAWORTH, MillerKnoll, HNI, Humanscale, Autonomus, Commercial Insurance: TRAVELERS, Liberty Mutual, AIG, Nationwide, CHUBB, HISCOCX, Allstate, GATEWAY, Gen Re, USLI, Berkshire Hathaway, Berkshires Hathaway Insurance Companies, Hotel Management: Marriott, Hilton, INTERCONTINENTAL, WYNDHAM, HYATT</p> <p><b>GOVERNMENT CONCESSIONAIRES, FRANCHISEES, AND LICENSEES</b></p> <p><b>Operation and Maintenance</b></p> <p>Toll Roads: cintra, acciona, Plenary, VINCI, Meridiam, MACQUARIE, Transurban, Railroads: BNSF, CSX, JNS NORFOLK SOUTHERN, Telecom: AT&amp;T, verizon, T Mobile, xfinity, LUMEN, COX, Electric and Gas Utilities: DUKE ENERGY, DTE, Southern Company, exelon, EDISON INTERNATIONAL, Sempra Energy, NEXTERA ENERGY, SoCalGas, Prisons Management &amp; Training Corporation: MTC, CoreCivic, LASALLE CORRECTIONS, The GEO Group, Inc., Pipelines: dep Midstream, MPLX, PLAINS, KINDER MORGAN, ENERGY TRANSFER, Williams</p>		



Markets

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HOMEBUILDING

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- Move-up Buyers, who are looking to upgrade from their first home to a larger, more luxurious residence. This category of buyer accounts for the majority of home sales. These homes often have more square footage, higher-quality finishes, and more amenities than entry-level homes.
- Active Adult focuses on older homebuyers who are looking for homes that cater to their own lifestyle needs. These homes may be smaller than traditional homes, but often feature one-level living, low-maintenance exteriors, and amenities such as community centers, swimming pools, and fitness centers.
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- Healthcare: includes medical centers, hospitals, nursing homes, and dispensaries.
- Education: includes schools, colleges, and universities.

INFRASTRUCTURE

Hard infrastructure encompasses physical systems that are critical to running a modern, industrialized economy, including transport systems such as roads and highways, and telecommunications services, such as telephone and broadband networks.

The key sectors in the hard infrastructure construction market are:

- Railways and Subways (e.g., structures, buildings, land, and equipment to support the rail lines)
- Roads (e.g., highways, public roads, including toll roads, tunnels, and bridges)
- Electricity and Power (e.g., coal-, nuclear- and gas-fired electrical generation facilities, solar and wind energy farms, hydroelectric facilities, and distribution networks)
- Water and sewerage (e.g., sewers, water treatment plants, pumping stations, reservoirs, and distribution systems)
- Airports (e.g., hangars, terminals, control towers, runways, and parking garages)
- Prisons
- Street lighting

1

Land, Materials and Equipment.

The upstream sector of the building and construction industry focuses on land, materials and equipment used to build homes, buildings and infrastructure.

- Land Acquisition and Lot Development. This sector involves purchasing undeveloped land that will be developed into finished lots for residential and commercial building construction, obtaining permits, sub-dividing land into parcels, and grading and clearing the land.
- Raw Materials. Various raw materials are used in the building and construction industry, such as metal, trees, stone, crude oil, and sand that will ultimately be fabricated or refined into building materials (e.g., aggregates, bricks, forming systems, cement, plastics, ceramic facing and floor tiles, composites, glass, metal, asphalt, precast concrete, sealants, paint and coatings, adhesives, and waterproofing compounds and wood).

PRODUCTION

1

Metal

Metals are commonly used in construction due to their durability and strength to form structural components, pipework, cladding materials, and other components. The most widely used metal in construction is steel, which is an alloy made using iron, followed by aluminum, lead, iron, and copper (including brass). Metals are produced in an open-pit mine or primary form before being processed by fabrication companies (or divisions of the primary producer) into usable components and materials.

2

Wood

Hardwoods are commonly used in the construction of walls, ceilings, beams, and floors. Oak is the most popular because it is extremely durable and insect-resistant. Wood is energy efficient, its ability to conduct heat makes it a better insulator than steel (400 times) and concrete (15 times). Outside of making houses, wood is used to make furniture, packaging, tools, and artwork.

3

Stone, Clay and Rock

A quarry is an open-pit mine used to extract natural stone to produce building stone or dimension stone. In particular, stone, rock, gravel, sand, and construction aggregate, gravel, and/or slate is excavated from the ground in order to use them to produce material for construction or other uses.

4

Crude Oil and Natural Gas

Exploration/Production. Companies in this Refiners and Processors. Refiners sector focus on acquire millions of barrels of crude oil exploring for, and and natural gas from exploration and producing (by drilling production companies. The incoming oil or hydraulic fracturing), oil and gas are then transported by crude oil and natural pipelines to large storage tanks near gas from wells (i.e., the refineries, before being sent to borings) on land and refineries (crude oil) and processing offshore in resource plants (natural gas). There are 138 refineries in the U.S. refineries, many of which are in the world. The crude oil located along the Gulf of Mexico, and natural gas are refineries change crude oil, and then transported to oil processing plants separate natural gas from the crude oil or gas, into usable products for use to nearby oil refineries, and gas are then transported by pipeline to gas processing heating and generating electricity, (b) plants. Producers: Exxon Mobil, Chevron, bp, Conoco Shell, Refiners: Valero, Energy Transfer, Phillips 66, Marathon Petroleum

5

Sand

Silica sand is a major ingredient (75%) in the production of flat glass, ranging from windows to beer bottles. The purity of the silica sand used in glass production plays a role in determining the color, strength and clarity of the final product. Other primary materials in glass are soda, limestone, clarifying agents, coloring, and glazing glass. The production process consists of melting raw materials in a furnace, cooling the river of glass which will often be nearly 300 meters in length, cutting the cooled glass into large sheets.

6

Electrical and Other Components

Semiconductor Makers

Intel, AMD, TSMC, Samsung, SK Hynix, Micron, Qualcomm, NXP, STMicroelectronics, Renesas Electronics, STMicroelectronics

Other

Electronic Instruments and Controls

Electric and Wiring Equipment

Computer Networking Equipment

Communication Equipment

Computer Hardware

TRANSPORTATION

9

Railroads

U.S. Freight Transport by Mode

Top Railroads

BNSF Railway

Union Pacific Railroad

CSX Transportation

Norfolk Southern Railway

Canadian National Railway

Canadian Pacific/Kansas City Southern Railway

Lumber and Construction.

America's construction and lumber industries rely heavily on the country's six freight railroads to move lumber and wood products, including milled lumber and other construction panels, such as wood particle, which is used to make furniture. Each year, U.S. railroads haul approximately 420,000 carloads of lumber and wood products. Lumber is shipped on center beam flatcars, which can carry close to 200,000 pounds of lumber or other construction material, such as wallboard. One center beam can carry enough lumber for five and one-half new homes.

10

Other Transport

Top Trucklines

JB Hunt Transport Services

FEDEX Freight

XPO Logistics

Knight-Swift Transport Services

YRC Worldwide

Trucks. Trucks carry all types of goods, ranging from premium products (vehicles) to high-value commodities (electronics and mixed freight such as consumer goods, office supplies, hardware, and plumbing items) and bulk commodities (gravel, grains, and oil). Gasoline (and other liquid and produce, the top six freighters shipped by trucklines are paper products, building materials (steel beams, concrete slabs, pipes, and logs), vehicles, and hazardous chemicals and materials. Vehicle carrier fleet trucks can carry between eight and 10 vehicles at a time.

Barges and Planes

Barges. Barges are used for very heavy or bulky low-value items because the cost of hauling goods by barge is very low. However, in the case of river barge transportation, it is much slower.

Carriers. Planes. Although not often used to transport materials due to its high cost, it is possible to carry materials by cargo plane.

REAL PROPERTY

7

Land Ownership

Land-use in the U.S. falls within six main categories: agricultural, residential, recreational, commercial, industrial, and transportation. Approximately 52% of the U.S. land base is used for agriculture. About 6% of land in America is "developed" (has at least 30 people per square mile) and 47% is uninhabited.

8

Lot Development

Lot development entails the purchasing of land, obtaining any necessary entitlements, permits, and zoning approvals, subdividing the land into parcels, clearing and grading the land, installing the infrastructure necessary to connect to utilities, building roads, and ultimately selling the finished lots to a developer of homes or commercial buildings.

2

Midstream

The Midstream sector encompasses the construction of residential homes, commercial real estate buildings and facilities, and infrastructure. The construction industry is a vital part of the U.S. economy, accounting for 4.3% of U.S. Gross Domestic Product (GDP) by itself, ranking twelfth amongst all industries. As of January 2023, the U.S. construction market was valued at \$1.96 trillion. Approximately 7.8 million people are employed by the construction industry (2.9% of the U.S. workforce), including employees and workers of general contractors, subcontractors, government agencies, architectural and engineering firms, and lenders and title insurance companies.

HOMEBUILDING

Pre-construction

Homebuilding involves land acquisition, development, and design activities in steps that occur concurrently or sequentially. Major pre-construction phase steps include:

- Site Selection/Feasibility Study (Feasibility study, soil and environmental reviews, zoning and governmental requirement reviews, review of required office, financial analysis)
- Land Purchase (A typical strategy for the homebuilder is to pay earnest money deposits to obtain the rights, on a non-recourse basis, but not the obligation, to buy land or lots at a set price on a defined schedule)
- Obtain Entitlements (Government approvals to begin development or construction work via specific project review process which includes zoning evaluation)
- Home Design (Architects create site plans, floor plans, and building elevations. Also necessary are structural, mechanical, electrical, plumbing and heating, ventilation, and air conditioning (HVAC) system designs which are often facilitated by Building Information Modeling (BIM) software applications)

Construction

The homebuilding construction phase encompasses activities from breaking ground to the substantial completion of the home, and the steps to obtain subcontractor support, labor and financing:

- Subcontractor Selection (Subcontractors will be responsible for specific portions of the construction process and will be responsible for obtaining and managing laborers, construction equipment, and may be required to furnish the building materials, and materials)
- Construction Financing (Money is typically lent on a draw-down basis as the home progresses, as opposed to one lump sum)
- Construction (including Scheduling) (Construction times for a single home can vary from 4-9 months beginning with grading the land, laying the foundation, framing the vertical structure, installing plumbing, electrical and HVAC, insulating the building, hanging drywall, applying exterior finishes, installing interior finishes, lighting, outlets, fixtures, flooring, and countertops, installing carpet and mirror, and final inspection)

Key Homebuilders

D.R. Horton

Lennar

PulteGroup

NVR

Taylor Morrison

Key Construction Financing Lenders

Wells Fargo Bank

Bank of America

Citibank

Chase Bank

COMMERCIAL REAL ESTATE

Multifamily

"Multifamily" refers to residential housing where multiple separate housing units are contained within one building or several buildings within one complex. Units can be side-by-side or stacked on top of each other (by D.R. Horton and others). Common multifamily types are apartment buildings and condominiums.

Key Developers

Graystar

Toll Brothers

Alliance Residential

DHI Communities

Related Group

Trammell Crow (by CBRE)

Product Categories

Apartment Building

Condominium

Townhouse

Mixed Use Building

Brownstone/Rowhouse

Retail

Top Mall Owners

Simon Property Group

Westfield Corporation

SITE Centers

Kinco Realty

Brookfield Properties

Retail Categories

Strip Malls/Shopping Centers

Outparcel

Power Center

Regional Mall

Community Retail Center

Office

Top Office Owners

Blackstone Group

Duke Realty

CBRE Group

Hines

Jones Lang LaSalle

Office Categories

Class A, B and C Office Buildings

Other Classifications (Trophy, Traditional, Creative, Co-working, Executive, Flex)

Industrial

Top Industrial Owners

Duke Realty, Prologis, CBRE Investors, Clarian Partners, Tishman, Vornado, Blackstone, REIT, Liberty Property Trust

Industrial Categories

General & Distribution Warehouse, Light & Heavy Manufacturing, R&D Center, Data Center, Showroom, Flex Space, Cold Storage

Hospitality

Top Hotel Owners

Blackstone, Host Hotels & Resorts, Intercontinental Hotels Group, Park Hotels & Resorts, Service Properties Trust, Small Hospitality Properties

Hospitality Categories

Hotels, water parks, casinos, amusement parks, stadiums, golf courses, cruise ships, restaurants, movie theaters, assisted living facilities

Health

Top Health Systems

HCA Healthcare, Veteran's Administration, Catholic Church (Common Spirit Health, Ascension Health, Trinity Health), LifePoint Health

Patient Care Facilities

Hospitals, Offices (Physicians, Dentists), Other (Walk-In, Free-Standing Emergency Rooms, Vision, Surgery, Rehabilitation, Diagnostic, Imaging, Radiation/Oncology Therapy, Urgent Care)

Education

Top Dormitory Owners

American Campus Communities, Harvard University, Street, Scion Group, Greystar, Landmark Properties, Vesper Holdings, Collier Cos.

Elementary/Middle, High, Green, and LEED-Certified K-12 Schools; Building Renovation, Parking, Student Housing, Academic Facility, Library, Performing Arts Center, Recreational, Research Laboratory

INFRASTRUCTURE

Infrastructure Construction and Civil Engineering

Infrastructure construction projects are what keep the important functions of the U.S. moving. These projects are responsible for keeping electricity and water flowing to homes and businesses. They are also responsible for the roads, bridges, and other mass transit used to deliver people and goods across the nation. Infrastructure construction and civil engineering companies are responsible for building these and other projects, such as dams, pipelines, railways, and aqueducts. There are 1.5 million construction companies in the U.S., ranging from small family-owned operations to multinational corporations with global footprints. However, only the largest construction companies are capable of managing an infrastructure project from end to end. Although one or more infrastructure contractors may develop a reputation as being particularly strong in a given category of infrastructure, these firms promote themselves as capable of handling any category of infrastructure project.

Top Infrastructure Construction Companies

Bechtel

Ferrovial Construction

Fluor

JE Dunn

Whiting-Turner

Ancor

Brasfield & Gorrie

Turner Construction

DPR Construction

Gilbane

Black & Veatch

Hensel Phelps

Walsh Group

Tutor Perini

Skanska

Kiewit

AECOM

Balfour Beatty

Key Categories of Infrastructure

Rail Networks

Telecommunications Networks

Airports

Bridges

Waste Management Facilities

Tunnels

Pipelines

Toll Roads

Aqueducts

Marine Ports

Subways

Water Treatment Facilities

Power Generation Facilities (Including Hydroelectric Dams, Solar and Wind Electric)

Uranium Processing Facilities

Prisons

Canals

Project Financing Structure. Infrastructure projects, which improve lives, create employment opportunities, and transform local and regional economies. However, because of the long-term nature of such projects, which typically require access to private capital, and an ever-expanding regulatory environment can make it difficult to get these projects off the ground. Project finance is the funding vehicle typically used for long-term infrastructure and industrial projects. Project finance is the private sector funding of such projects using a non-recourse or limited recourse financial structure, where (1) the debt and equity used to finance the project are paid back from the cash flow generated by the project and (2) the project's assets, rights, and interests are held as collateral.

3

Downstream

The largest industry in the U.S. is the real estate, renting and leasing industry, which contributes to 13% of the GDP. This Downstream sector encompasses the process of taking a completed home, commercial building, or infrastructure facility and putting it in the hands of an individual homebuyer, commercial enterprise, government agency (private government-sponsored contractor), or utility owner. In other words, this sector focuses on the sale, renting and leasing of homes and commercial real estate and the maintenance and furnishing of these properties and infrastructure projects.

Leading players of key Downstream segments are:

- Residential Real Estate Brokers/Leasing Agents: Coldwell Banker Real Estate, Century 21, RE/MAX, Keller Williams Real Estate
- Commercial Real Estate Brokers/Leasing Agents and Property Managers: CBRE, Jones Lang LaSalle (JLL), Cushman & Wakefield, Sodexo, Walker & Dunlop
- Infrastructure Operation and Maintenance: Ferrovial/Cintra, Kiewit, Plenary Infrastructure
- Mortgage Lenders: Freedom Mortgage, Rocket Mortgage, Loan Depot, United Shore, PennyMac, Caliber Home Loans
- Insurance Companies: Nationwide, USAA, Allstate, State Farm

INDIVIDUALS

Home Sales

Selling a home involves four essential steps:

- Finding a real estate agent to list the home on an online service (e.g., Multiple Listing Service or MLS), stage the home to look its best, and facilitate negotiations for the sale of the home at the highest possible price (which does not cost the seller anything).
- Review and negotiate offers from several buyers.
- Accept an offer and work through any contingencies (buyer may insist on a home inspection, appraisal and financing contingencies).
- Close the home sale, where the following activities occur contemporaneously: (a) the buyer's bank provides home loan financing and takes a mortgage as security, (b) the buyer receives title insurance, (c) the ownership of the home is transferred to the buyer by a deed, which is filed in a state or local county recorder of deeds office, and (d) the purchase price is delivered to the seller.

Key Home Lenders

Chase Bank, Wells Fargo Bank, Bank of America, Trust Bank, Rocket Mortgage, United Shore, US Bank

Key Realty Agencies

Keller Williams, Zillow, RE/MAX, Realty One Group, Coldwell Banker, KKR, HomeServices of America

Key Title Insurers

American Title, Old Republic National Title, Chicago Title, Fidelity National Title, Stewart Title Guaranty, DHI Title Agency

Homeowners Insurance

"Homeowner's insurance" (also known as "hazard insurance") pays for losses and damage to the owner's property if something unexpected happens, like a fire or a burglary. Standard homeowner's insurance does not cover damage from earthquakes or floods, but it may be possible to add this coverage. If the owner borrowed from a home lender in exchange for a mortgage, the lender will make sure the property is properly insured by homeowner's insurance and will require proof that the owner has homeowner's insurance. In many instances, homeowners will pay for their homeowner's insurance through an escrow account as part of their monthly mortgage payment. Payments are made to the lender, and the lender holds the part of the payment that is for insurance in escrow. When the bill for insurance is due, the lender pays it from the escrow account.

Top Home Insurers

State Farm Insurance Company

Allstate Corporation

United Services Automobile Association (USA)

Liberty Mutual Holding, Inc.

Farmer's Insurance Group

Consumption

Furniture. When decorating a primary residence, most owners opt for quality over quantity because they anticipate lots of wear and tear. The average expenditure per person on furniture was \$716 in 2021. The biggest ticket items are furniture (couch, dining table, chairs, bed), rugs, lighting, wall decor, window treatments, and styling accessories.

Key Furniture Retailers

Ashley Furniture, IKEA, Berkshire Hathaway, Rooms to Go

Appliances. To assist with daily tasks like cooking, washing dishes, drying clothes, and preserving fresh food, it will be necessary for the homeowner to buy home appliances (if the homeowner did not include appliances as part of the home sale). In 2022, the average household spent \$354 on major appliances (refrigerator, freezer, washer, dryer, cooktop, oven) and \$135 on small household appliances (microwave, dishwasher).

Key Appliance Retailers

Best Buy, Home Depot, Menards, Lowe's, Sears, Costco Wholesale

COMMERCIAL ENTERPRISES

Property Brokerage

Unless the commercial property owner (typically a real estate investment trust or other investment manager) wishes to sell, the owner will engage a commercial real estate broker with expertise in the local market to find tenants and lease the property. Leasing a commercial property involves 6 essential steps:

- Determine the market value of the property and set the rental rate.
- Advertise the property through various channels, such as commercial real estate websites, brokerages, and personal networks.
- Conduct property viewings and provide interested parties with necessary information and documentation.
- Once a potential tenant expresses interest, provide them with a commercial lease agreement to review and negotiate the terms of the lease. Gross Leases are most common for commercial properties such as offices and retail space. The tenant pays a single, flat amount that includes rent, taxes, utilities, and insurance. The landlord is responsible for paying taxes, utilities, and insurance from the rent fees. By contrast, the most common form of industrial lease is the Triple Net Lease, where the tenant agrees to pay not only a fee for rent and utilities but also all of the industrial property's operating expenses, such as maintenance fees, building insurance, and property taxes.
- Once both parties agree to the terms, finalize the lease agreement and sign it.
- Provide the tenant with access to the property and any necessary information or support during their occupancy.

Facilities Management. A facilities manager provides day-to-day management services for client-operated facilities (headquarters buildings, regional offices, and administrative offices and facilities serving specialized industries).

Facilities Management Services (Maintenance Management, Quality Management, Tools to Track, Process Efficiency Improvements and Performance)

EHS Management

Supply Chain Programs

Project Management. A project manager uses its training, supply chain, and project- and asset-type expertise to provide on-time, on-budget project management services.

Project Management Services

Design and Furniture, Fixtures & Equipment (FFFE) Management

Construction (Ground Up and Renovation)

Cost Consultancy and Segregation

Tenant and Infrastructure Improvements

Business Move Management

Design, Engineering and Sustainability Consulting

Top Construction Firms

Skanska

Gilbane

Fluor

AECOM

JE Dunn

Whiting-Turner

Turner

Bechtel

DPR Construction

Top Commercial Real Estate Brokerages

Colliers International

Savills

Walker & Dunlop

CBRE

JLL

Newmark

Berkadia

Transwestern

Lee & Assoc.

NAI Global

Cushman & Wakefield

SVN International

Matthew's RE Investment Serv.

Marcus & Millichap

Avison Young

TCN Worldwide

Stream Realty Partners

Coldwell Banker Comm.

Commercial real estate companies and brokerage firms provide services for investors, owners, and tenants by combining local market insight, specialized expertise, and premier tools and resources. The larger firms will also offer additional services such as property, project and portfolio management, property appraisal and development, and business consulting. They assist clients with their purchasing, selling and leasing requirements. There are hundreds of commercial real estate brokerages worldwide; CBRE Group is the largest.

Construction Process: As with homebuilding, commercial real estate development entails land acquisition, development, and design activities, selection of a general contractor (which will select the needed subcontractors), construction financing, and the actual construction.

Building Information Modeling (BIM): BIM is a digital representation of physical and functional characteristics of a building or infrastructure project. BIM has become present in nearly every stage of the CRE construction process and is as a shared resource for information about a facility and for decision-making during the building's life-cycle.

Top Construction Lenders

Bank OZK

UMB Bank

Goldman Sachs

Wells Fargo Bank

Starwood Property Trust

GOVERNMENT CONCESSIONAIRES, FRANCHISEES, AND LICENSEES

Toll Road Concessions. In the case of toll roads, a government agency may enter into a concession agreement with a private-sector developer of highways under which (1) the developer is granted the rights to design, build, finance, operate, and maintain a toll road for a fixed period (e.g., 30 years) and (2) the developer agrees to pay the government agency (called the grantor) concession fees (e.g., rent for the location, a percentage of the developer's sales revenue, or a combination of the two) during the life of the concession.

Example: Ferrovial and Cintra. Austin, Texas-based Cintra is an example of a toll road developer. Cintra is one of the world's largest private-sector developers of transportation infrastructure, with business activities concentrated in toll highways and car park concessions in Canada, the U.S., Europe (Spain, Portugal, Italy, and the U.K. and Ireland), Australia, and Colombia. Cintra manages over 1,880 kilometers of toll roads in 20+ countries. Cintra is owned by Madrid, Spain-based Ferrovial S.A., which engages in the investment and development of transportation infrastructures. The company operates through four segments: (1) Construction (public infrastructure), (2) Operation and Maintenance (public infrastructure), (3) Infrastructure and Mobility (sustainable energy and mobility sectors infrastructure), and (4) the Other-Infrastructure and Mobility (sustainable energy and mobility sectors infrastructure).

Slected Toll Road Operators

Cintra

ASTIM North America

TransCore

Verra Mobility

Transurban

Atlanta

Plenary Group

Public Utilities. Public utilities supply services considered essential to modern living, such as water, telecommunications, gas, and electricity. Local government agencies may offer some utility services, but in most instances the local government will privatize the utility. Private industry to build, own and operate utility networks (72% of electricity customers are served by investor-owned utilities).

Top Telcos: AT&T, Verizon, T-Mobile, Comcast, Cox

Top Electric and Gas Utilities: PG&E, Duke Energy, American Electric Power, SoCalGas, NextEra Energy, DTE Energy, Edison International, Sempra Energy

Private Prison Operators. The federal government and 26 states use private corporations to operate some of their detention centers and prisons. The U.S. Department of Justice's Bureau of Prisons has contracts with three private operators, which together operate 11 federal prisons across the U.S. The U.S. Immigration and Customs Enforcement outsources immigration detention to private prison companies.

Top Prison Operators

CoreCivic

The GEO Group

Management & Training Corporation

LaSalle Corrections