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FREIGHT WAGONS – GLOBAL MARKET TRENDS

Forecast, Installed Bases, Suppliers,
Procurement Projects

2022



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Freight wagons – Global market trends Forecast, Installed Bases, Suppliers, Procurement Projects

Available in English from December 2022.

You can also purchase the **data annex in Excel format** (see overview data sheets on page 4 for more information).

This MultiClient Study entitled “Freight Wagons – Global Market Trends” offers an analysis and comprehensive insight into the structure, installed bases, procurements, manufacturers and development trends in the market for freight wagons. SCI Verkehr has already compiled eight MultiClient Studies on this topic.

This study is intended for all companies which are or contemplate to become active in the freight wagon market: transport companies, manufacturers, suppliers, leasing companies, maintenance companies, investors, banks and loan companies as well as public institutions, associations and consultancy companies

In order to operate effectively in the freight wagon market, well-founded knowledge of the fundamental structure of and basic figures concerning the market are necessary. This concerns important market players above all: operators, owners, leasing companies and manufacturers. Installed bases, wagon types, current and future procurement volumes and market volumes are crucial variables influencing when decisions are to be made.

Based on the current developments in the freight wagon market, this study comprises an analysis of the market for freight wagons and a thorough assessment of the future demand for procurements in this segment. This study is a continuous development of the successful previous study “Freight Wagons – Global Market Trends” from 2020. All chapters of the preceding study have been revised entirely.

In concrete terms, this multi-client market study of freight wagons includes

- A regionally differentiated examination of the worldwide market for freight wagons including an in-depth analysis of all attractive markets in the individual countries, especially in Europe
- A comprehensive analysis of current installed bases in terms of type, operational purposes, quantities and age structures as well as future procurement potential
- An overview of the most important drivers behind the procurement of freight wagons in the individual regions
- Forecast of new procurement and after sales volumes of freight wagons (in EUR) for each region up to 2026
- Type-specific forecast of future vehicle requirements in each region, divided into six main segments (open wagons, covered wagons, flat wagons, intermodal wagons, tank wagons and other wagons)
- Analysis of the current market shares of significant freight wagon manufacturers and a brief description of all significant manufacturers in the individual regions
- Brief description of important current and planned procurement projects

All in all, the study provides a well-founded analysis of the worldwide market for freight wagons. It delivers comprehensive and differentiated key information on this vehicle segment. The study therefore provides both companies established in the railway industry as well as active and potential operators of rail freight transport services with important indicators for operational and strategic planning.

DATA ANNEX IN EXCEL FORMAT

OVERVIEW DATA SHEETS

1 Market overview

- 1.1 Market overview (Pivot)
- 1.2 Transport performance (Pivot)
- 1.3 Market volume (Pivot)
- 1.4 Market overview (Data)
- 1.5 Transport performance (Data)
- 1.6 Market volume (Data)



[Go to index](#) [Go to data](#)

1.2 Transport performance

Transport Performance	Year	2008	2009	2010
Rail freight transport				
Asia				
CIS				
North America				
Africa / Middle East				
Australia / Pacific				
Europe				
South / Central America				
Total				

2 Installed base

- 2.1 Installed base overview (Pivot)
- 2.2 Installed base owner (Pivot)
- 2.3 Installed base owner type (Pivot)
- 2.4 Installed base age (Pivot)
- 2.5 Installed base overview (Data)
- 2.6 Installed base owner (Data)
- 2.7 Installed base owner type (Data)
- 2.8 Installed base age (Data)

Region	Country	Unit	Year	Value
Africa / Middle East	Total	Units	Before 1982	
Africa / Middle East	Total	Units	1982-1986	
Africa / Middle East	Total	Units	1987-1991	
Africa / Middle East	Total	Units	1992-1996	
Africa / Middle East	Total	Units	1997-2001	
Africa / Middle East	Total	Units	2002-2006	
Africa / Middle East	Total	Units	2007-2011	
Africa / Middle East	Total	Units	2012-2016	
Africa / Middle East	Total	Units	2017-2021	

3 Deliveries

- 3.1 Deliveries country (Pivot)
- 3.2 Deliveries segment (Pivot)
- 3.3 Deliveries manufacturer (Pivot)
- 3.4 Deliveries year segment (Pivot)
- 3.5 Deliveries country (Data)
- 3.6 Deliveries segment (Data)
- 3.7 Deliveries manufacturer (Data)
- 3.8 Deliveries year segment (Data)

Units	Owner	Delivery	Remarks
	DB Cargo	2022	In early 2022, Chinese manufacturer CRRC and DB Cargo reached yet another agreement with DB Cargo purchasing XXX car-carrying wagons of the type XXX.
	DB Cargo	2022	A pre-series of XXX wagons with different super structures of the new m ³ concept is already being used by DB Cargo in customer transports.
	ORV Moers	2022	ORV Moers delivered several batches of Tadns wagons to its customer in 2022. The wagons have a capacity of 82.5 m ³ and are optimised for the transport of fertilisers.
	DB Cargo	2022	DB Cargo took delivery of XXX new double deck car carrying wagons in early 2022.
	Touax	2021	Turkish manufacturer Gök Yapi supplied XXX new 80' Sgrss wagons to leasing company Touax. The wagons were constructed following an agreement between Touax and a German operator.
	Wascosa	2021	Emerging wagon manufacturer Nymwag from Czechia delivered XXX intermodal wagons to Wascosa in August and September 2021. The wagons for the transport of containers are a six-axle design.

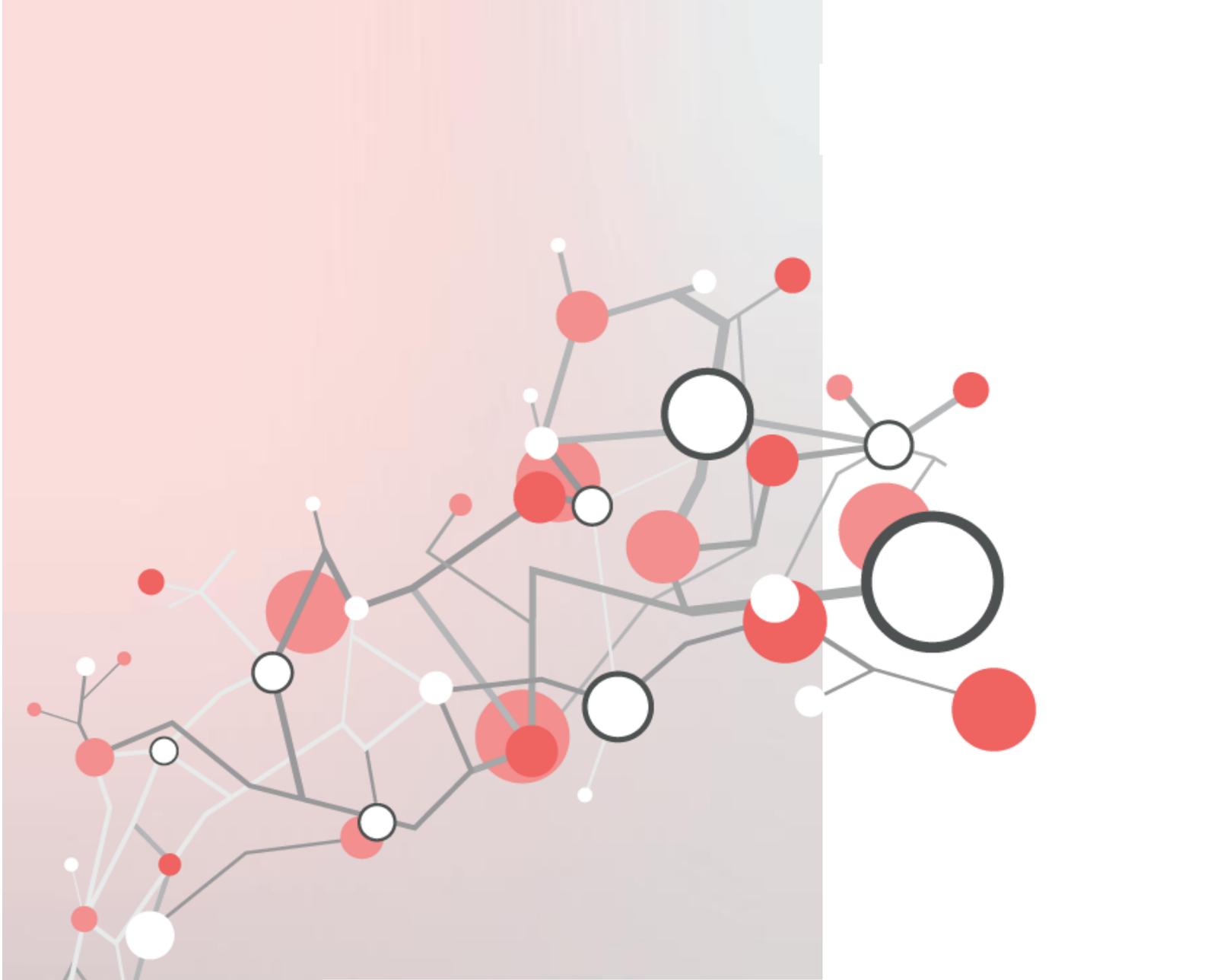
4 Additional tables

- 5.1 Project overview (Data)
- 5.2 Additional figures

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6

The market for freight wagons in South and Central America

6 The market for freight wagons in South and Central America

6.1 Overall market

Installed base

Freight wagon fleet
 **XXX**
 units

Fleet development
 **XXX**
 CAGR 2021-26

Average age
 2021
 **XXX**
 years

Market for new vehicles

Market volume
 2021
 **XXX**
 EUR million

Market development
 **XXX**
 CAGR 2021-26

Market volume
 2026
 **XXX**
 EUR million

Market for after sales

Market volume
 2021
 **XXX**
 EUR million

Market development
 **XXX**
 CAGR 2021-26

Market volume
 2026
 **XXX**
 EUR million

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Figure 1: Market overview - freight wagons in South and Central America

The South and Central American freight wagon market has a relatively small global share with an installed base of only XXX units. Overall, the regional market stalled over the last five years with the installed base rising by roughly XXX units between 2016 and 2021. The **new vehicle market volume amounts to approx. EUR XXX million** annually and decreased by XXX% p.a. between 2016 and 2021 as the Brazilian market suffered from setbacks in the mining sector and fleet renovations in other important markets were completed. The freight wagon after sales sector has a volume of around EUR XXX million and has grown continuously at a CAGR of XXX% p.a. since 2016. For the next years, however, SCI Verkehr expects a steep growth of the OEM market of XXX% p.a. (in terms of market volume in EUR) from 2021 until 2026, which is mainly driven by price effects.

[...]

6.2 Transport market

Transport performance 2021	Performance development	Rail modal share 2020
XXX billion tkm	XXX% CAGR 2021-26	XXX percent

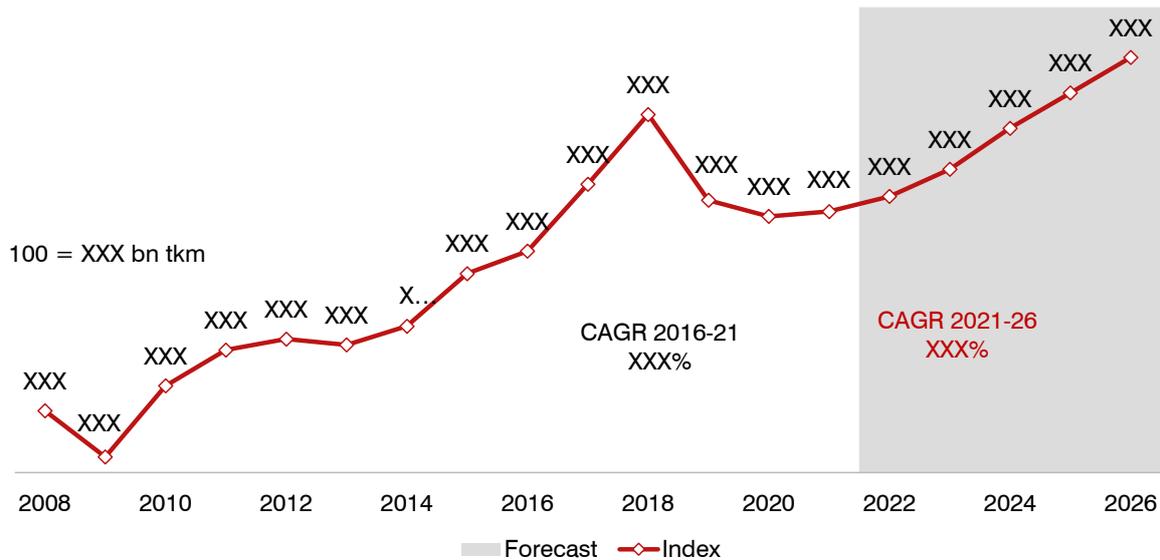
Many countries in South and Central America are regarded as politically stable, but a variety of socio-political factors still lead to the generally weak creditworthiness level in this region. The most important transport market is Brazil, by far, followed by Colombia and Argentina. All other countries together do not reach the market size that any of these three countries individually.

Rail freight transport in South and Central America is **generally a positively developing market with almost continuous growth** since the turn of the millennium. However, already before the Covid-19 pandemic, rail freight transport began to contract in 2019. **Although the market showed a slight**

increase in 2021, volumes are still XXX% lower than during the peak in 2018. Still, transport performance grew from XXX billion tkm in 2011 to XXX billion tkm in 2021, constituting an increase of slightly over XXX% within ten years.

[...]

Development of rail freight transport performance in South and Central America (Index 2008 = 100)



Source: SCI database, SCI Verkehr forecast

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Figure 2: Rail freight transport performance in South and Central America

After the significant drop in rail freight transport performance in 2019 resulting from the Brumadinho dam accident in Brazil and economic contractions caused by Covid-19 in 2020, transport volumes have stabilised and are expected to grow again. However, the peak performance of 2018 is not expected to be reached again before XXX. All in all, SCI Verkehr expects the transport performance to grow by XXX% p.a. until 2026 influenced by the following drivers:

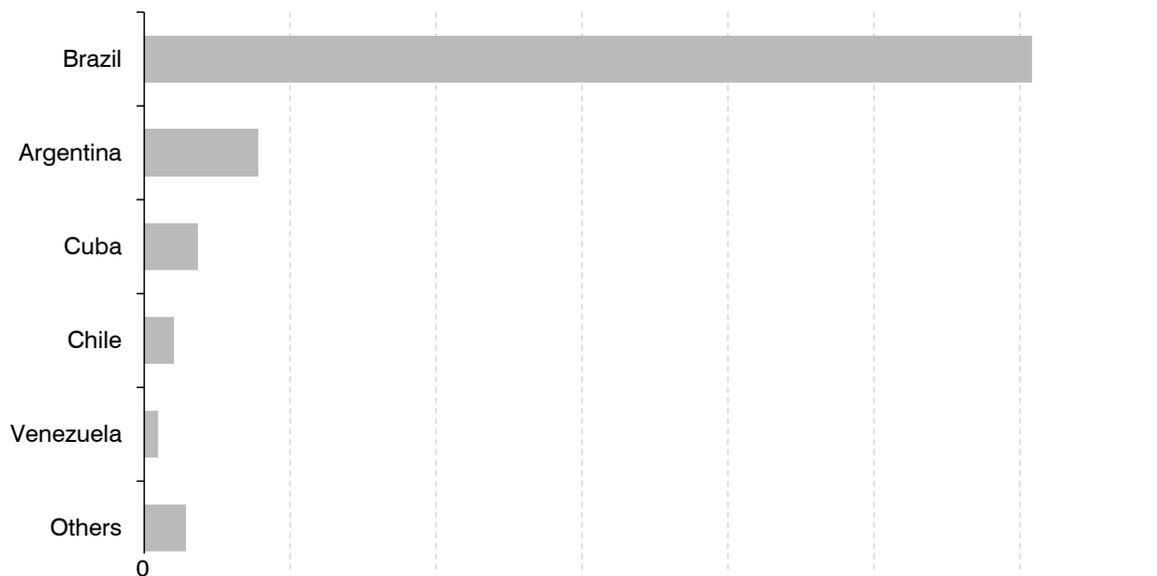
The **mining industry is of outstanding importance for the Brazilian and Colombian rail freight markets**. Metal ores represent the vast majority of all transported goods (measured in tkm) in Brazil and the mining activity is expected to further increase in the future. Besides metal ores, agricultural products such as soy and corn are an important pillar for rail freight transport, not only in Brazil but in many countries of the region. In Colombia, however, coal represents XXX% of the transport volume. Concerning intermodal transport, the region is still on a low level but has potential for growth that is slowly realised by new projects.

[...]

6.3 Installed base/age structure

The freight wagon fleet in South and Central America **comprises around XXX wagons**, constituting an increase of around XXX wagons compared to 2016. More than XXX of the wagon fleet in South and Central America **are operated in Brazil**, primarily consisting of open wagons (XXX%) for the transport of ores and, with some distance, agricultural products.

Installed base of freight wagons in South and Central America by country (2021, number of wagons)



Source: SCI database

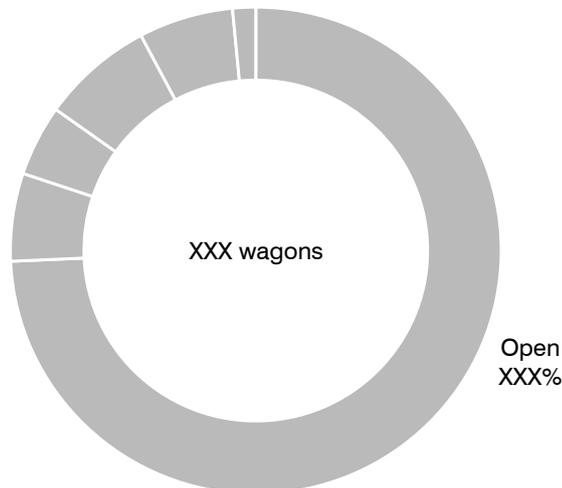
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Figure 3: Freight wagon fleet in Central and South America by country

Despite continuous fleet reductions over the last twenty years, **Argentina still accommodates the second-largest freight wagon fleet** in South and Central America, comprising around XXX units. Main reasons behind the shrinking fleet were the low demand for rail freight transports resulting from the difficult economic situation since the Argentinian depression from 1998 to 2002 and poor rail infrastructure. Regardless of the renationalisation and investments in the rail freight sector, including a fleet renewal programme of Trenes Argentinos Cargas for XXX new freight wagons that was completed in XXX, the steady decline of the wagon fleet has not been reversed.

[...]

Installed base of freight wagons in South and Central America by wagon type (2021)



Source: SCI database

© SCI Verkehr

Figure 4: Freight wagon fleet in South and Central America by wagon type

Wagon segment	Share in total fleet 2021	CAGR 2021-26	Comment
Open	XXX%	XXX%	<p>With more than XXX units, open wagons are by far the most important wagon segment. This is due to the high importance of the ore (open hoppers) and agricultural industry (covered hoppers) in South America and its significance with regards to exports, e.g., to China.</p> <ul style="list-style-type: none"> Resulting from the further intensification of the mining activities and the upgrade of the network, the fleet of open wagons will increase further.
Covered	XXX%	XXX%	<p>The fleet of covered wagons consists of around XXX wagons with a decreasing tendency, as they are substituted by open wagons (agricultural industry) and intermodal wagons (consumer goods).</p>
Flat	XXX%	XXX%	<p>The number of flat wagons in South and Central America is comparatively small (XXX units, around XXX% of the total fleet). The wagons are often multi-purpose wagons or dedicated to the transport of railroad ties and track construction material as well as wood, steel products or cement. Standard flat wagons are also often used for the transport of containers.</p>
Intermodal	XXX%	XXX%	<p>The intermodal fleet consists of approx. XXX units, primarily owned by Vale subsidiary FCA, Rumo and MRS Logistica in Brazil.</p> <ul style="list-style-type: none"> Resulting from the extension projects in Brazil, new procurements of intermodal wagons are necessary to meet the increasing demand. As a consequence, SCI Verkehr expects this segment to have the highest growth rate of all segments in South and Central America in the coming years.
Tank	XXX%	XXX%	<p>With around XXX units, the share of tank wagons in the total wagon fleet is relatively small (XXX%). In contrast to other world market regions, ethanol fuel and vegetable oils are the main goods type transported with tank wagons. Due to the importance of mining, wagons for the transport of sulphuric acid have also a higher share than in other world regions.</p> <ul style="list-style-type: none"> SCI Verkehr expects the fleet to slightly decrease at XXX% p.a. as tank wagons remain a niche market in South and Central America.

Other/unknown	XXX%	XXX% – Other freight wagons have a small share in the total of XXX%, i.e., XXX wagons. Growth is mainly driven by the procurement of wagons for powder-shaped goods.
Total	100%	XXX% – Based on the high share of the ore and agricultural industry (primarily grain), open wagons form the backbone of the South/Central American rail freight system.

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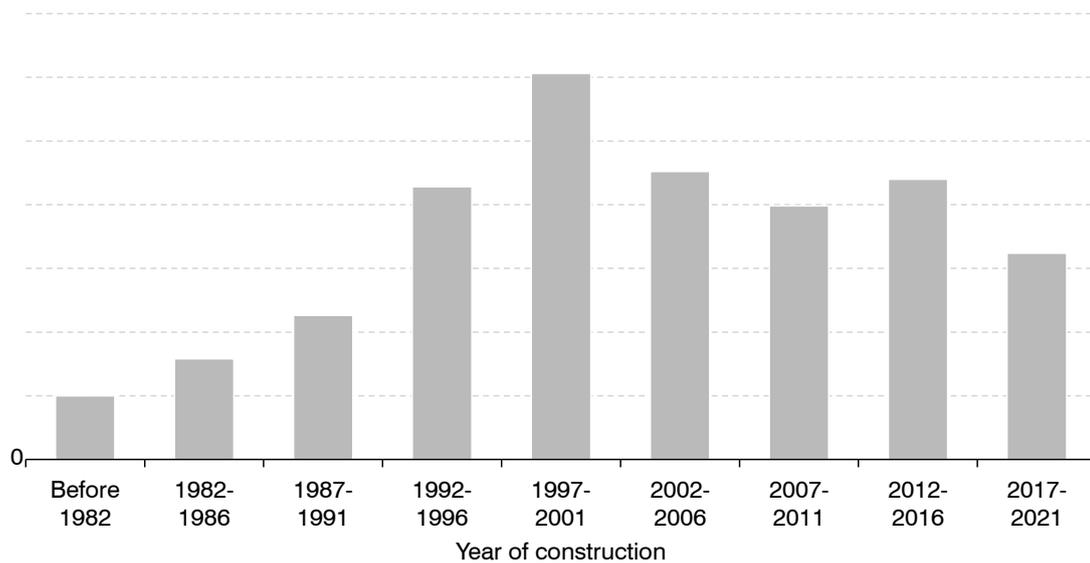
Country	Open	Covered	Flat	Intermodal	Tank	Other/unknown	Total
Brazil	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Argentina	XXX	XXX	XXX	XXX	XXX	XXX	XXX
others	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Total	XXX	XXX	XXX	XXX	XXX	XXX	XXX

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Due to rounding off the totals might differ from the sum of the individual amounts.

[...]

Age structure of the freight wagon fleet in South and Central America (2021, number of wagons)



Source: SCI database

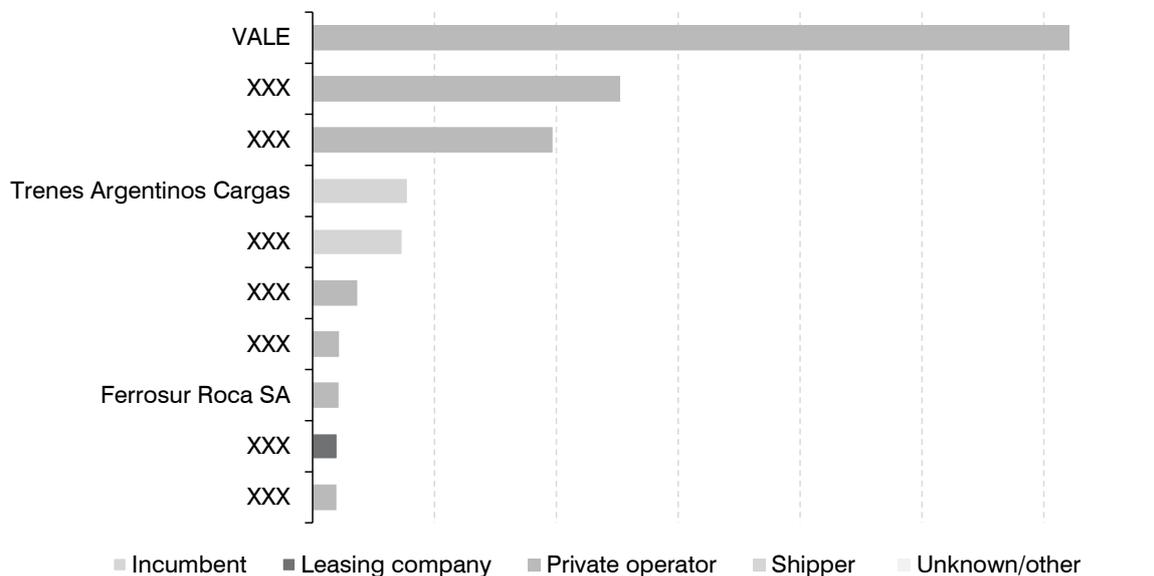
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Figure 5: Age structure of the freight wagon fleet in South and Central America 2021

6.4 Ownership structure

Resulting from the railway liberalisation process in Brazil, all freight wagons in this market are **owned by private rail freight operators or to a small extent by leasing companies**. Incumbents play significant roles in markets like Cuba and Argentina. Leasing companies are of minor importance in South and Central America.

Installed base of largest freight wagon owners in South and Central America (2021, number of wagons)



Source: SCI database

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Figure 6: Freight wagon fleets of the most important owners in South and Central America

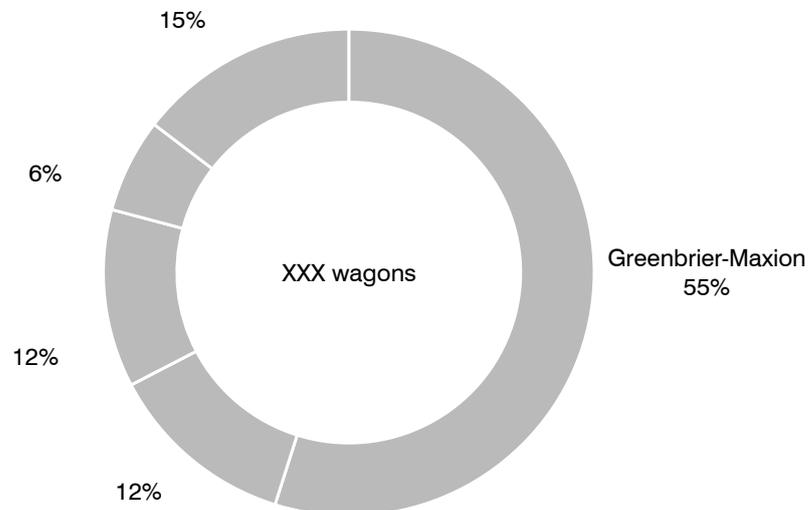
Owner type	Total fleet 2021 (share)	Comment
Operators	XXX (XXX%)	Around XXX% of the South and Central American freight wagon fleet is owned and operated by private operators or incumbents. As the fleet of the latter only comprises around XXX wagons, private operators are determining the freight wagon business.
Leasing companies	XXX (XXX%)	The share of leased freight wagons in the total freight wagon fleet amounts to around XXX wagons. The most important leasing company in South and Central America is XXX, which owns around XXX wagons (mostly open and covered wagons).
Total	XXX (100%)	Most of the wagon fleet in the region is owned and operated by private operators, with incumbents and leasing companies representing small shares of the overall market.

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[...]

6.5 Manufacturers

Comparable to the development in other world market regions, the manufacturer landscape in the South and Central American freight wagon market **experienced a process of consolidation**, especially after the financial crisis in 2008. Since then, smaller manufacturers like Usaminas Mecânica, Emem or Santa Fe Vagoes were pushed out of the market. Whereas historically freight wagons in South and Central America were **mainly supplied by domestic manufacturers**, in recent years manufactures from other parts of the world gained market shares.

Freight wagon deliveries by manufacturer in South and Central America (2017-21, number of wagons)

Source: SCI database, SCI Verkehr estimation

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Figure 7: Market shares of freight wagon manufacturers in South and Central America

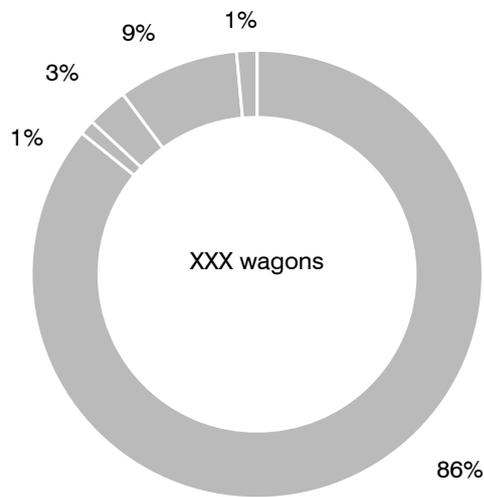
The Brazilian freight wagon market is determined by the two large companies **Greenbrier-Maxion** and **Randon**, which together account for XXX of the total South and Central American market. Greenbrier-Maxion (until 2015: Amsted Maxion), was formed as a 50/50 joint-venture between automobile components manufacturer lochpe-Maxion and US bogie and wheel manufacturer Amsted Rail. Since 2017, Greenbrier directly owns 60% of the shares. Randon is not only in the freight wagon business, but also the largest manufacturer of trailers and semi-trailers in South and Central America. In March 2018, Randon inaugurated a new production facility in Brazil to manufacture hopper and gondola wagons with a capacity to produce eight wagons per day. However, during the Covid-19 pandemic, Radon was particularly hit hard, selling only XXX units in 2020. Although numbers recovered in 2021, the roughly XXX units sold in that year are still only about half the amount sold in 2017.

[...]

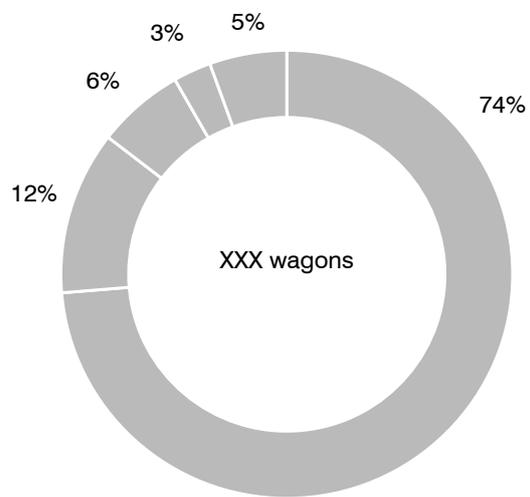
6.6 Market volume and market development

The procurement numbers of new freight wagons in South and Central America are heavily influenced by the requirements of the raw material industry and, in consequence, are very volatile. The strong fluctuations in incoming orders are also a consequence of the high importance of a few large rail freight operators/wagon owners for the overall market. As soon as an important company suspends procurements, this can result in a major drop in demand.

Freight wagon deliveries in South and Central America by wagon type (2017-21, number of wagons)



Freight wagon deliveries in South and Central America by country (2017-21, number of wagons)



Source: SCI database

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Figure 8: Freight wagon deliveries in South and Central America by wagon type and country

Freight wagon deliveries experienced a strong decrease and an interim low in XXX (approx. 1,XXX units). The following two years saw an improvement, however, the level remained far below numbers observed in previous years. The most influencing market for procurements is Brazil with a high demand in new open wagons for ore and soy/grain transports. After the procurements of around XXX wagons by the new state-owned freight railway Trenes Argentinos Cargas between XXX and XXX, the Argentinian market significantly dropped with only about XXX new wagons purchased per year afterwards. This development was expected and is natural after such high investment.

[...]

Due to the growing freight wagon fleets as well as price effects, SCI Verkehr expects the **after sales sector** in South America to **increase by XXX% p.a. until 2026**, representing a constant counterweight to the more volatile OEM market for manufacturers. Brazil is the most influencing market for the after sales market accommodating more than three-quarters of the total South and Central American freight wagon fleet.

Driver	Brief description	Relevance	Trend
Transport demand and rail conditions	<ul style="list-style-type: none"> – Transport demand strongly depends on the raw material industry. – The Brumadinho dam accident in Brazil had a significant influence on the transport performance in 2019 as the disturbed railway section is connected to the important Córrego do Feijão ore mine. Additionally, the raw material market was challenged in 2018 and 2019 through global trade conflicts and in 2020 through the Covid-19 pandemic. – Nevertheless, the demand for freight wagons is expected to be positively driven by increasing transport volumes resulting from new development and expansion projects (e.g., in Brazil or Colombia) and the current shortage of industry supplies. 	●	↗
Investment funds			

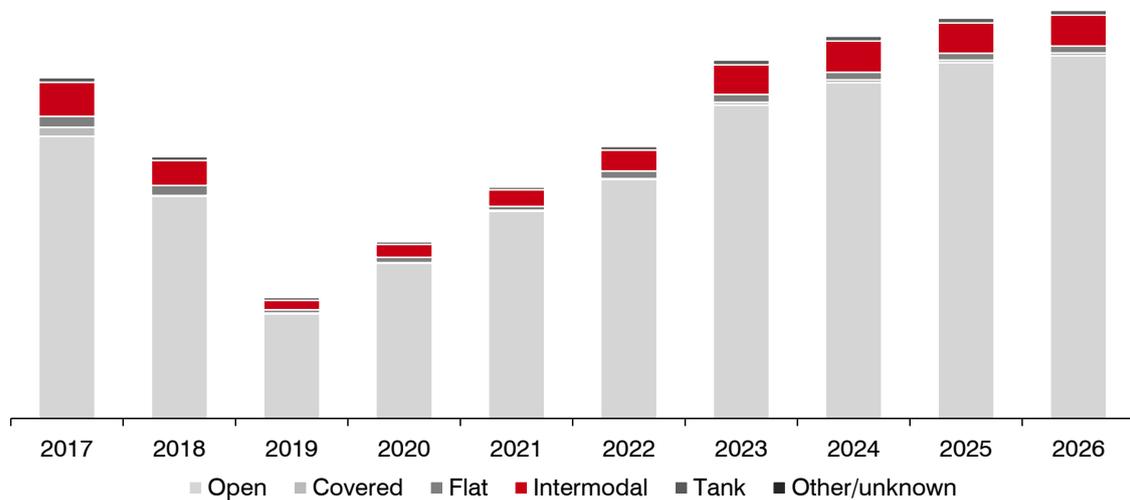
Driver	Brief description	Relevance	Trend
Fleet age and condition			
Inflation/ economic situation			
Rail infrastructure			

Relevance for procurement: ● = very high, ◐ = high, ◑ = medium, ◒ = low, ○ = none

5-year trend: strongly increasing ↑, increasing ↗, constant →, decreasing ↘, strongly decreasing ↓

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Freight wagon deliveries by wagon type in South and Central America (number of wagons)



Source: SCI database, SCI forecast

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Figure 9: Freight wagon deliveries in South and Central America by wagon type

6.7 Important current and planned procurement projects

Owner	Wagon type	Units	Delivery	Description
Rumo	Open	XXX	From 2023	As announced in early 2022, Brazilian rail freight operator Rumo is planning to procure a total of XXX freight wagons. The rolling stock is supposed to increase Rumo's capacities on the network in the federal state of Mato Grosso. The freight wagons are to be designed for the transport of grain, bran, sugar and fertilisers. According to its own account, Rumo has not yet signed contracts with suppliers, but will as usually give preference to national suppliers.
Bracell	Flat	XXX	2021	Brazilian cellulose company Bracell received a total of XXX flat wagons (model FTT) from manufacturer Greenbrier-Maxion throughout 2021. Delivery started in February. The wagons have a canvas roof to protect the cellulose from weather.

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