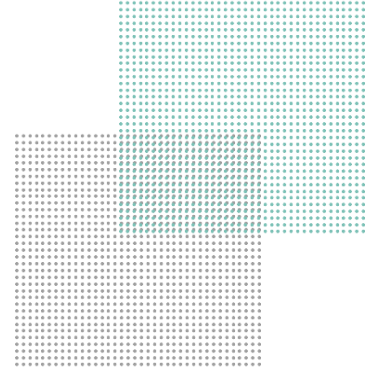




RESEARCH & CONSULTING



June 2023

IPAF Rental Market Report 2023

GLOBAL REPORT
(ALL COUNTRIES)

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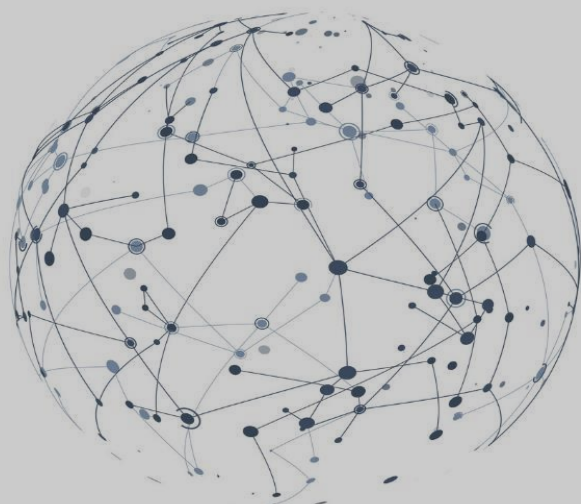


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Ducker provides unrivalled market research and executive advisory services based on decades of experience supporting the strategic decisions of more than 700 companies. Client executives benefit from the firm's broad expertise and geographic reach, robust cloud-based technology platforms, expanded insight into customer behaviour, and award-winning data and analyst insights spanning B2B, healthcare, consumer, and private equity. Ducker has been working with IPAF to create these industry reports since 2009, making this the 14th anniversary of our award-winning collaboration.

Ducker benefits from solid industry experience and a highly international team with the ability to approach and study global markets at a local level:

- **Product and industry expertise:** Experience in the MEWP and equipment rental markets through several projects covering access equipment and other types of construction machinery at all levels of the value chain, including rental as well as distribution and contracting.
- **International approach applied locally:** With a team of permanent native consultants working out of offices that reach across the US, Europe and Asia, Ducker prides itself on the fact that all fieldwork is completed in the respondent's native language by in-house consultants.
- **Methodological expertise:** Ongoing involvement in strategic consulting within areas such as market sizing and segmentation, distribution structure, competitive positioning, voice of the customer or market opportunity and new product entry assessments for a variety of products within the global construction and transportation industries among others.
- **Quality charter:** Ducker works to the guidelines of the ESOMAR ethics standards.

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This study assesses the mobile elevating work platform (MEWP) rental market for North America, Europe and China, and covers the time period 2015-2024, with a particular focus on 2022.

Main objectives:

- 2022 MEWP rental market value and fleet size;
- trends and dynamics (2015-24);
- operational indicators (investment, age of fleet, application);
- in addition to the primary market value and fleet-size objective, fleet mix is included to ensure that the value is anchored in reality. Moreover, fleet information is typically more readily available than rental revenue. This has allowed for cross-checks, revenue-per-unit ratios and the optimisation of secondary sources;
- estimated size of the 2022 MEWP rental fleet worldwide, with a breakdown by region and by machine type (including the estimated share of vehicle-mounted platforms held by rental companies owning self-propelled fleets).

Additional information:

- Ranking of construction and non-construction sub-sectors in the MEWP rental revenue;
- return on investment/average payback period by equipment type;
- utilisation rates by equipment type (booms vs scissors);
- the current study does not examine rental company profitability.

All interviews were conducted between February and May of 2023, which has allowed for primary data collection on the previous full year, thus providing for more specifically targeted and up-to-date information than would have been available from any statistical sources.

Scope and definitions – products and countries

The current study focuses on powered access equipment owned by rental fleets, ie mobile elevating work platforms (MEWPs), formerly known as aerial work platforms (AWPs). It includes the full range of powered access equipment (all sizes and types) except mast climbing work platforms (MCWPs).

Included are: All booms, scissor lifts, truck or van-mounted booms and vertical masts.

- Both articulated and straight telescopic booms.
- Self-propelled as well as push-around, towable and vehicle-mounted.

Excluded: Low-level access equipment (<10ft / 3m high), telescopic material handlers, forklifts, cranes, MCWPs and equipment owned by non-rental companies.

The European part of the study comprises the following ten countries:

- Denmark (DK)
- Finland (FI)
- France (FR)
- Germany (DE)
- Italy (IT)
- Netherlands (NL)
- Norway (NO)
- Spain (ES)
- Sweden (SE)
- United Kingdom (UK)

These represent 85% of the European* market in value.



* Defined as 27 EU countries plus Norway, North Macedonia, Switzerland and the UK.

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Scope and definitions – target companies and respondents

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MEWP rental revenue:

- Includes for example: Machine rental rates; machine repair; support (eg fuel services); transportation/delivery; training; damage waiver; operator charges.
- Used equipment sales are excluded from the MEWP rental revenues reported.

Re-rental/cross hire:

- Rental by one rental company to/from another rental company.

Utilisation rate:

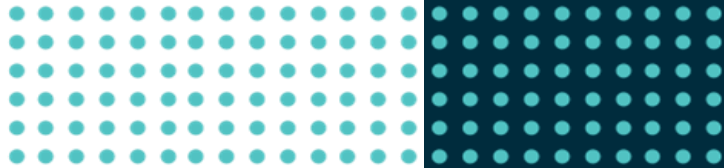
- The physical number of machines out on rent as a percentage of the total number in fleet at any given time.

Average age of fleet:

- The overall average age of the total fleet in December 2021, including machines that underwent refurbishment/remanufacturing.

Rental rate:

- Corresponds more to net prices than list prices. This is directly linked to the rental revenue.
- The dollar amount that the customer agrees to pay for hire and use of a machine.

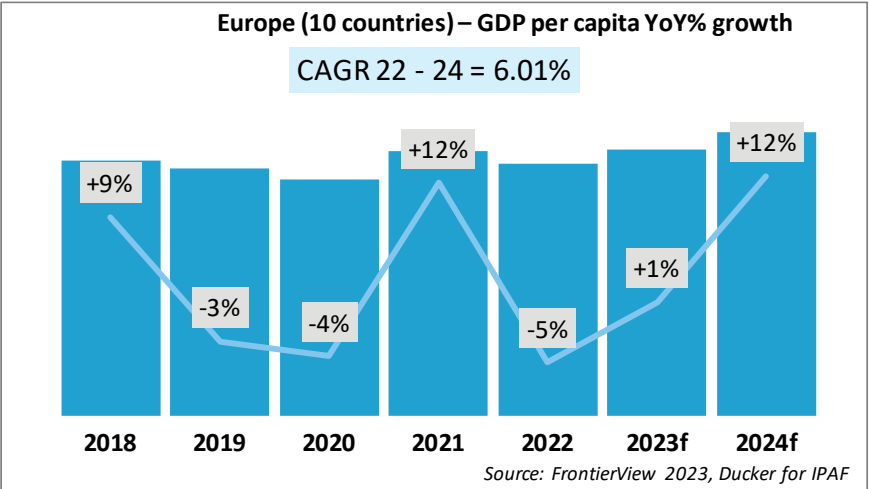
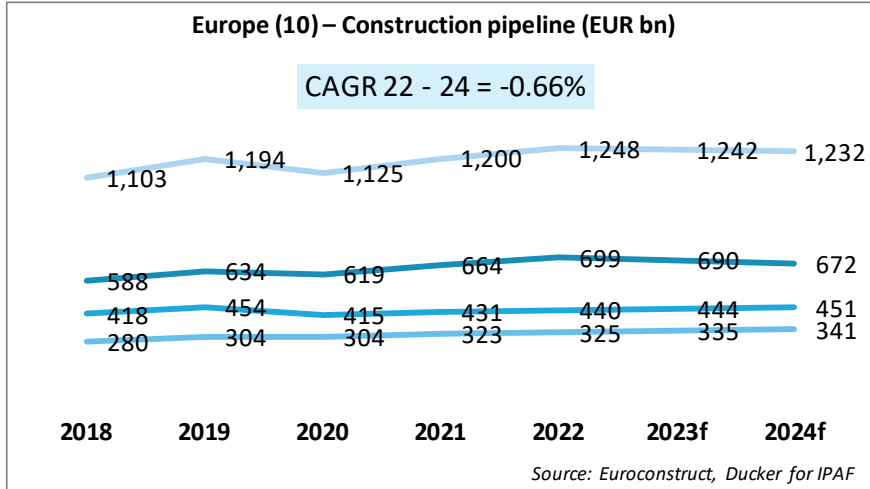


EXECUTIVE SUMMARY
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Executive summary – Europe

GDP declined by five per cent during 2022, after a year of positive growth in 2021. GDP outlook was slightly improved during 2023 and was expected to further increase by 2024. Construction output in the 10 European countries under study increased by almost €50 billion in 2022, though it is expected to decline slightly again during both 2023 and 2024.



— Residential construction — Non-residential construction — Total construction — Civil engineering / Major infrastructure

CAGR: Compound annual growth rate

Europe (10) includes Germany, France, UK, Italy, Spain, the Netherlands and the Nordics: Finland, Sweden, Norway and Denmark.

Executive summary – European MEWP rental market situation in 2023

In 2022, the European MEWP rental market reached €3,2 billion total revenue, to exceed pre-pandemic levels, experiencing high levels of growth in most markets and returning activities in both construction and non-construction sectors.

Rental companies continued investing in their fleet, catching up with renewal and expansion plans that were hampered by supply-chain issues and limited availability of some new models from MEWP manufacturers. The European fleet stood at a total of approximately 340,000 units at the end of 2022.

Utilisations rate went up by one per cent, to an average of 65 per cent, after a steep recovery in 2021, partly driven by limited availability and fleet expansion and partly by elevated demand. After a slower recovery in 2021, Spain increased utilisation rate by three per cent during 2022.

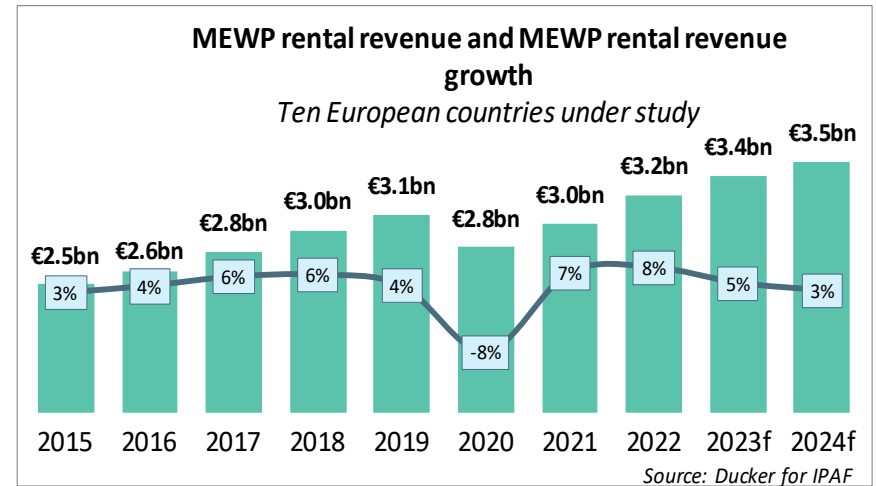
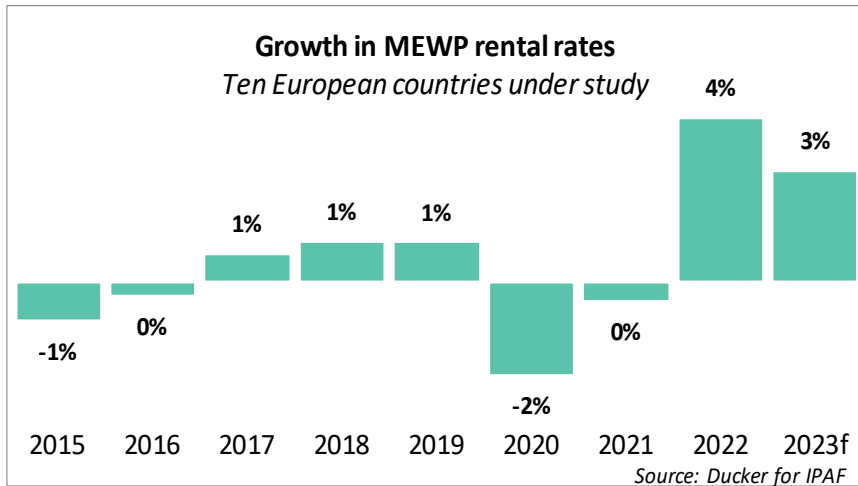
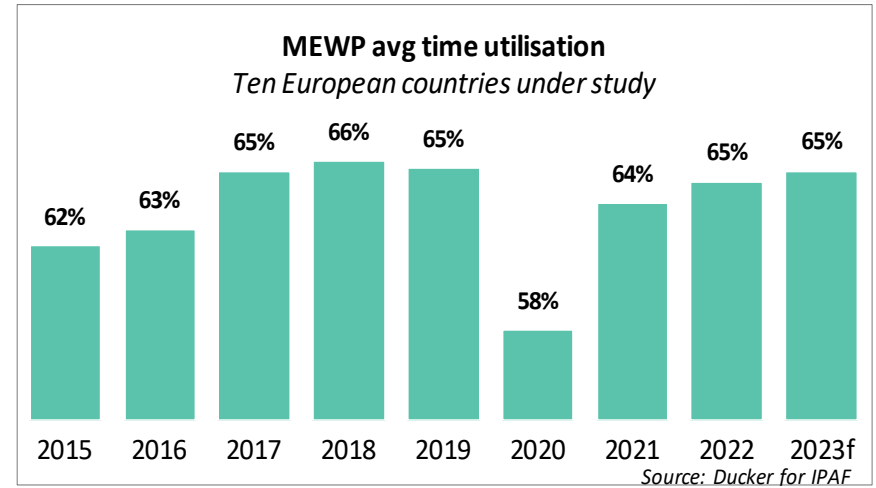
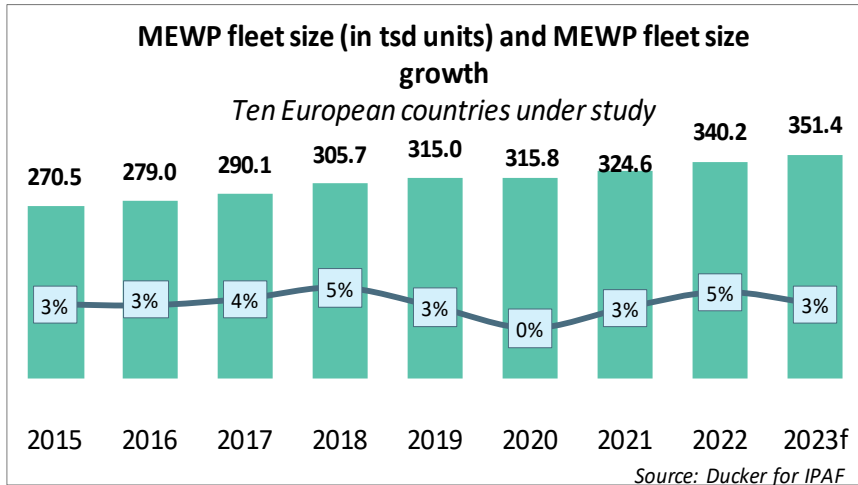
With undisputed demand and both inflation and MEWP purchase prices rising, rental companies were forced to substantially increase rental rates in most European countries, leading to an average rise of around four per cent in 2022. Only the Nordic region experienced challenges, owing mainly to consolidation activity increasing already fierce market competition, which suppressed rental rate increases.

The level of investment remained at positive levels, increased further by 24 per cent in 2022 compared to 2021 investment. In addition to high demand, investment is being driven by rental companies wishing to renew fleet and transition to greener technologies.

The market outlook for 2023 remains positive, as manufacturer lead times are expected to further stabilise in the upcoming 12-18-month period and rental companies forecast continued healthy demand and further revenue increases driven by rental rate rises to offset the effects of inflation and input cost price pressures.

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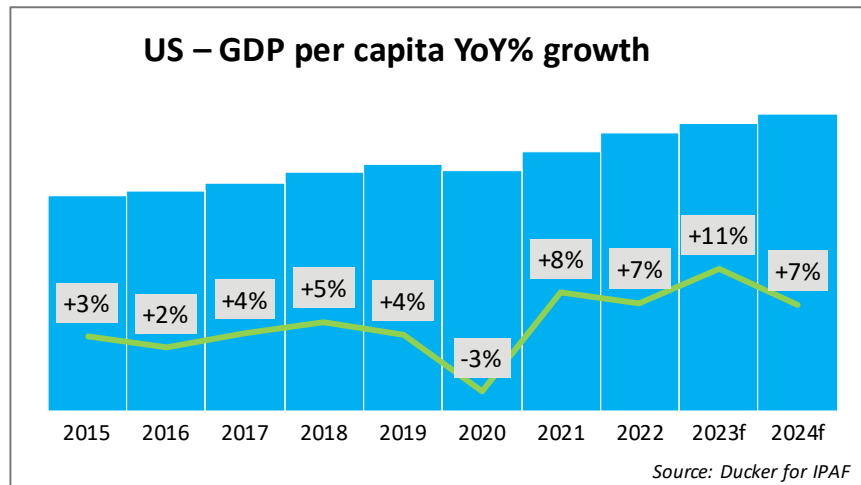
Executive summary – European MEWP rental market situation in 2023



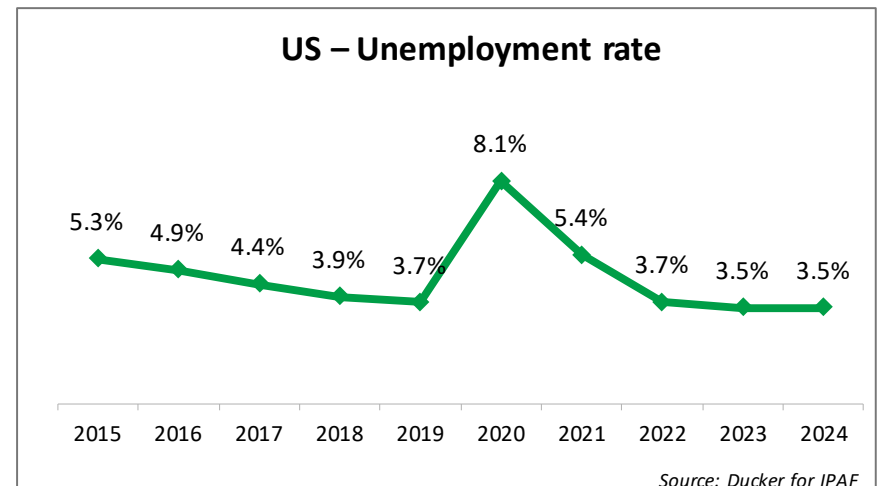
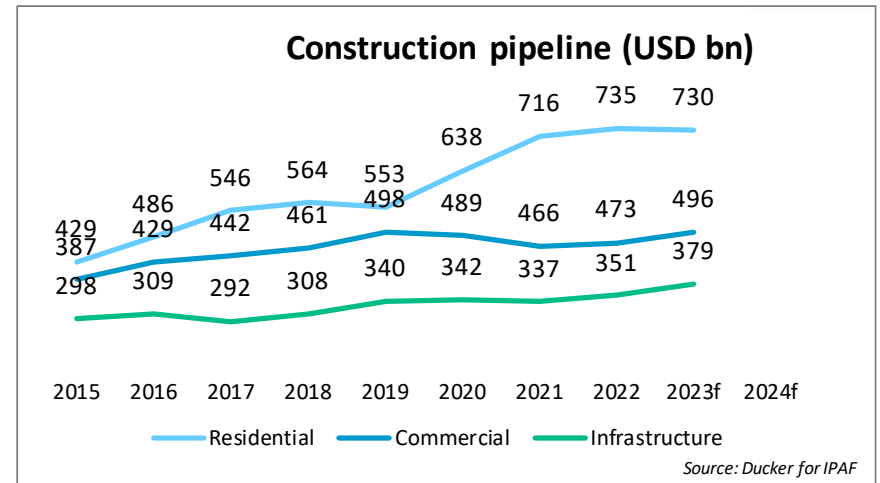
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Executive summary – US

Both GDP and construction output grew significantly in 2022. After an eight per cent increase in 2021, GDP increased further by seven per cent in 2022, partially owing to a strong year in all construction sectors. Construction output increased by \$40 billion, driving strong demand in MEWP rental market.



CAGR: Compound annual growth rate



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Executive summary – US MEWP rental market situation in 2023

US MEWP rental revenue increased by 15 per cent and reached US\$13.6 billion in 2022, owing to a strong economy leading to high demand for MEWPs. MEWP fleet size in the US grew by 10 per cent, as rental companies resumed increasing fleet size in a bid to keep average utilisation rates from becoming too high.

Utilisation rate went up to 73 per cent on average, unseen levels on the US MEWP rental market. Despite lead times improving for new equipment from manufacturers, rental companies reported backlogs in 2022 and expected for 2023.

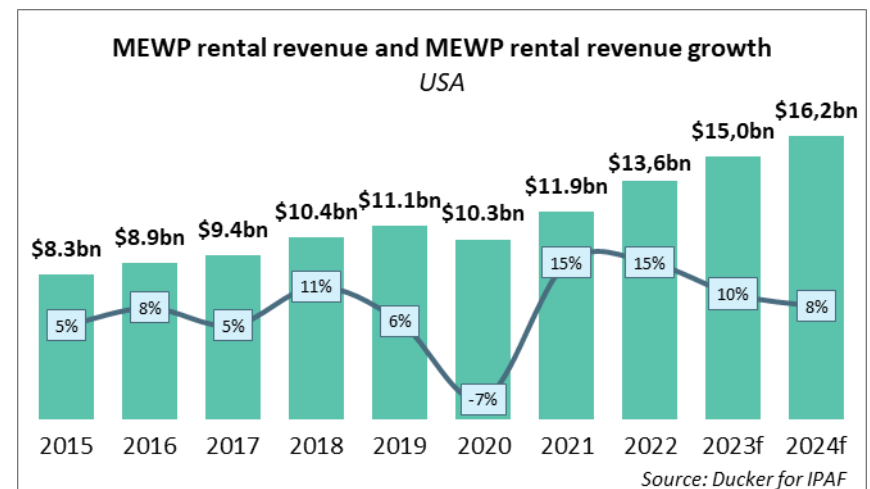
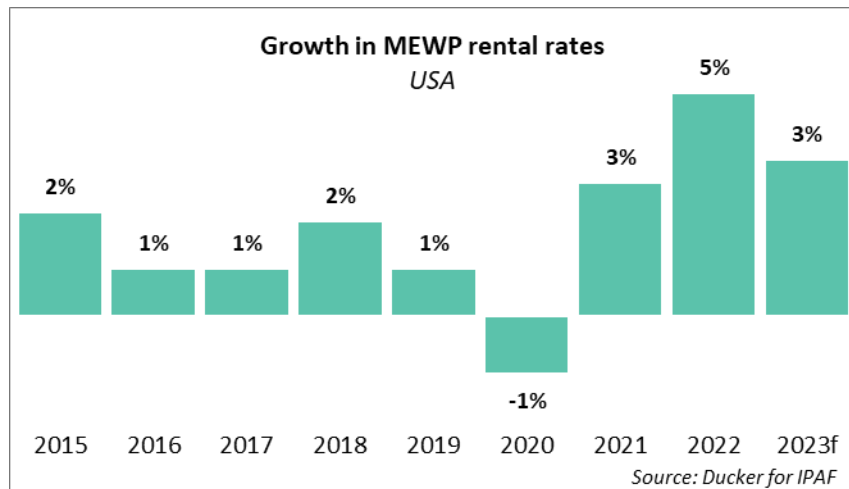
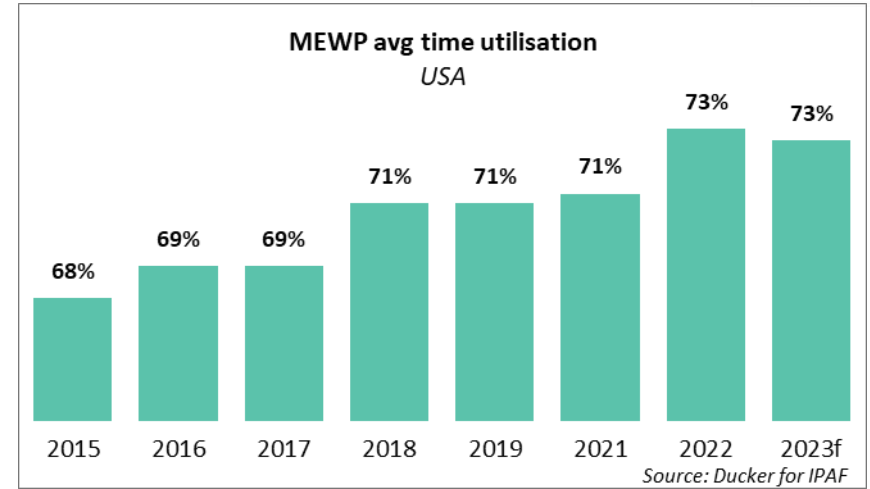
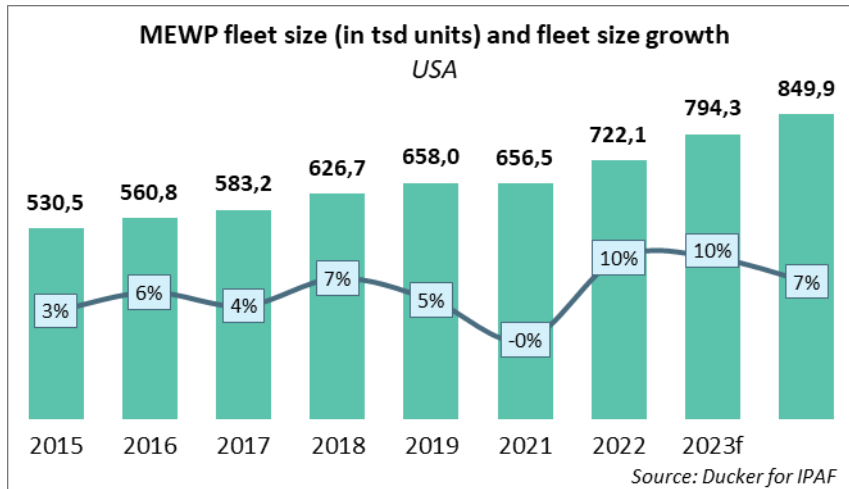
Owing to ongoing supply chain issues, average retention period increased in the US market, raising the concern for increased fleet age, which will keep investment levels high in 2023.

As predicted in 2021, high tariffs imposed on Chinese manufactured machines hampered the availability of some models in the market, increasing the pressure on the market.

Rental rates increased by five per cent in 2022 to compensate for the increase in MEWP procurement costs and inflationary increases. Most companies expect further rental rate increases in 2022, although at a slower pace, as is it hard to sustain client relationships with high year-on-year increases.

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Executive summary – US MEWP rental market situation in 2023



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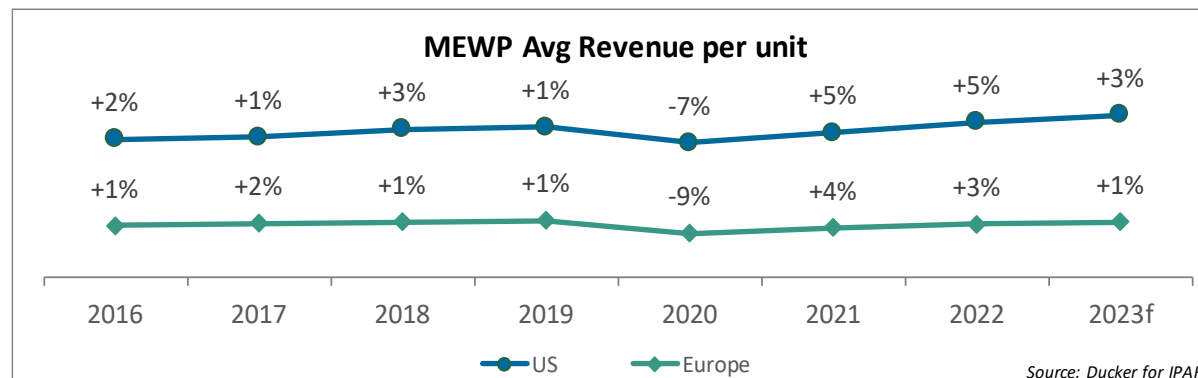
Executive summary – Europe vs US market performance

Region	2022 revenue growth	2022 revenue	2022 fleet size growth	2022 fleet size	Utilisation rate growth	Rental rate growth
Europe (10)	+8%	€3.2/ \$3.4Bn	+ 5%	340,189	+1 pts	+4%
USA	+15%	\$13.6 / €12.6Bn	+ 10%	794,316	+2 pts	+5%

In 2022, both the US and Europe MEWP rental markets saw another year of increases, as demand, rental rates and ongoing MEWP scarcity is driving the market revenue.

Both the Europe and US markets grew in 2022, by 8 per cent and 15 per cent respectively, with positive market outlooks reported in most countries under study.

Rental rates also increased, by 4 per cent on average in Europe and 5 per cent in the US, as rental companies in both markets were able to improve rates to counterbalance external factors mainly owing to inflationary increases.



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Executive summary – fleet size by region and type of equipment in 2023

	North America	Latin America	EAME**	Asia-Pacific
Booms	318,972	38,662	169,051	224,938
Scissors	512,128	29,740	212,683	514,576
Others	48,216	5,948	64,632	61,977
Total	879,316	74,350	446,366	801,491

Included: All booms, scissor lifts and vertical masts;

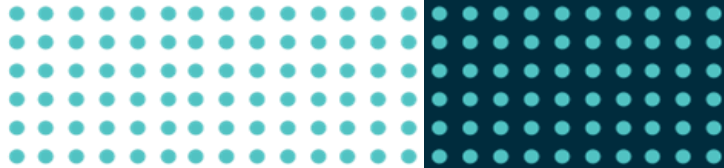
Excluded: Low-level access equipment (<10ft/3m high), telescopic material handlers, forklifts, cranes, MCWPs.

Others include: Vertical lifts, vertical masts, vehicle-mounted booms owned by rental companies with self-propelled fleets.

*Includes Mexico

** Overall Europe (EU27+UK) accounts for 86% of total EAME fleet

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EUROPE INFORMATION
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2022 was a year of activity in construction, but decline of GDP in most countries.

Region	Market Situation 2021	GDP	Overall construction	MEWP Rental Market	Key Indicator
Nordics	Decline in GDP and moderate growth in construction	↓ -4%	↑ 2%	↑ +4%	Stable rental rates and fleet size, growth in utilisation
Germany	Decline in GDP, stable construction	↓ -4%	= 0%	↑ +7%	Increase in all indicators
United Kingdom	Decline in GDP and growth construction	↓ -1%	↑ 5%	↑ +7%	Increase in all indicators
Netherlands	Stable in GDP, growth construction	= 0%	↑ 4%	↑ +8%	Increase in all indicators
Italy	Decline in GDP and strong growth construction	↓ -4%	↑ 15%	↑ +8%	Increase in all indicators
France	Decline in GDP and growth in construction	↓ -5%	↑ 4%	↑ +9%	Increase in all indicators
Spain	Strong growth in GDP and moderate growth in construction	↑ 1%	↑ 3%	↑ +12%	Increase in all indicators
Europe (Ten countries)	Growth in revenue. Positive outlooks for 2023	↓ -5%	↑ +4%	↑ 8%	Increase in all indicators

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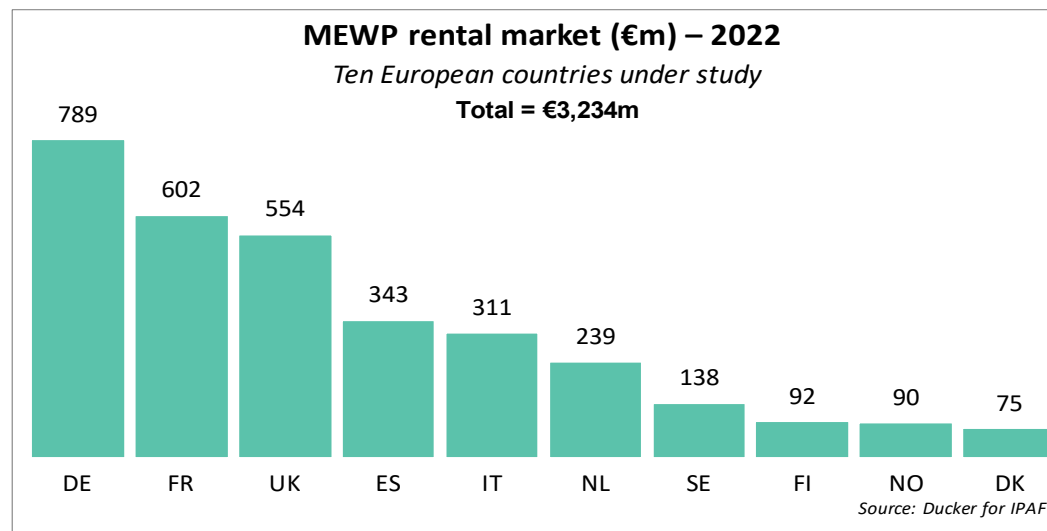


MARKET SIZE 2015-2023
IPAF Powered Access Rental Market Report 2023
EUROPE

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Market size 2023 – rental market value

The value of the total European MEWP rental market reached €3.2bn in 2022, exceeding pre-pandemic levels, though tempered by expectations of slower growth over the next years. Overall market value increased, mainly owing to improved rental rates and fleet size growth throughout all countries under study. Three countries still dominate the market, with the cumulative share of Germany, the UK and France in MEWP rental revenue remaining 60 per cent of the total market.

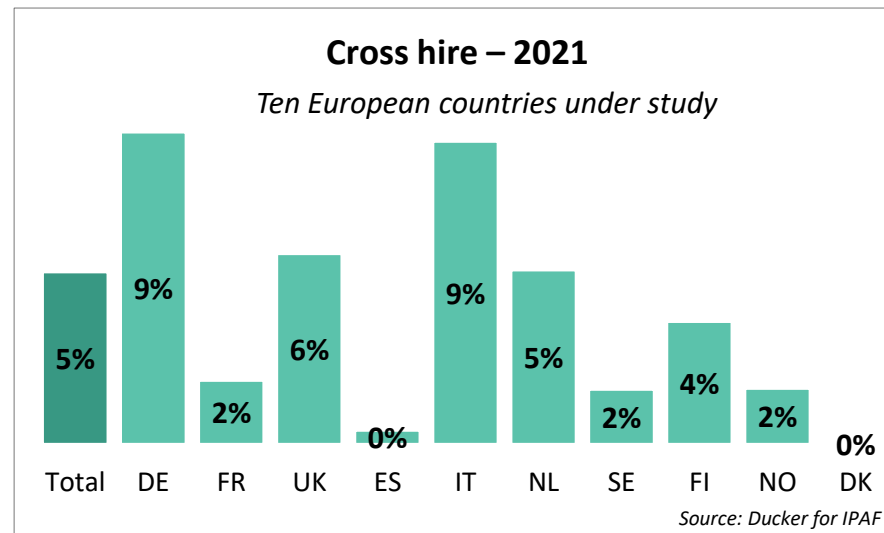
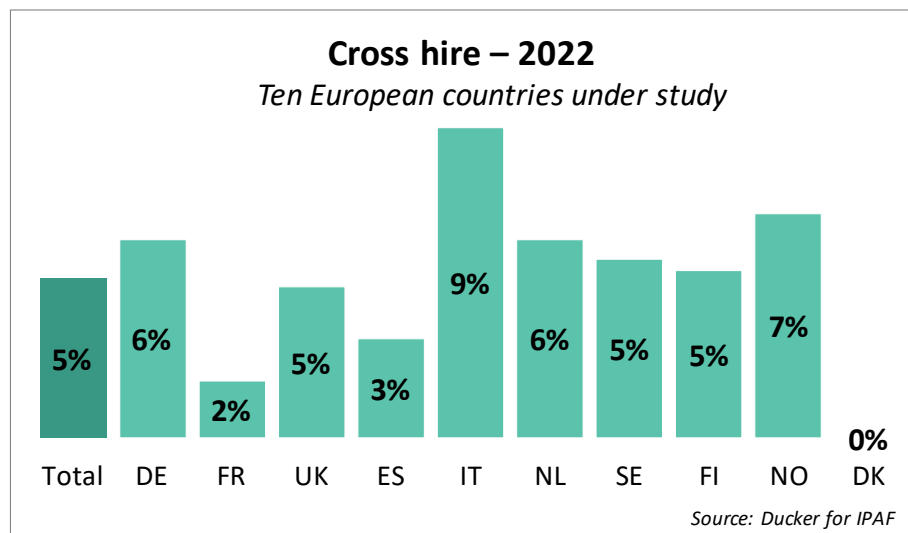


2022	Total	DE	FR	UK	ES	IT	NL	SE	FI	NO	DK
Rental Revenue as % of Total Company Revenue	59%	50%	65%	53%	55%	55%	64%	76%	77%	75%	75%
MEWP Revenue as % of Total Rental Revenue	53%	68%	34%	87%	61%	77%	60%	30%	32%	42%	38%
MEWP Rental Revenue as % of Total Company Revenue	32%	34%	22%	46%	34%	42%	38%	23%	25%	31%	28%

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Market size 2023 – cross hire

In 2022, cross hire decreased slightly in most European countries under study, as lead times on new machines partially stabilised and rental companies were able to begin expanding their fleets in line with pre-pandemic strategies. Cross hire went up considerably in Spain and remained steady in Italy, where cross-hire activities are increasingly used to attract new clients and diversify fleets without needing to invest in a lot of new machines. As equipment availability stabilises and returns to pre-pandemic norms, cross hire is expected to decline in most countries under study.

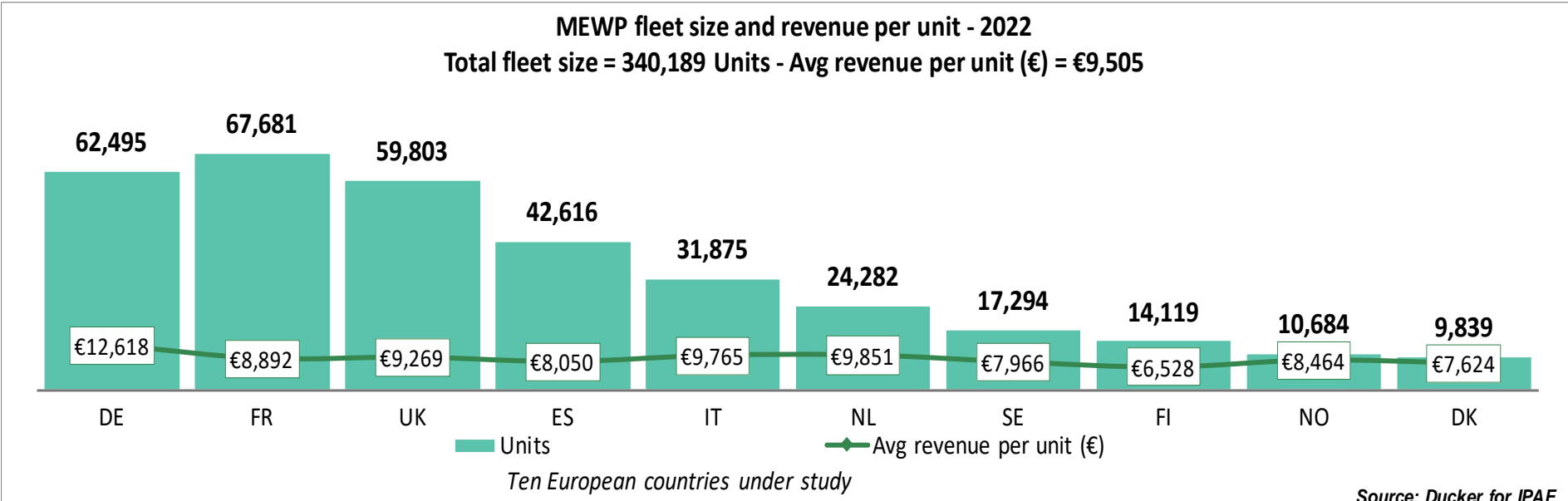


Cross hire = Rental by one company from another. All re-rental amounts have been eliminated from totals expressed in this report

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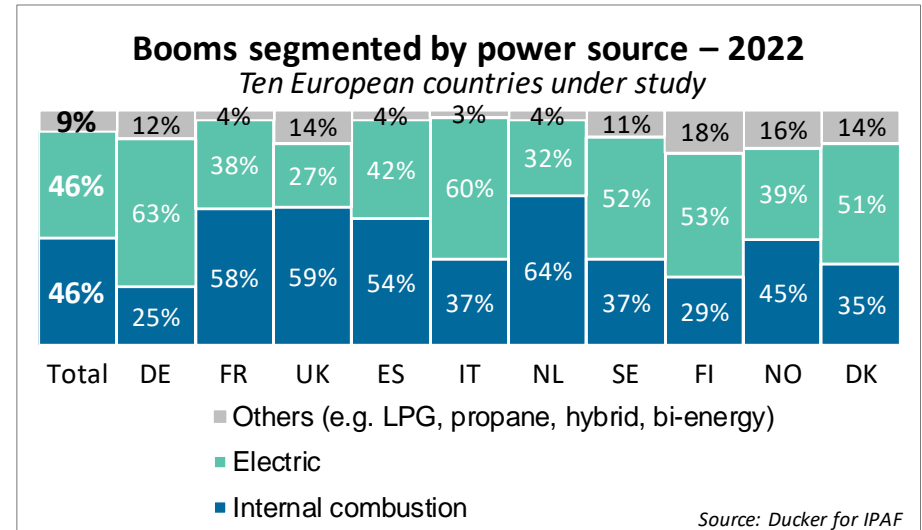
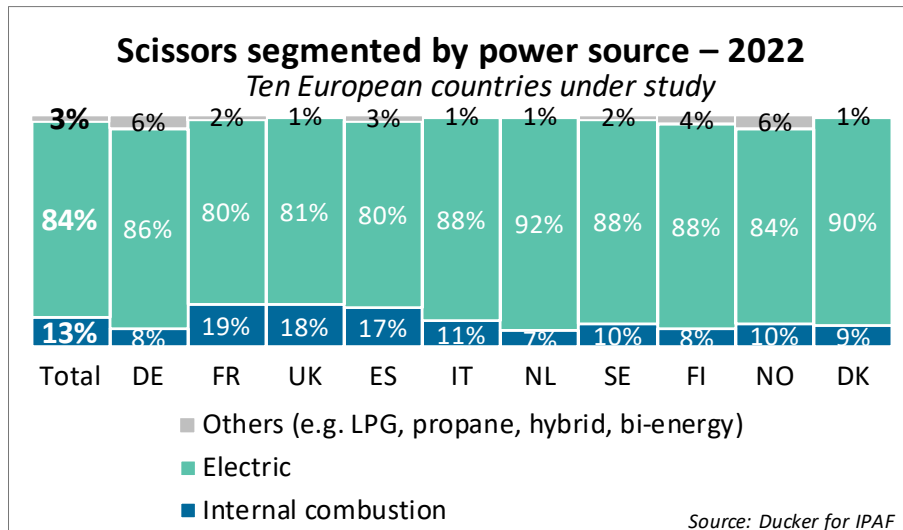
Market size 2022 – market size in units

The total rental MEWP fleet size in the ten European countries under study was estimated to stand at approximately 340,000 units as of the end of 2022. In 2022, the French MEWP rental fleet remained the largest fleet: It exceeded 67,000 units having grown by approximately 5,000 units. Second to the French fleet in terms of size was the German fleet, on close to 62,500 units, followed closely by the UK fleet, which stood at almost 60,000 units (low-level access excluded) at the end of 2022. Average revenue increased to €9,505 per unit and, as in previous years, Germany had the highest revenue per unit.



Market size 2022 – power sources

The European MEWP rental market continues to shift towards green energy sources, but the transition remains constrained by unreliable supply of new machines to purchase to enable fleet renewal on the desired scale. Electric scissors dominate fleets in all countries, particularly in the Netherlands, Germany and the Nordic countries. This transition towards electric scissors continues in the rest of Europe, but internal combustion scissors remain popular for rough terrain use and heights over 20m. Rental companies report progress in terms electrification options from manufacturers of MEWPs and expect to see an increase of available models in the next few years. Transition towards electric booms is progressing at varying rates, depending on the country and local demand for rough-terrain units, +20m heights and availability of charging infrastructure.



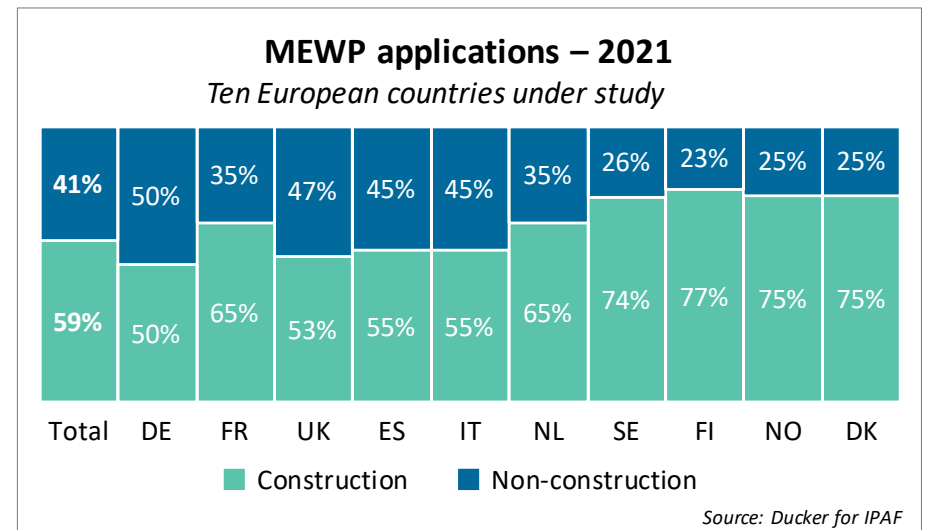
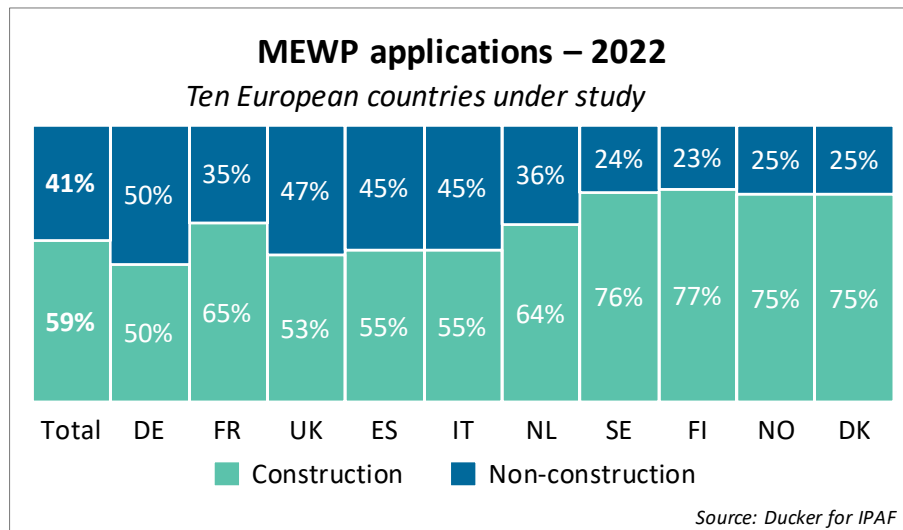
Percentage of the fleet powered by electric vs internal combustion.

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Market size 2022 – applications

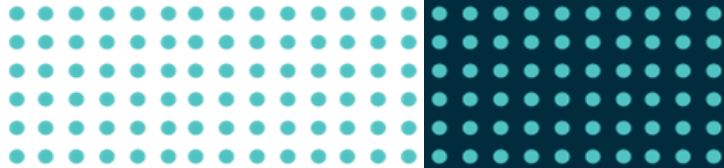
In 2022, application split between construction and non-construction remained steady over 2021. High demand coming from both construction and non-construction end uses: Major construction projects commencing in 2022, causing a positive outlook for several years to come and ongoing renovation activities driven by governments. Non-construction end-uses experiencing healthy activities in many segments. Events and media have fully recovered, activities in service for data centres and warehouses increased.



Non-construction includes property and infrastructure maintenance, cleaning, utilities, events.

Construction includes new-build and renovation work, across commercial, residential and infrastructure projects.

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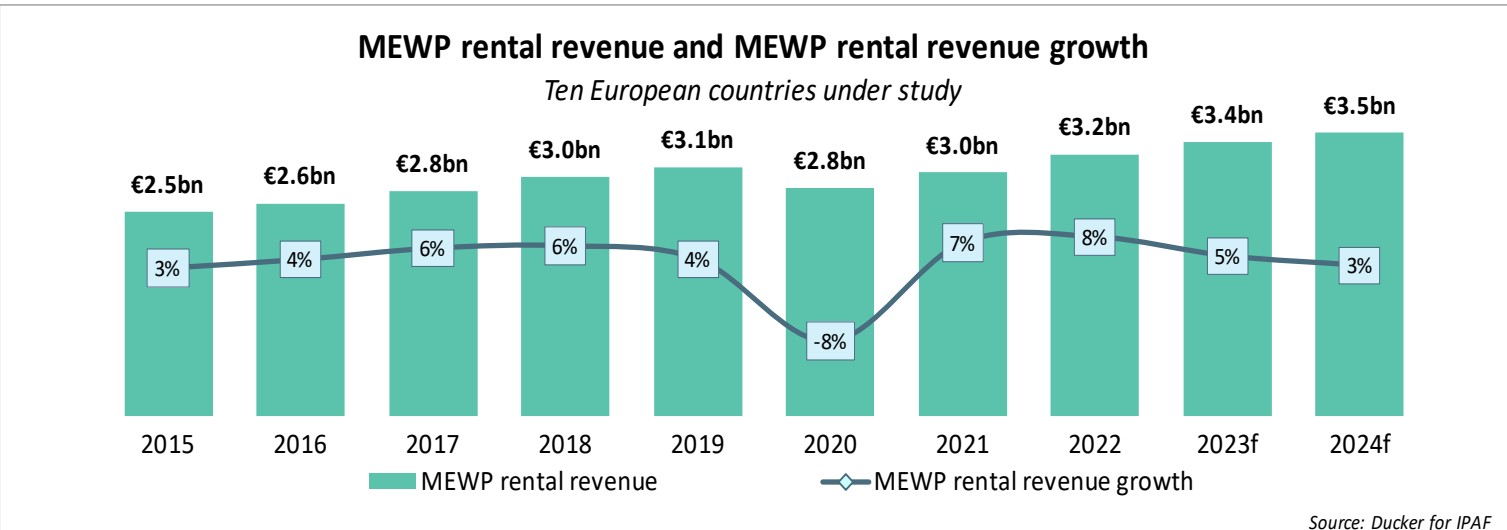


MARKET DYNAMICS 2015-2023
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EUROPE

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Market dynamics 2015-2023 – market value growth

During 2021, European MEWP rental revenue increased by around eight per cent to reach a total value of €3.2 billion. Despite the negative impacts caused by the war in Ukraine, inflationary pressure and the lack of skilled workers, the rental market experienced a year of high levels of growth. Outlooks for 2023 and 2024 remain positive, with many rental companies expecting further market growth of up to five per cent, though rental companies operating in some markets are expecting lower levels of growths, mainly owing to lower construction output.

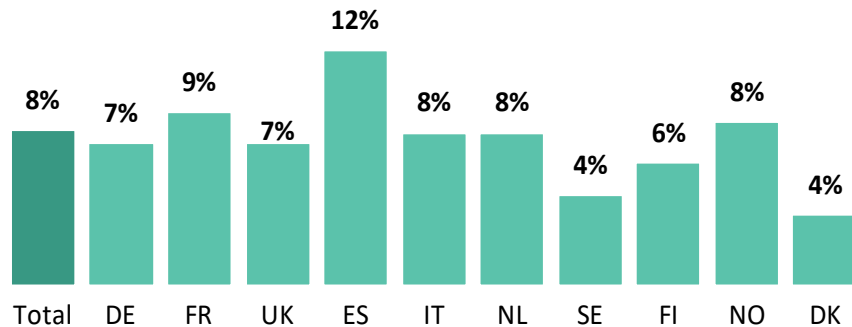


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MEWP rental revenue growth – 2022

Ten European countries under study

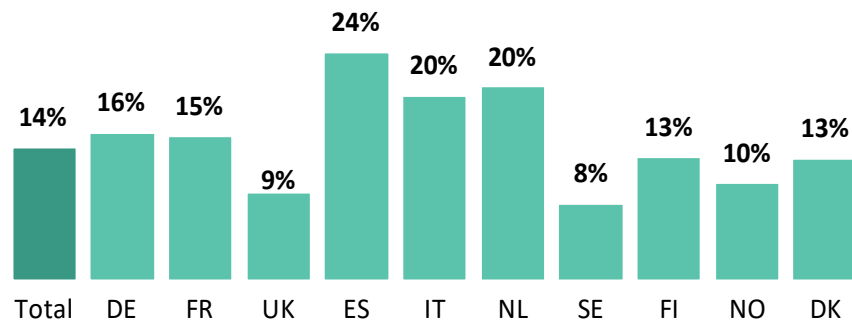


Source: Ducker for IPAF

Total revenue increase across all 10 European countries under study amounted to eight per cent in 2022. Markets in Sweden and Denmark experienced lower levels of growth of around four per cent, owing mainly to a decline in construction output. Spain experienced the highest increase in revenue in 2022, partially as a late rebound after a comparably slow recovery in 2021.

MEWP rental penetration rate – 2022

Ten European countries under study

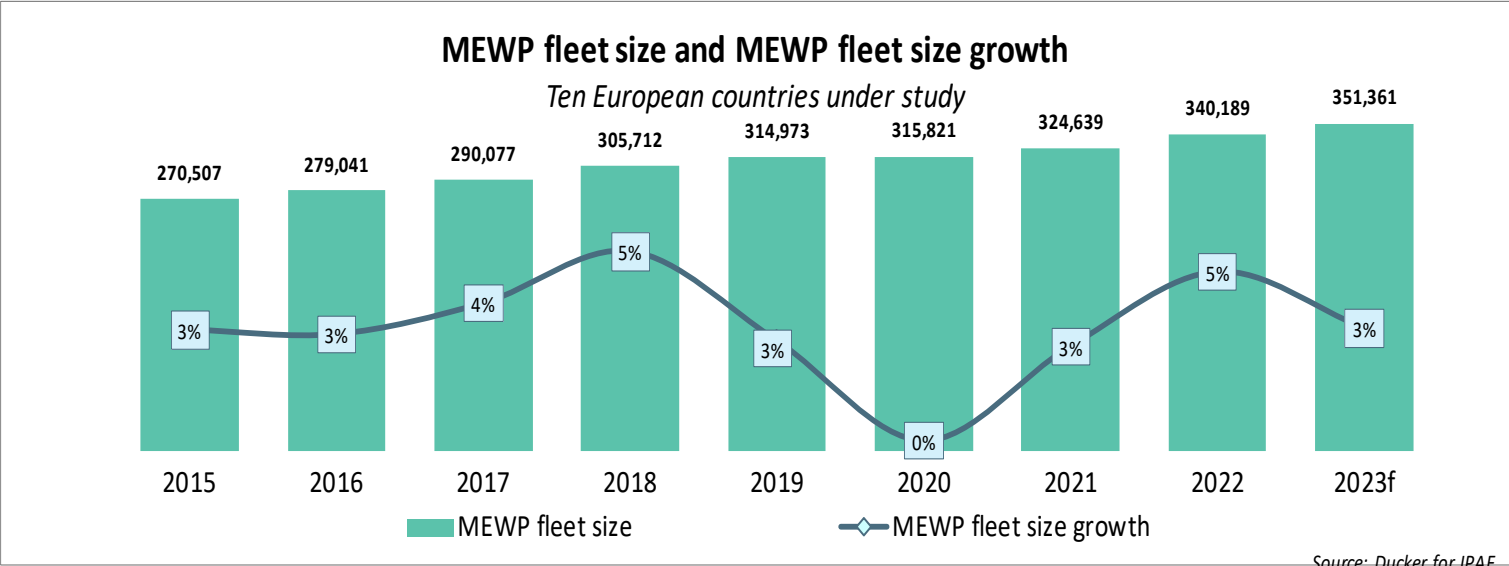


Source: Ducker for IPAF

MEWP rental penetration in the European countries under study increased by one per cent, to stand at 14 per cent in total. As in 2021, the share of MEWP-generated revenues in Spain, the Netherlands and Italy were the highest among the 10 European countries in the scope of the study.

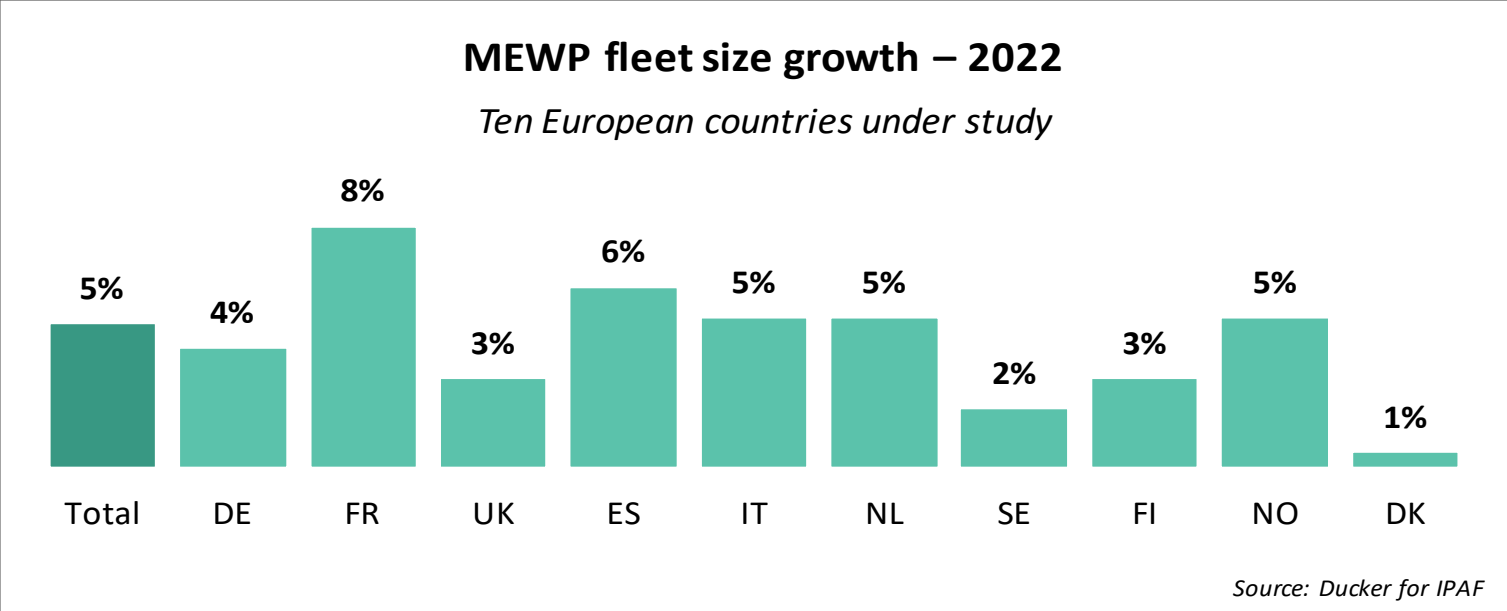
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Fleet size grew by around five per cent in 2022 and was influenced by two factors: Backlogged orders of new MEWPs arriving in 2022, after rental companies invested heavily in fleet expansion and renewal in 2021; supply-chain issues had previously prevented rental companies from increasing fleets as much as intended, while demand from both construction and non-construction end sectors remained high in 2022 and 2023.



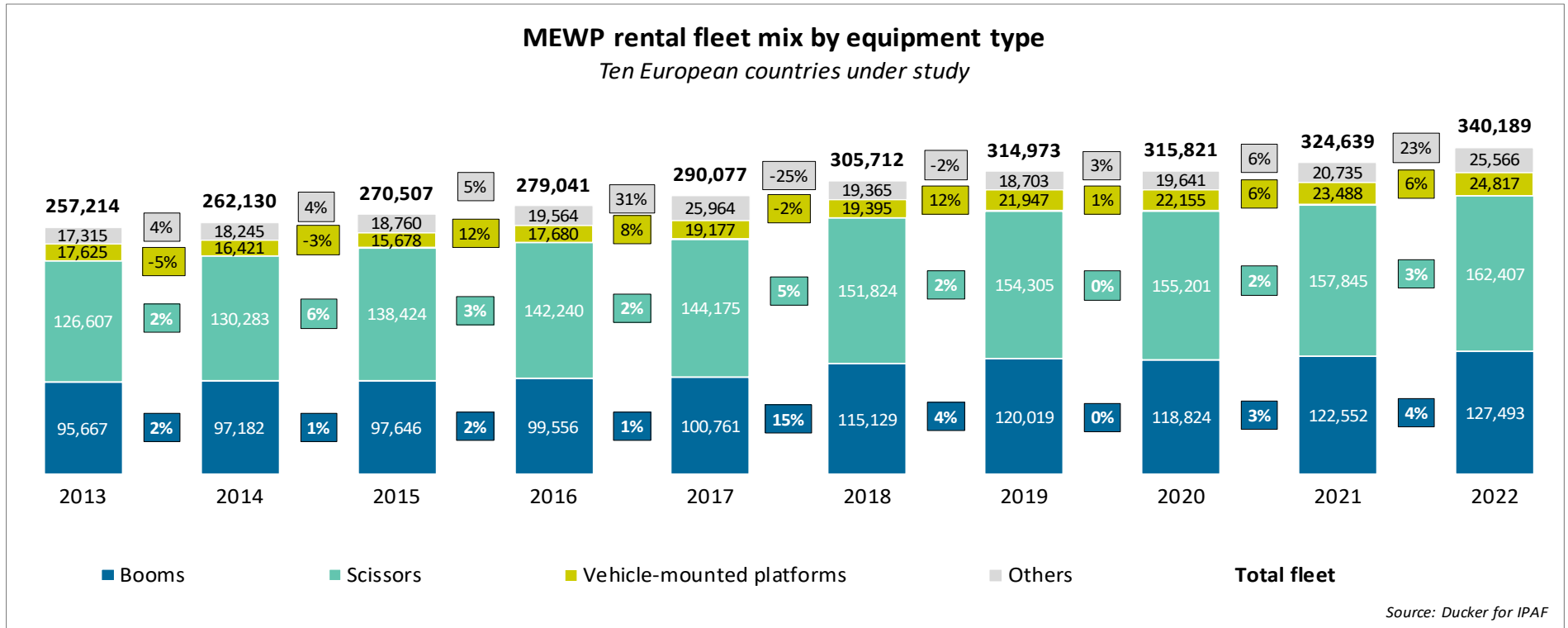
Included: All booms, scissor lifts and vertical masts; Excluded: low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, MCWPs

In 2022, rental fleets across Europe grew at different speeds, with typical fleet size in France increasing by around eight per cent year on year. Average fleet size growth in the countries under study was at five per cent, owing to overall high levels of demand and positive market outlooks for 2023. With major construction projects commencing, French and Spanish companies significantly increased their fleet size. However, fleet size remained largely unchanged in both Denmark and Sweden, as rental companies anticipated slower demand in 2023.



Market dynamics 2015-2023 – market size in units

The combined MEWP fleet mix of the ten European countries under study is comprised of 48% scissors, 37.5% booms, 7% vehicle-mounted MEWPs and 7.5% other types. An increase of demand for vertical lifts in some countries such as the Netherlands and France, increased “others” by one per cent. Remaining fleet remained broadly the same through 2022.



+X% % unit growth, eg booms fleet increased by 4% from 2021 to 2022.

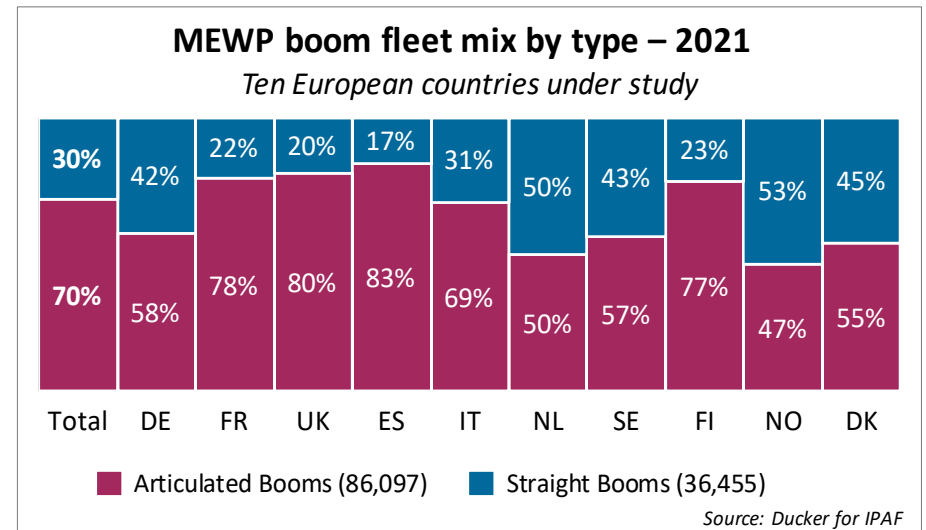
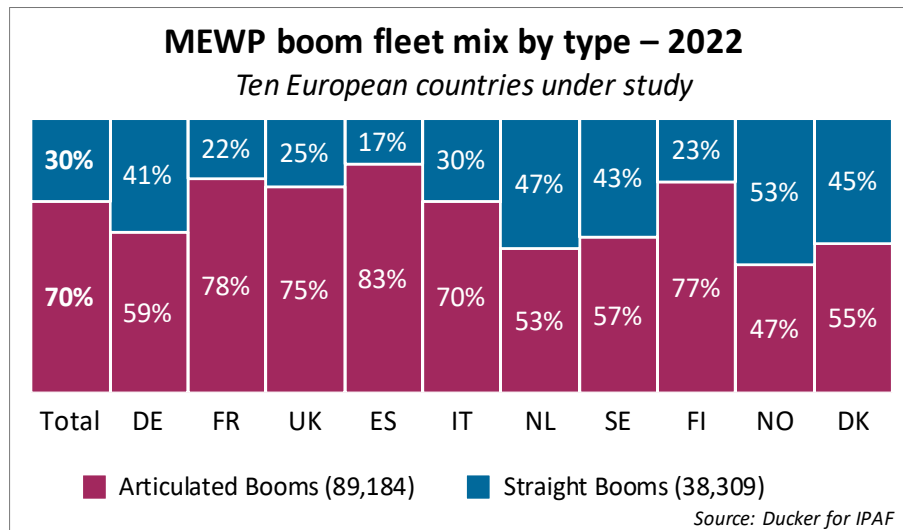
Others include: Vertical lifts, vertical masts, push-around verticals, trailer mounted/towable.

Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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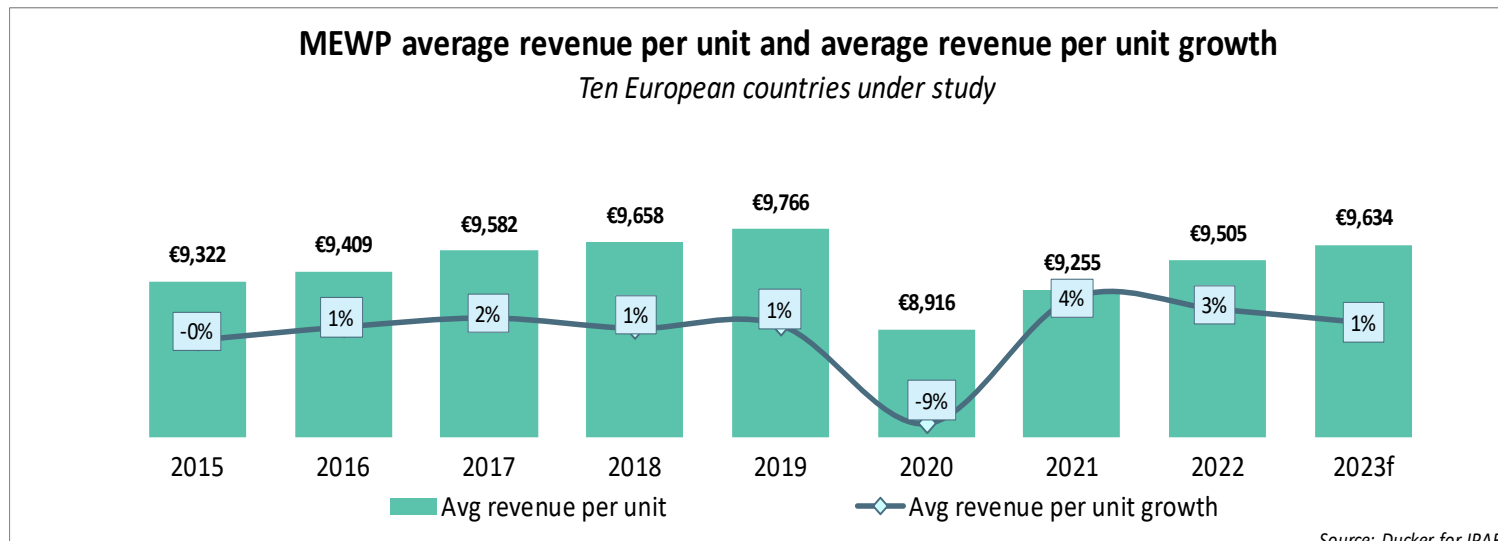
Market dynamics 2015-2023 – market size in units

Rental markets in Norway, Sweden, the Netherlands and Germany continue to favour straight booms, while articulated booms remained the dominant MEWP equipment group during 2022 owing to their greater flexibility and variety of end applications. Articulated booms represent more than 75% of the boom fleets in Spain, France, the UK and Finland. Owing to the fact that availability of new articulated booms from the OEMs has been problematical during the past few years, the share of straight booms increased in the UK, though articulated booms increased in the Netherlands, Germany and Italy.



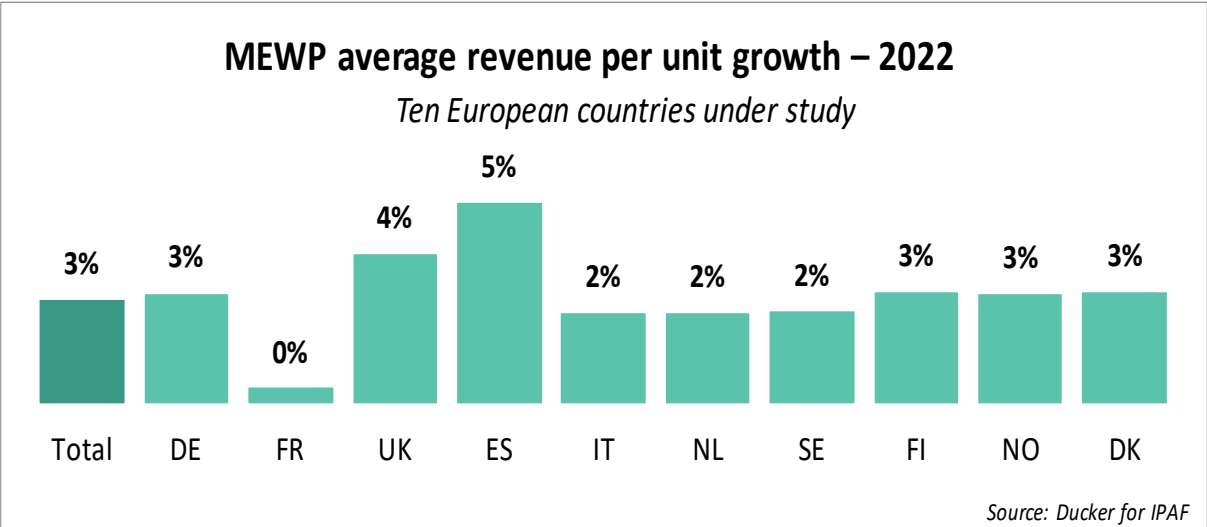
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After average revenue per unit partially recovered in 2021, the rental market saw a further increase in 2022 by around three per cent. Owing to significant increases in the purchase price of new equipment, rental companies were forced to increase rental rates to maintain previous levels of expected average revenue.



Market dynamics 2015-2023 – revenue per unit

In 2022, average revenue per unit increased for all countries under study, except for France, which remained at 2021 levels. On average the European market saw an increase of three per cent over 2021, with Spain, the UK and Germany experiencing the most significant increases in 2022, owing mainly to high demand and rental rate increases. Most of the European countries under study were able to reach or exceed pre-pandemic levels and are forecast to further increase in 2023.



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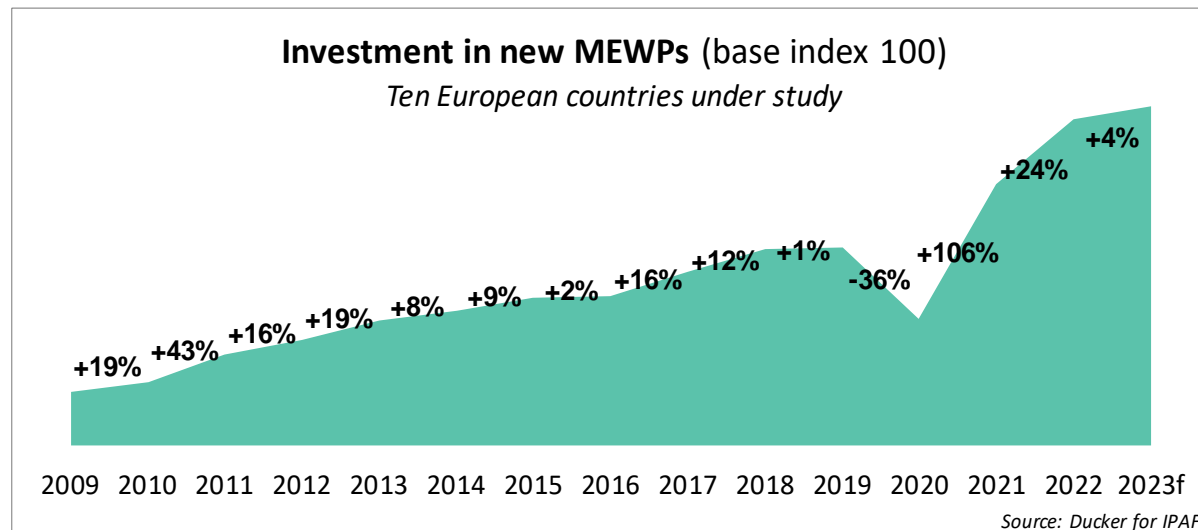




INVESTMENT 2009-2023
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EUROPE

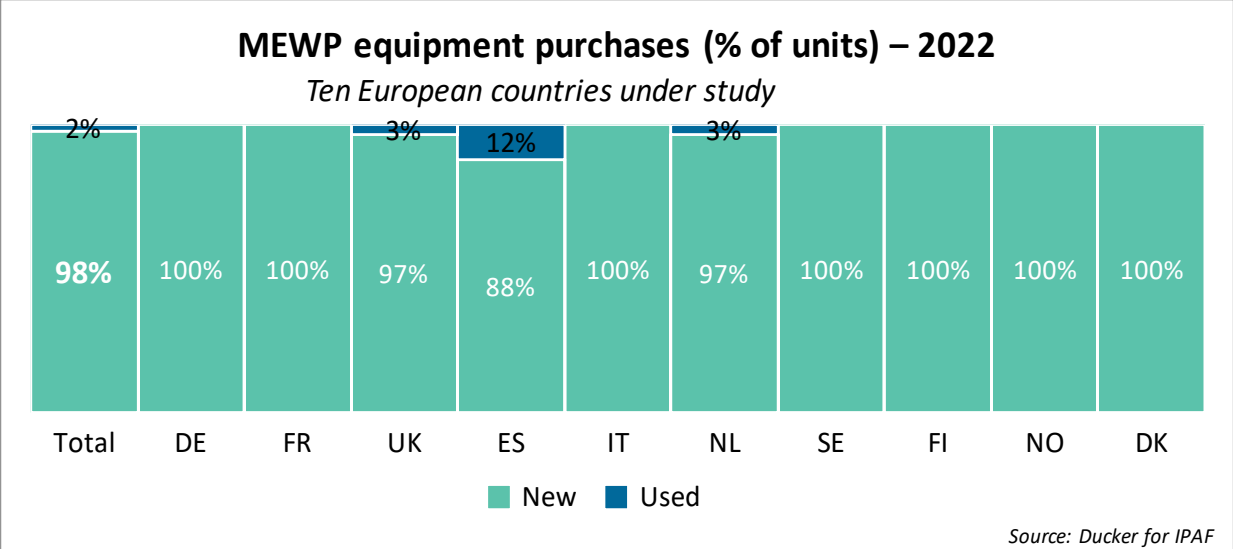
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After a year of rental companies resuming their pre-pandemic investment plans in terms of both fleet expansion and renewal, rental companies further increased investment levels in 2022, which averaged out to a 24 per cent increase across all European countries as a whole. Supply-chain issues remain for both European and North American manufacturers, so rental companies are investing to ensure early delivery. Chinese manufacturers continue to penetrate the European market, as they were less affected by the disruption to production supply chains and had more new equipment readily available.



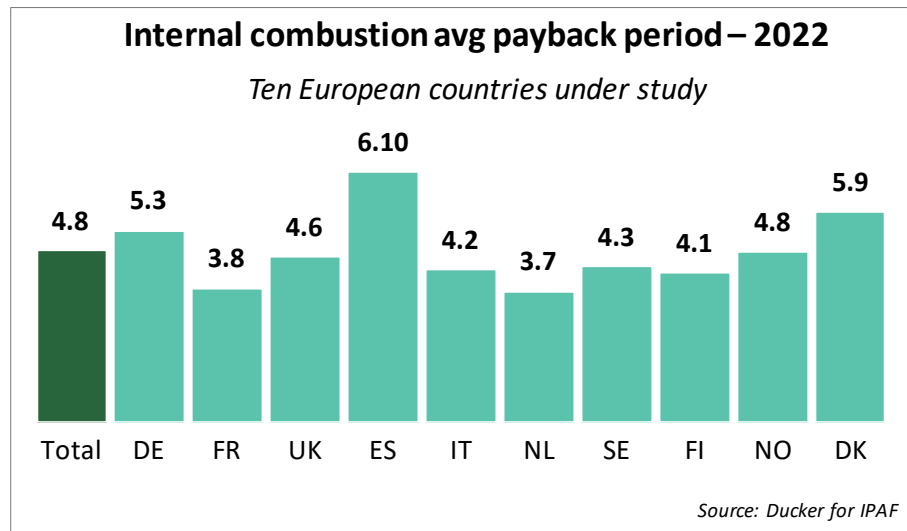
Investment – equipment purchases

During 2022, as in 2021, European companies were focused on renewing and expanding their fleets and mostly preferred to purchase brand new equipment, with exceptions wherever the desired machines were not available new direct from the manufacturer, or owing to longer-than-usual lead times caused by supply-chain issues. Spain has the highest share of used equipment purchases, owing to the relatively younger age of typical machines in the Spanish fleet.

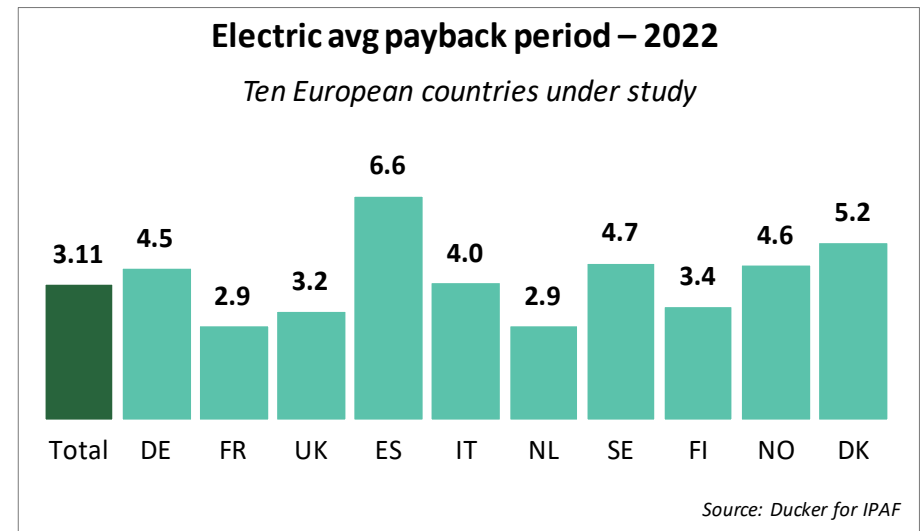


Investment – typical payback period

In all European countries under study, electric-powered equipment has an average payback period below that of internal-combustion-powered machines. While the average payback period for internal-combustion-powered MEWPs remained stable, electric-powered machines decreased by two months, partly owing to an increase in the number of Chinese machines in the market. In 2023, increased equipment prices are expected to affect average the payback period for both categories.



4.8= 4 years, 8 month



3.11 = 3 years, 11 months

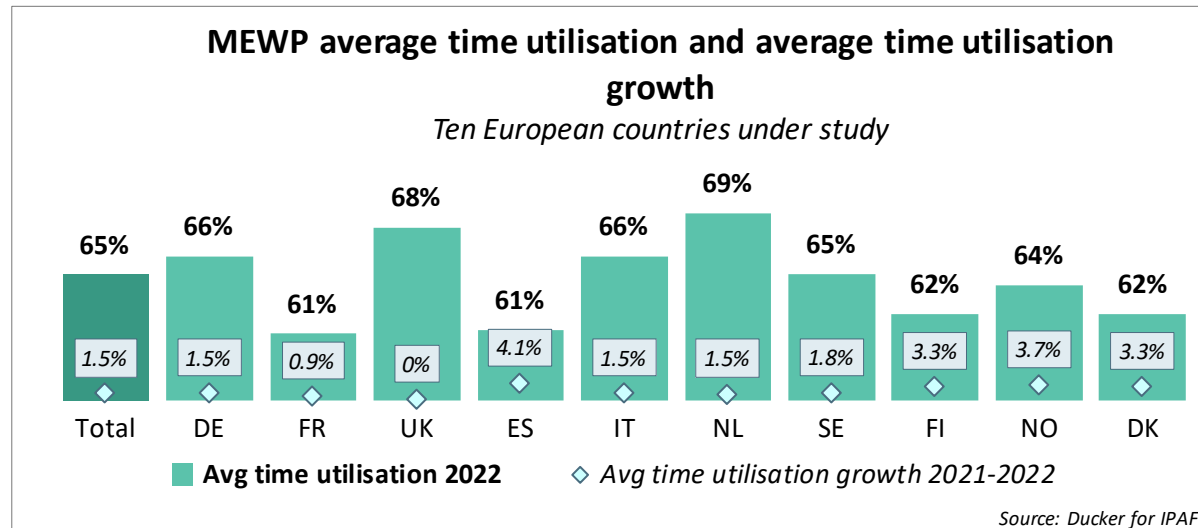


OPERATIONAL ASPECTS 2015-2023
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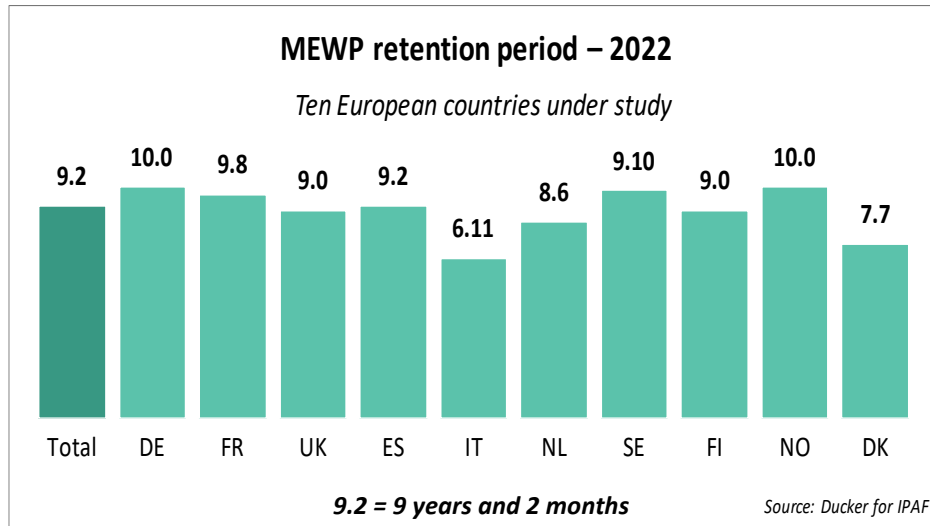
Operational aspects – time utilisation rates

Average utilisation rate in the ten countries under study went up by almost 1.5 per cent by the end of 2022, driven by healthy levels of activity in construction and most non-construction sectors. Utilisation rate went up or remained steady in all European countries under study, remaining unchanged in the UK and up to a maximum of 4.1 per cent in Italy. While some countries have reached or even exceeded the pre-pandemic utilisation rates, Germany, Spain, Norway and Denmark are expected to regain these levels by the end of 2023. Utilisation rates across Europe are expected to stabilise further in 2022, owing to improving availability of new MEWPs on the market.



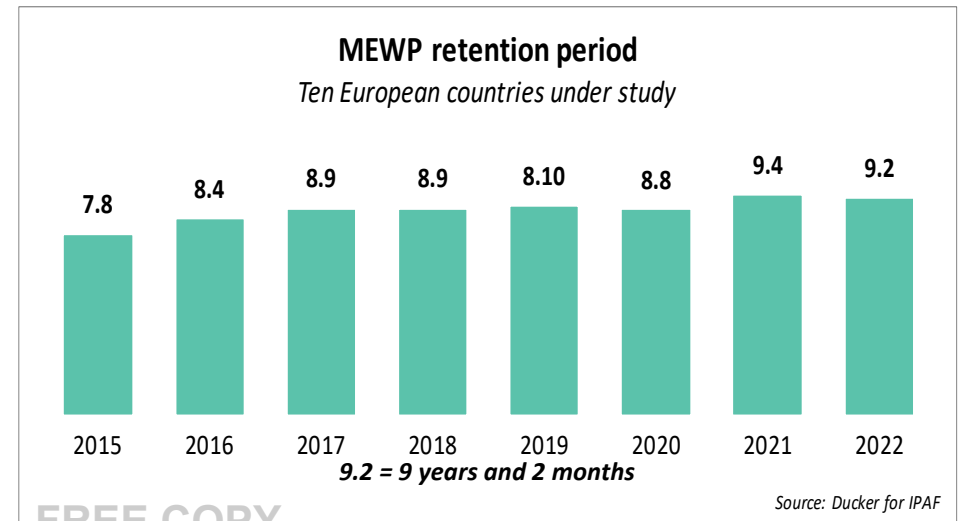
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Operational aspects – retention period



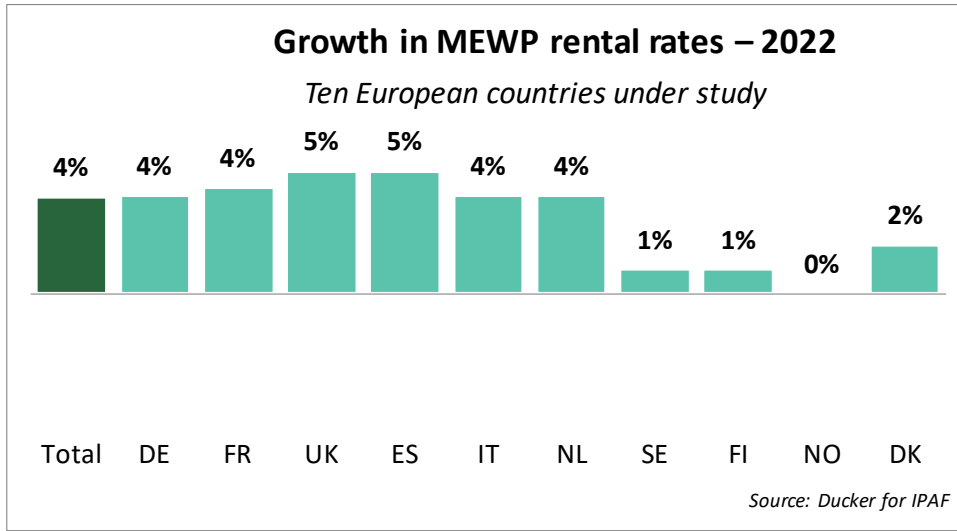
Average retention period is typically longest in Germany and Norway; in Germany retention period decreased by ten months, while in Norway it slightly increased by one month. Despite experiencing longer lead times in 2021, many companies were not looking to substitute their traditional equipment suppliers and kept machines in the fleet for a longer time instead.

Driven by slightly improved lead times of new equipment, average retention period decreased by two months to nine years and two months. Rental companies reported that the price increases have impacted the retention period and will likely keep retention period at above nine years, even when lead times are normalising.



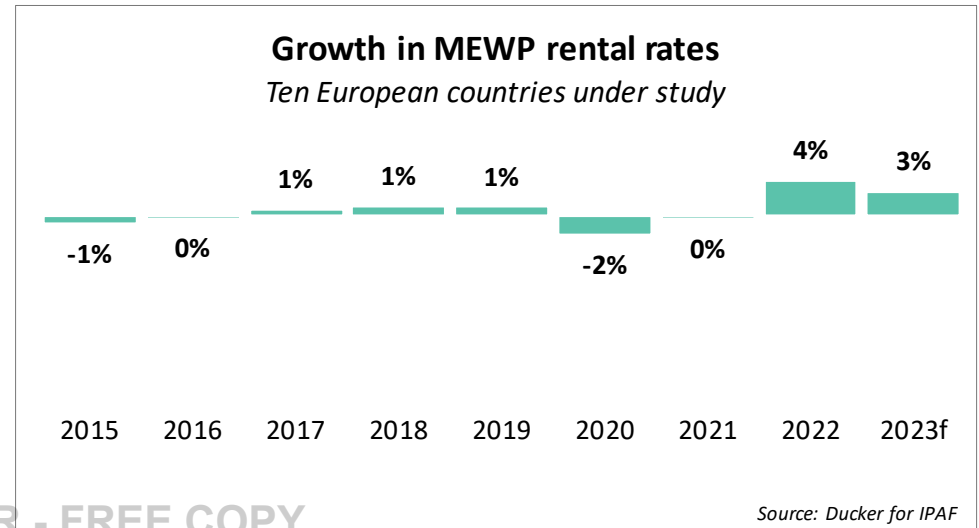
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Operational aspects – rental rates



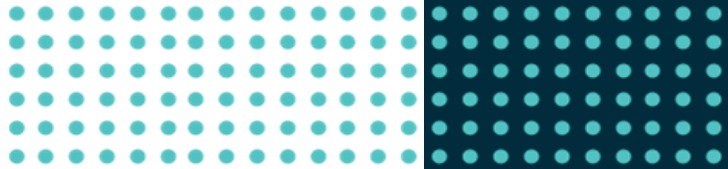
Most European countries experienced significant rental rate increases, of around four or five per cent in 2022, driven by rising inflation. Rental companies in the Nordic region were unable to increase rental rates by more than one per cent on average, driven by consolidation activity fuelling fierce competition on prices in those markets.

In 2022, average rental rates increased across the 10 countries under study by around 4 per cent. Given rising inflationary pressures and increasing purchase prices for new machines, average rental rates are expected to increase by around a further three per cent in 2023. Tight competition in the rental market is driving rental companies to incrementally increase rental rates year on year, rather than doing so in one large increase.



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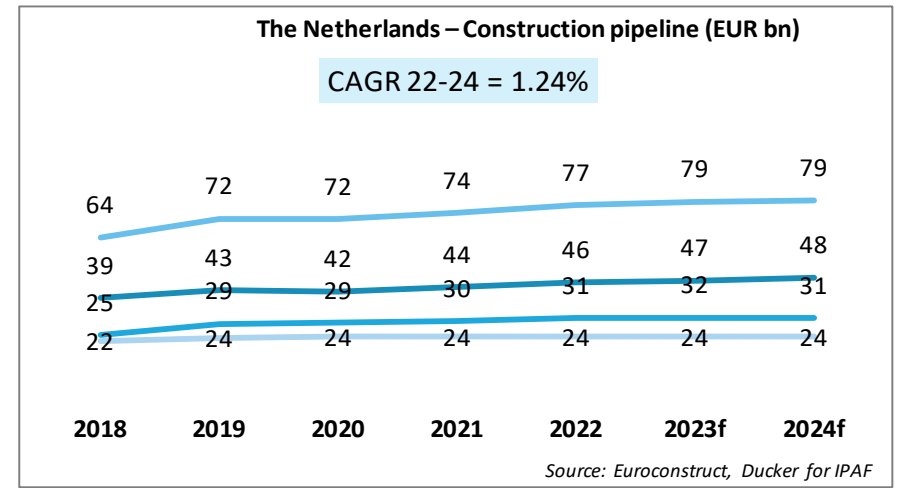
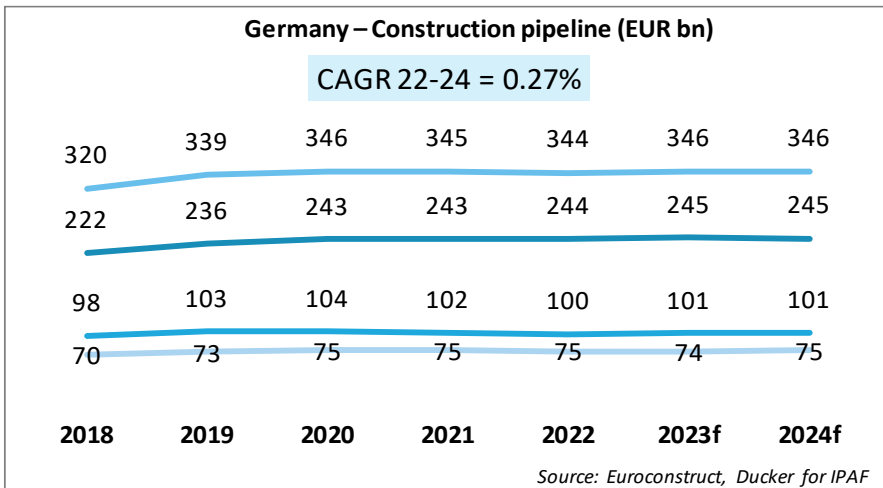
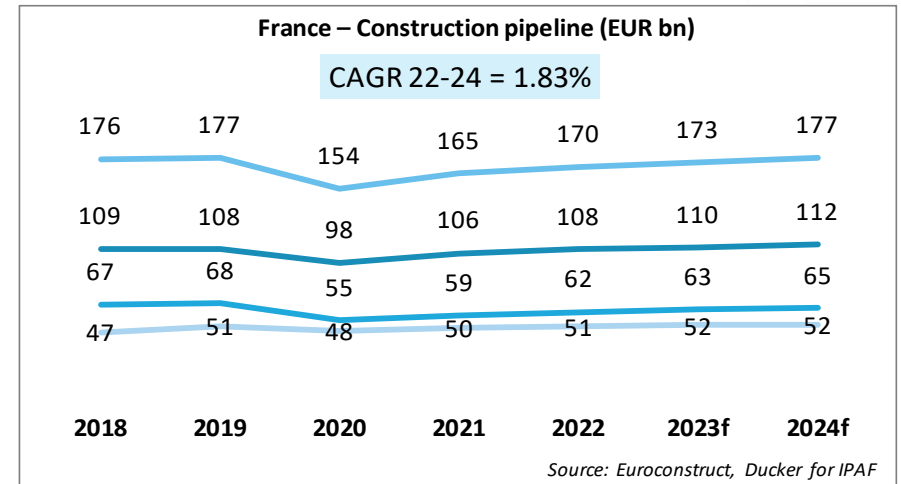
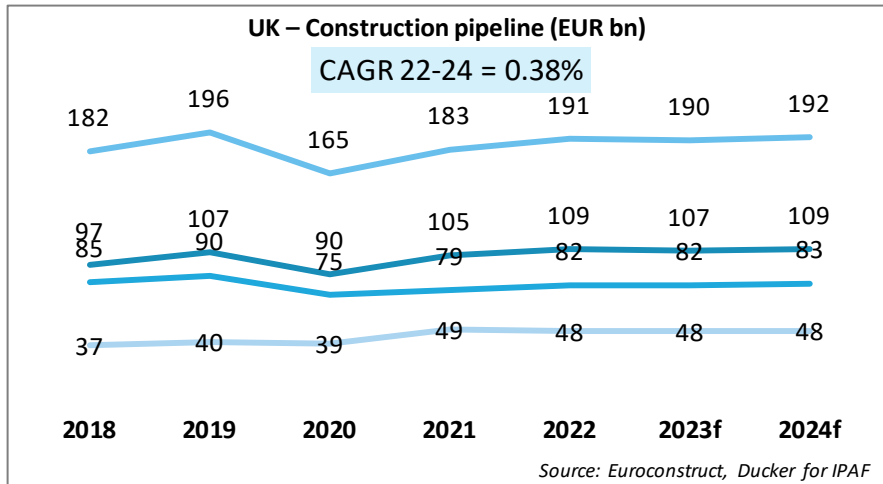




MARKET TRENDS AND DRIVERS
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Market trends and drivers – construction pipeline



— Residential construction — Non-residential construction — Total construction — Civil engineering / Major infrastructure

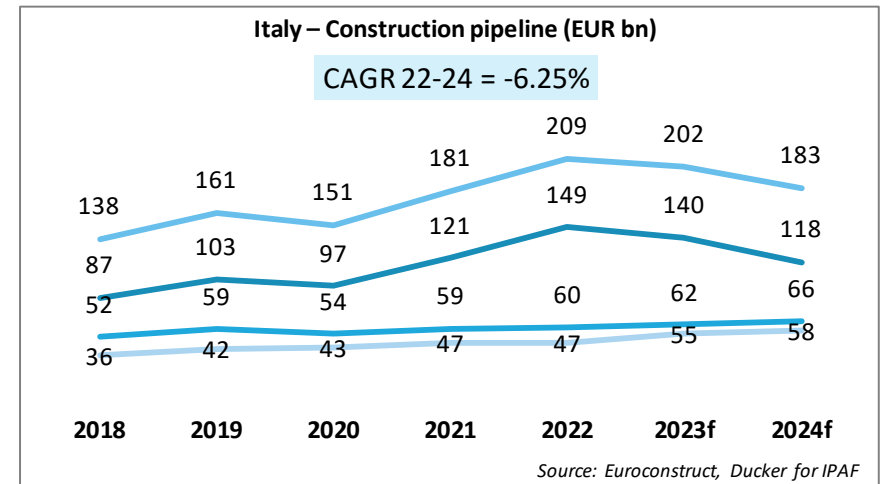
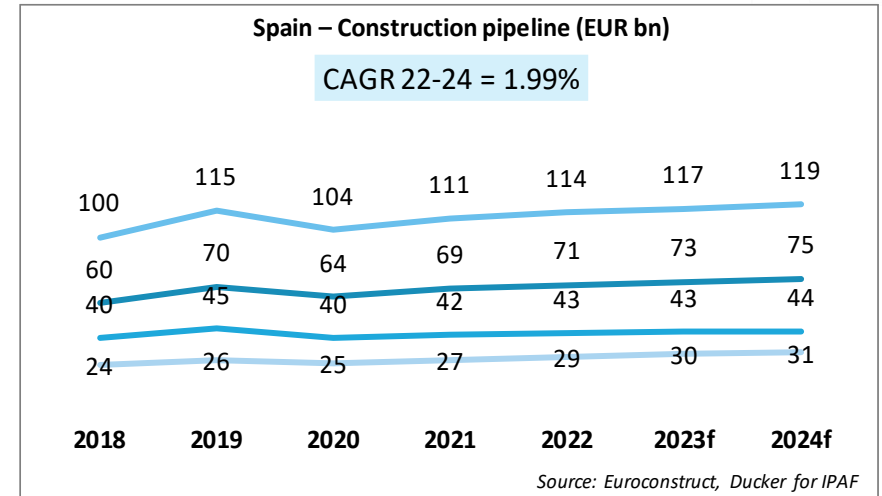
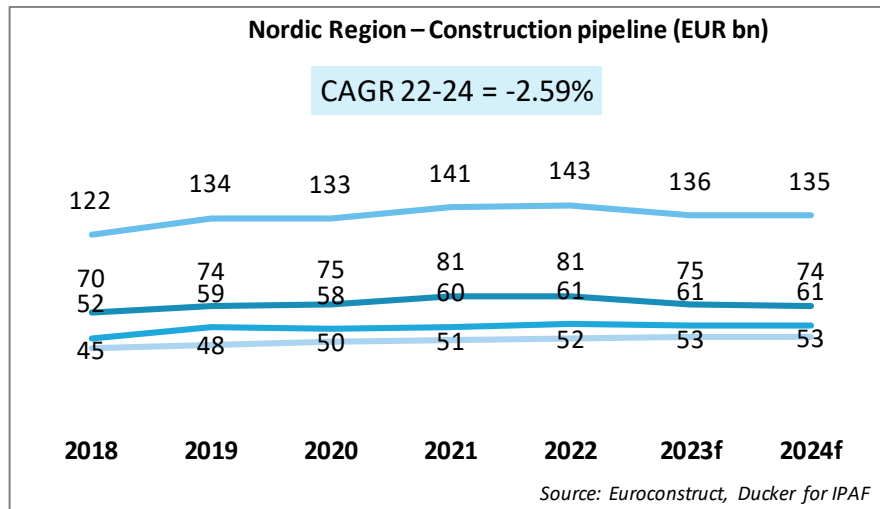
CAGR: Compound annual growth rate

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Construction pipeline (billions euros) based on Euroconstruct 2022 figures.



Market trends and drivers – construction pipeline



— Residential construction
 — Non-residential construction
 — Total construction
 — Civil engineering / Major infrastructure

CAGR: Compound annual growth rate

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Construction pipeline (billions euros) based on Euroconstruct 2022 figures.





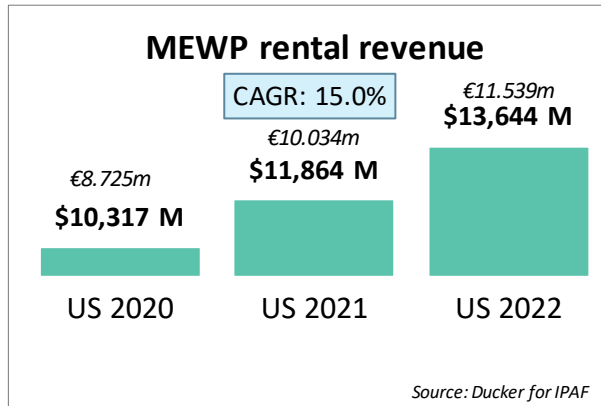
US INFORMATION

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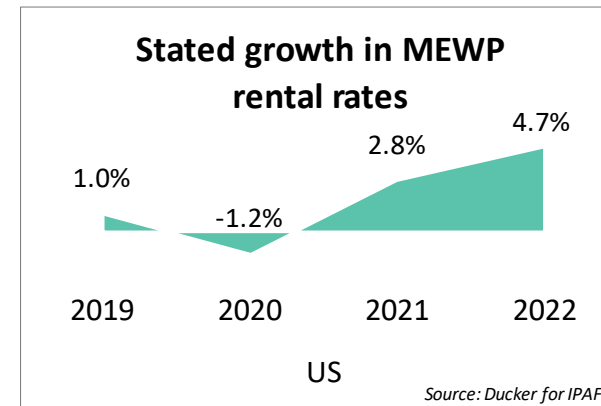
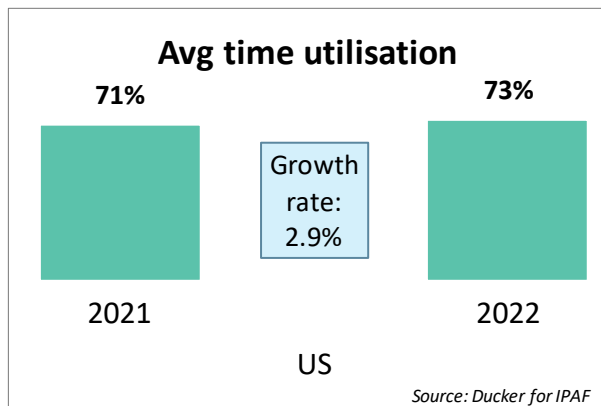
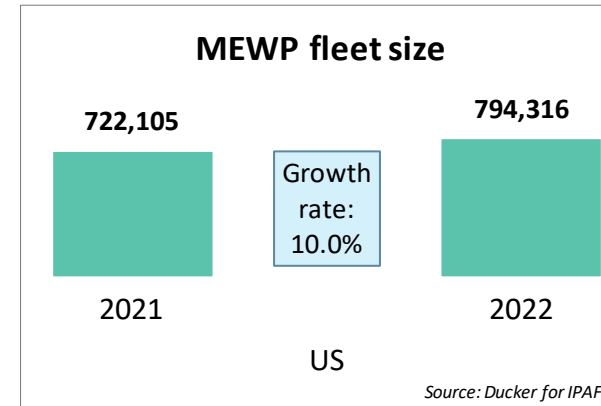
North America

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2022 was a year of strong growth in the US; with both the wider economy and construction activity at high levels, most main indicators returned to pre-pandemic levels or even exceeded them. MEWP rental revenue reached a record high, a direct consequence of the country’s rapid market growth. Total fleet size expanded, while rental companies were able to increase rental rates by an average of five per cent in 2022. Utilisation rates increased to an all-time high of 73 per cent.



CAGR: Compound annual growth rate



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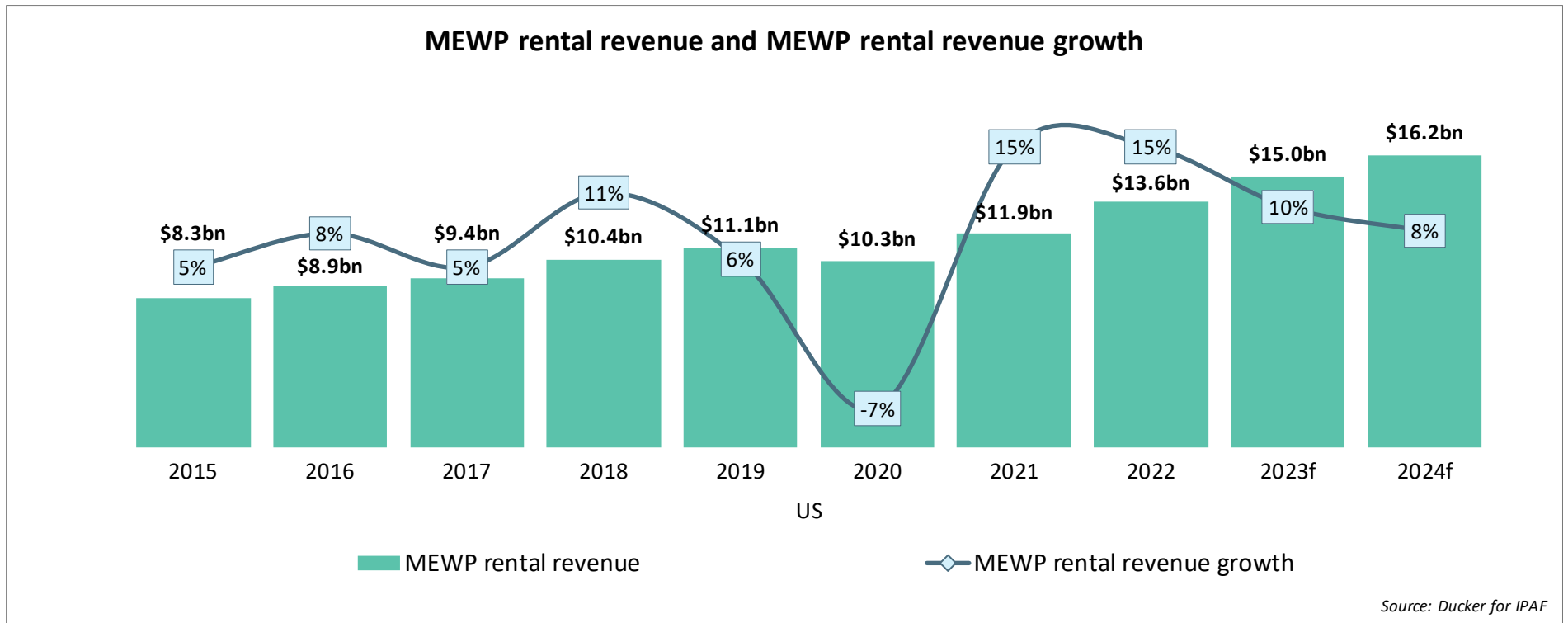


MARKET SIZE AND DYNAMICS 2008-2023
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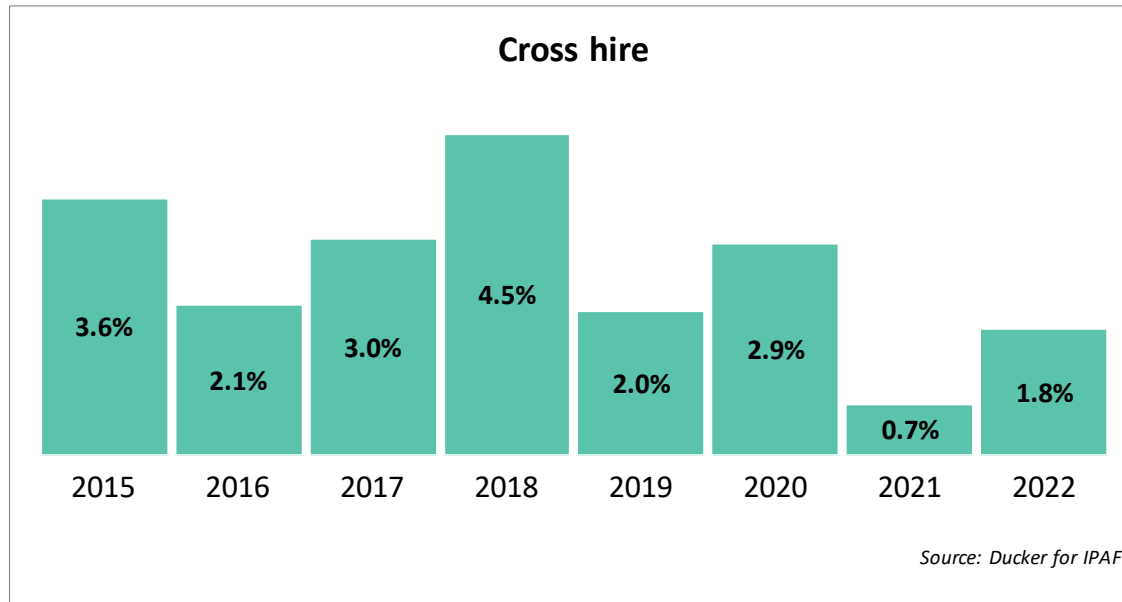
US – rental market value and growth

Rental market value grew 15 per cent year on year and is expected to remain at these high levels over the next two years, owing to the US's continuing strong economy. Rental revenue increased as a result of rental companies increasing rental rates and expanding fleet size in line with increasing demand in the market. Demand is expected to remain high, though revenue growth is expected to slow down over the next years owing mainly to a decrease in demand.



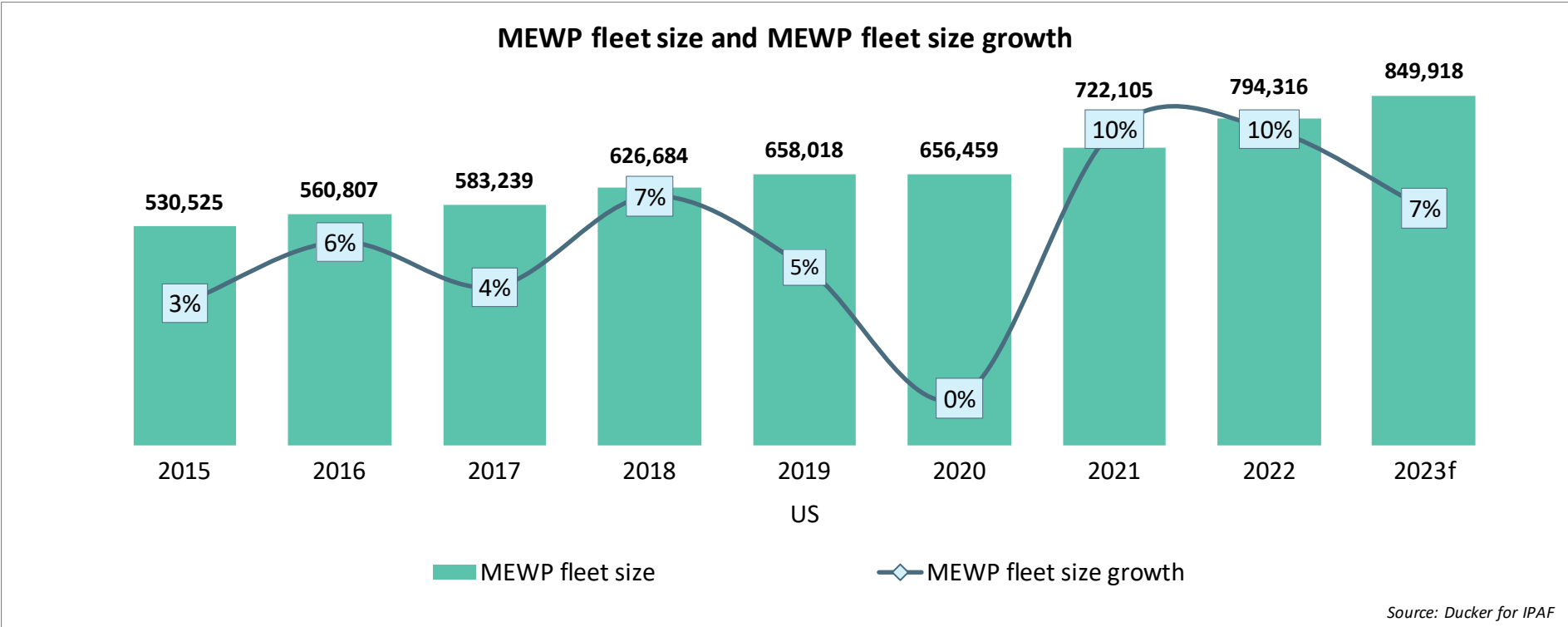
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Cross hire grew slightly in 2022, owing to growing demand and continuing delays in the fulfilment of orders for new MEWP machines. Whereas in many countries in Europe, Chinese manufacturers have stepped into the breach where long lead times and delays to OEM fulfilment have stifled fleet growth, restrictions in the form of tariffs have meant this hasn't been a viable alternative in the US. As in Europe, some companies have enjoyed the increased fleet flexibility offered by cross hire.



US – market size in units

Overall fleet size increased by around ten per cent across 2022, adding more than 70,000 units to the country’s estimated total MEWP fleet. The US fleet is forecast to continue growing in 2023, sustaining the record years of growths. Wherever possible, MEWP rental companies expanded their fleet in 2022, owing to peaks in demand. The total number of units in the US MEWP fleet is expected to reach almost 850,000 units by the end of 2023.



Included: All booms, scissor lifts and vertical masts

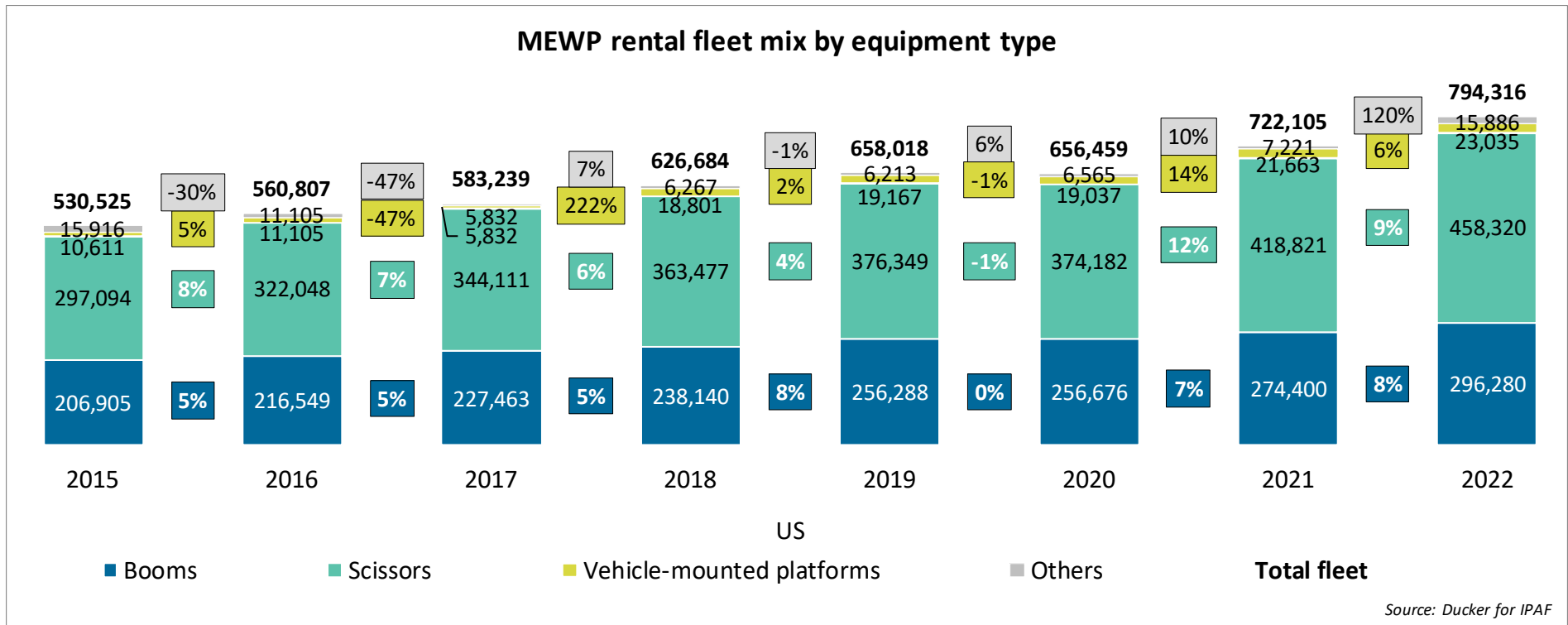
Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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US – market size in units

All MEWP categories saw similar increases in 2022, with the exception of particularly strong growth rates reported for spider/tracked lifts, owing to their versatility and suitability for use in tight spaces or on rough terrain. Spider lifts are increasingly used in forestry, gardening, painting and industrial cleaning, increasing share of others by one per cent. Overall fleet mix remained broadly the same as in previous years and is expected to remain relatively unchanged in years to come.



+X% % unit growth, eg booms fleet increased by 8% from 2021 to 2022.

Others include: Vertical lifts, vertical masts, push-around verticals, trailer mounted/towable.

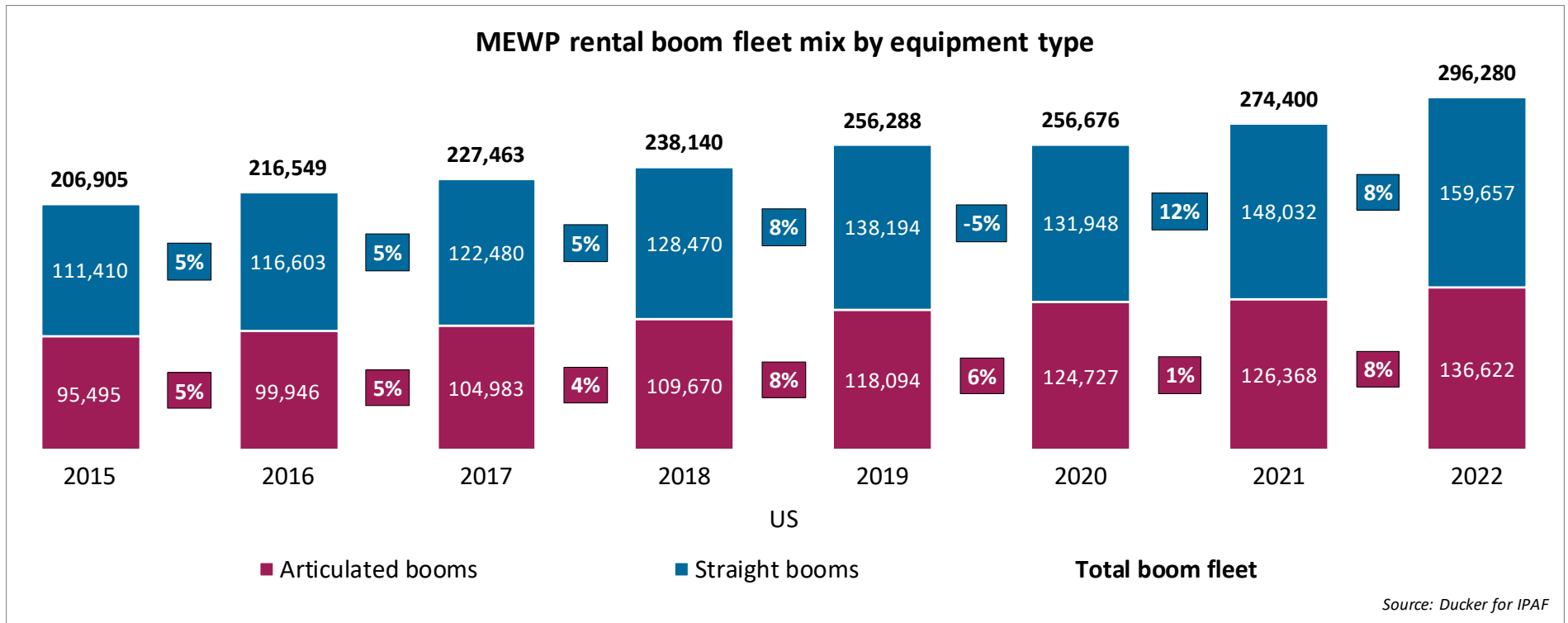
Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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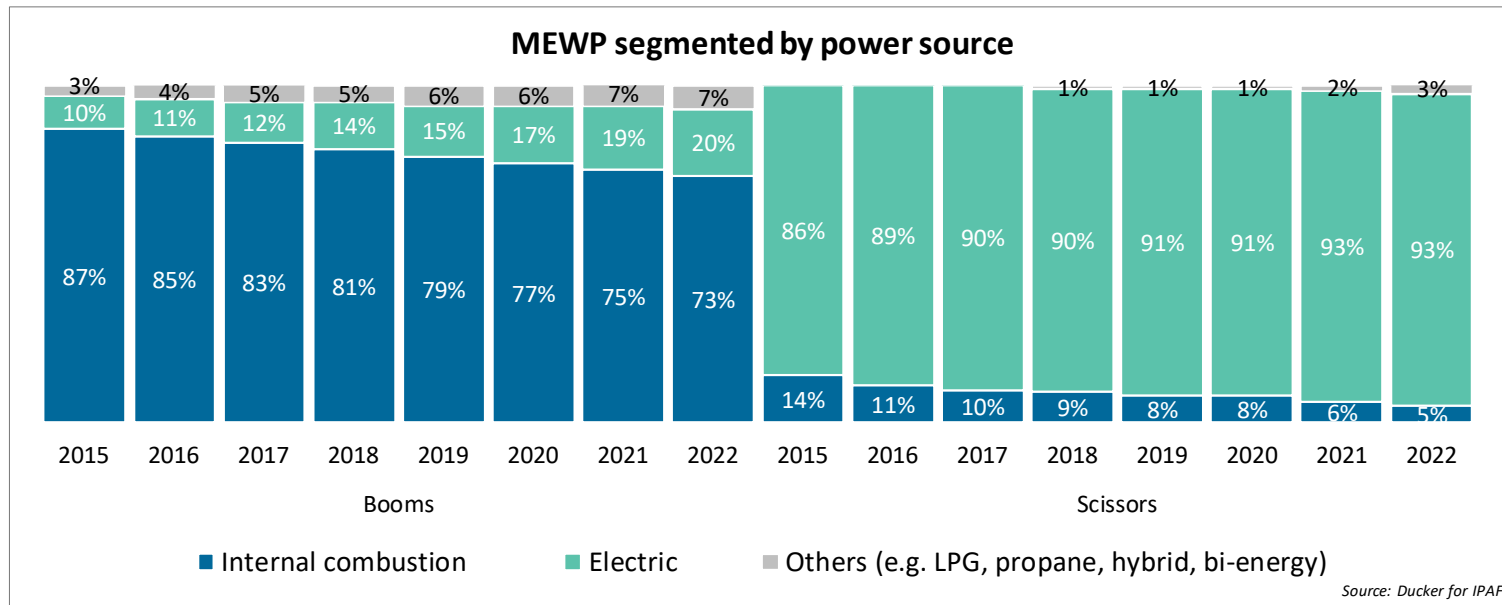
US – market size in units

Total boom fleet exceeded 295,000 units, with both categories growing equally by around eight per cent over 2022. The current ratio between straight and articulated booms in the US fleet remains at around 54:46. Despite varying growth rates for the two categories over the past few years, straight booms remain marginally more popular than articulated booms in US fleets.



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Transition to electric power sources continued for both main MEWP categories in 2022. Electric MEWPs represent 20% of all booms, increasing by two per cent over 2021. The majority of scissors are used indoors, where demand for electric-powered equipment is high. The share of hybrid scissors increased by one per cent, further diminishing the relative fleet share of internal combustion-powered MEWPs.



**disclaimer: Ducker revised booms power sources splits for the previous years*

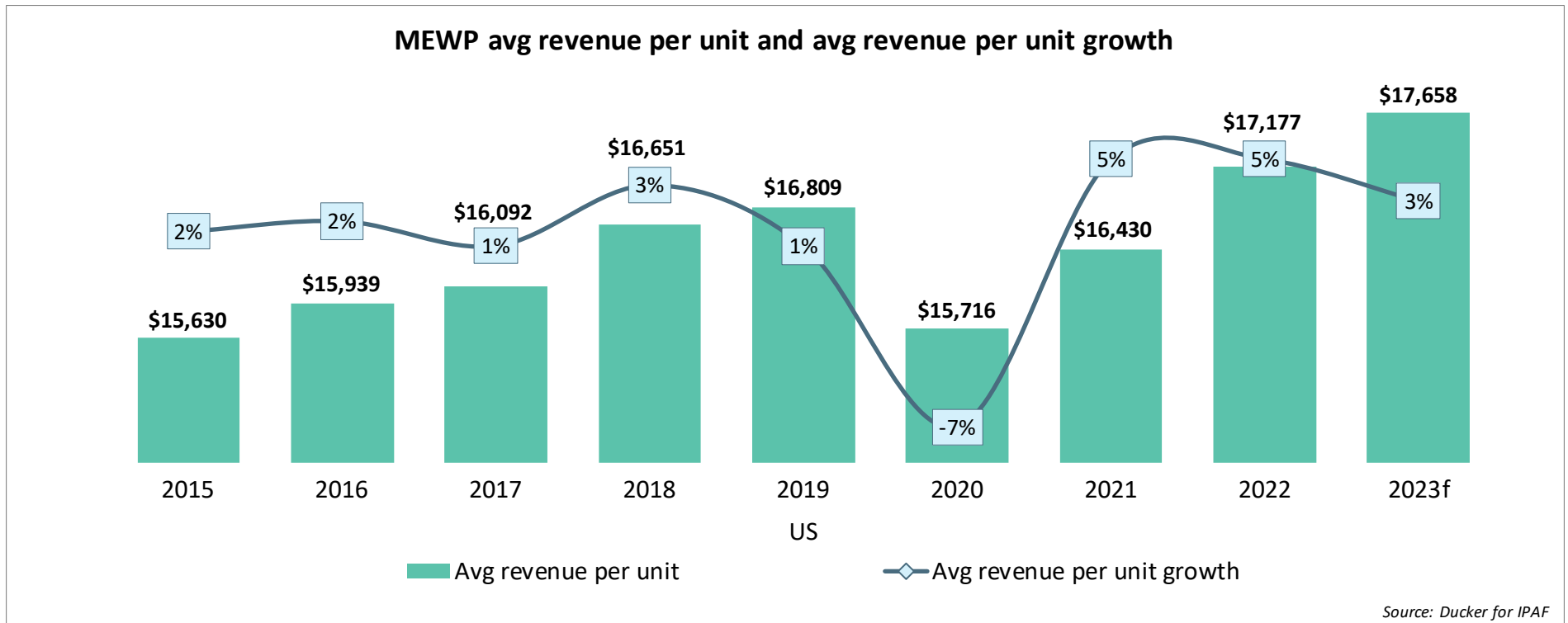


“In the long term, we will see a more gradual shift as technology gets better. Instead of internal combustion, we will likely switch to hydrogen, though I expect only a single-digit change. On a side note, we see that as OEMs push electric, they progressively reduce their internal combustion offer, but the change is expensive.” – MEWP rental company fleet manager

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US – revenue per unit

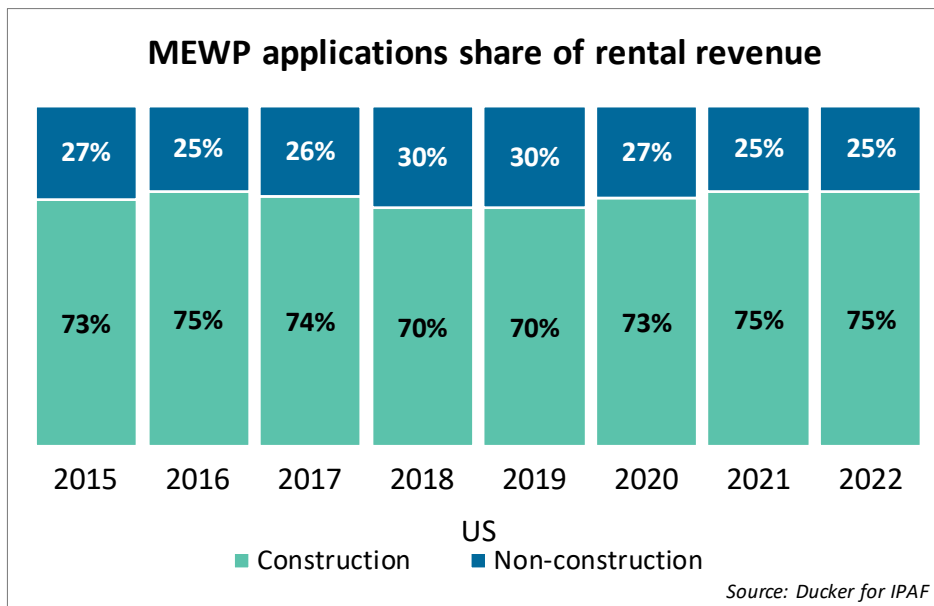
Average revenue per MEWP unit rose by five per cent in 2022, exceeding pre-pandemic levels, despite rental companies increasing their fleets, following increased demand in the market. After a sudden drop in 2020 at the height of the pandemic, average rental revenue partially recovered in 2021. As rental companies expect to be able to further increase rental rates and ongoing levels of demand, they expect it to drive up average revenue per unit by three per cent in 2023.



Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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The US MEWP rental market remains mostly oriented towards construction applications and exhibits a roughly 75:25 ratio between construction and non-construction end uses, which has remained largely unchanged since 2015 and is expected to remain so over the next few years. Both construction and non-construction sub-sectors experienced a healthy level of activity in 2022. While commercial remains by far the strongest construction market, in non-construction sub-sectors, warehouse activities and wind energy were reported to be experiencing the strongest growth in end-use demand.

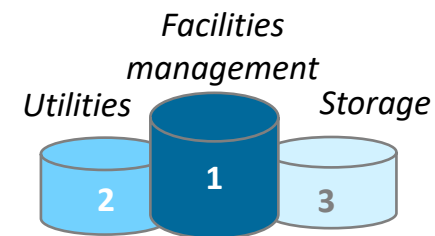


Non-construction activities include industry, maintenance, cleaning, utilities and events.

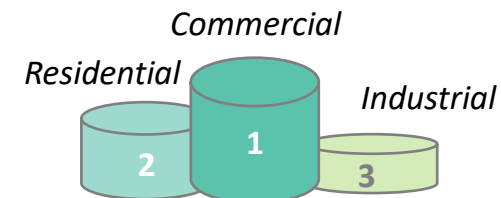
Construction includes new-build and renovation; including residential, commercial, retail and industrial.

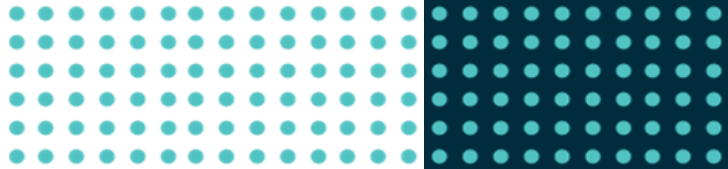


Main non-construction sub-sectors



Main construction sub-sectors

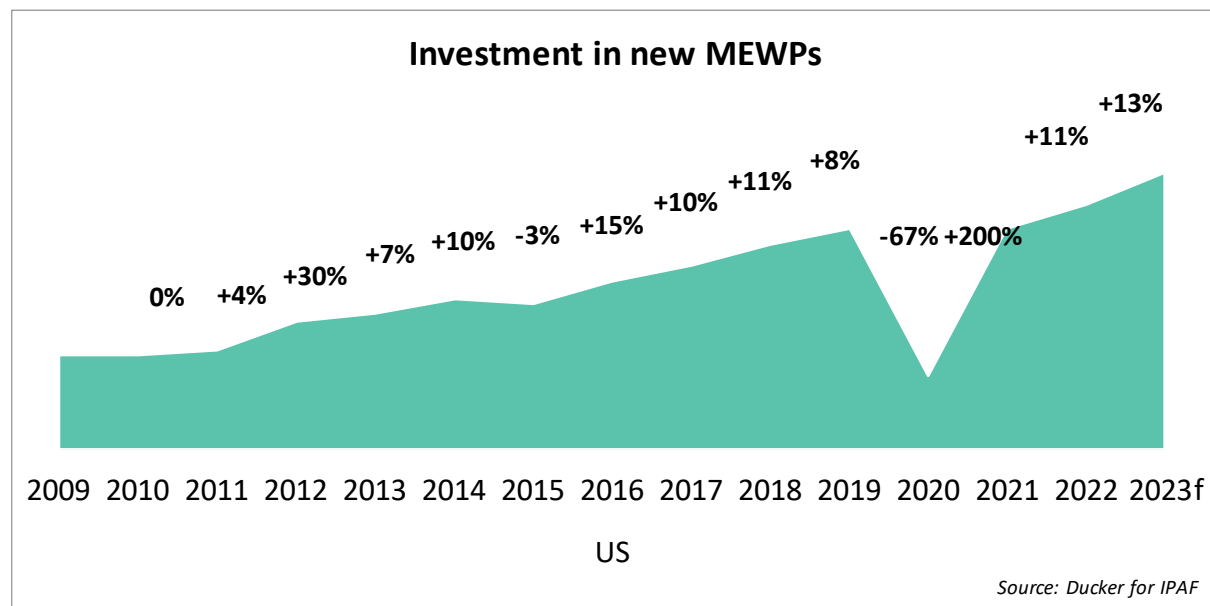




MARKET SIZE AND DYNAMICS 2008-2023
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After a significant increase in 2021, MEWP rental companies were able to further increase investment in 2022. The growth of investment highlights companies' intent to develop their fleets and keep up with growing user demand. An additional increase in the amount of investment is expected in 2023, despite equipment price rises, also reflecting higher rates of fleet renewal/MEWP replacement. Owing to tariffs imposed by the US Government, imports of Chinese machines were limited.



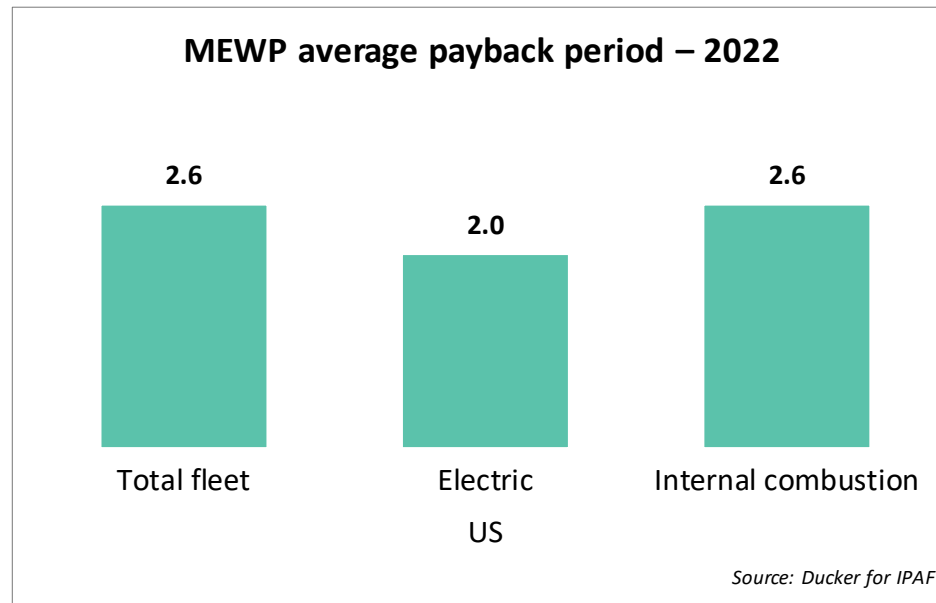
“

“We had a lot of sales this year as well, which is allowing us to make new purchases since we’re seeing overall growth, and we want to be able to keep up with this increased demand.” – MEWP rental company purchasing manager

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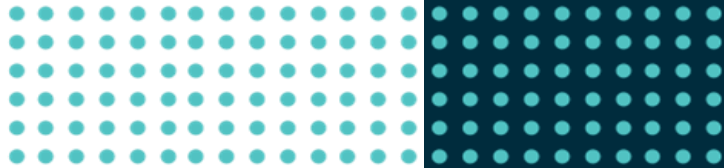
US – typical payback period

Average payback period of MEWPs remained steady in 2022, after previously declining by around nine months, reflecting the generally quite high utilisation rate for rental equipment in the US, which largely much returned to pre-pandemic levels over the course of 2022.



2.6 = 2 years and 6 months

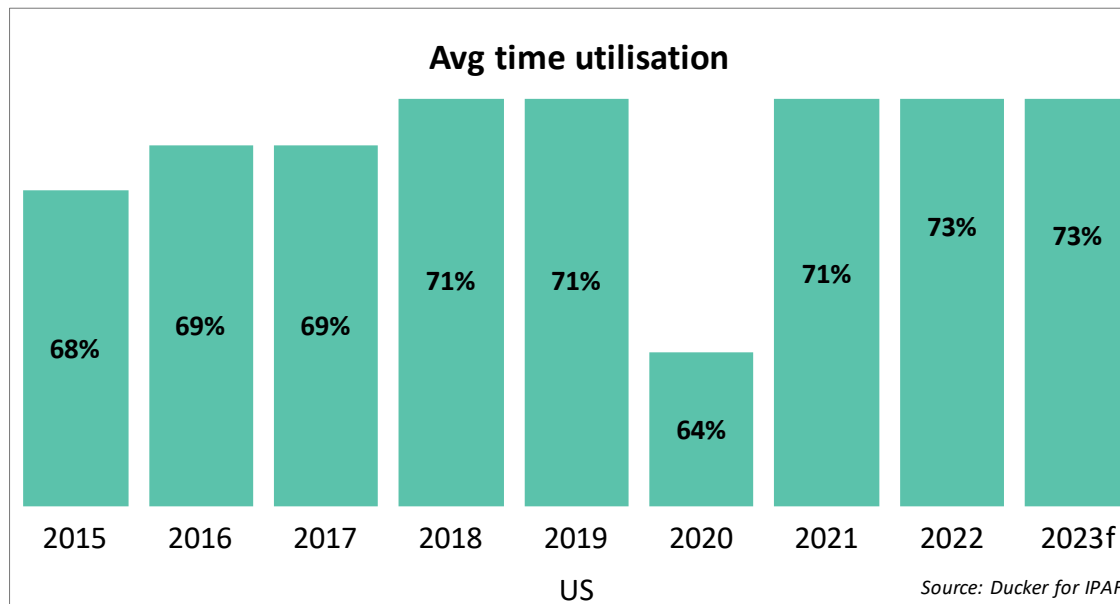
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OPERATIONAL ASPECTS 2008-2022
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Average utilisation rate increased by two per cent, after rebounding to pre-pandemic levels in 2021, partially owing to healthy levels of activity in construction but mainly owing to availability concerns. Rental companies report that average rental duration is increasing, owing to equipment shortages, as customers want to ensure availability throughout the duration of a construction project. In 2023, utilisation rate is expected to be maintained by positive construction outlooks.



Utilisation of largest MEWP groups in 2022: scissors: 74%, booms: 72%.

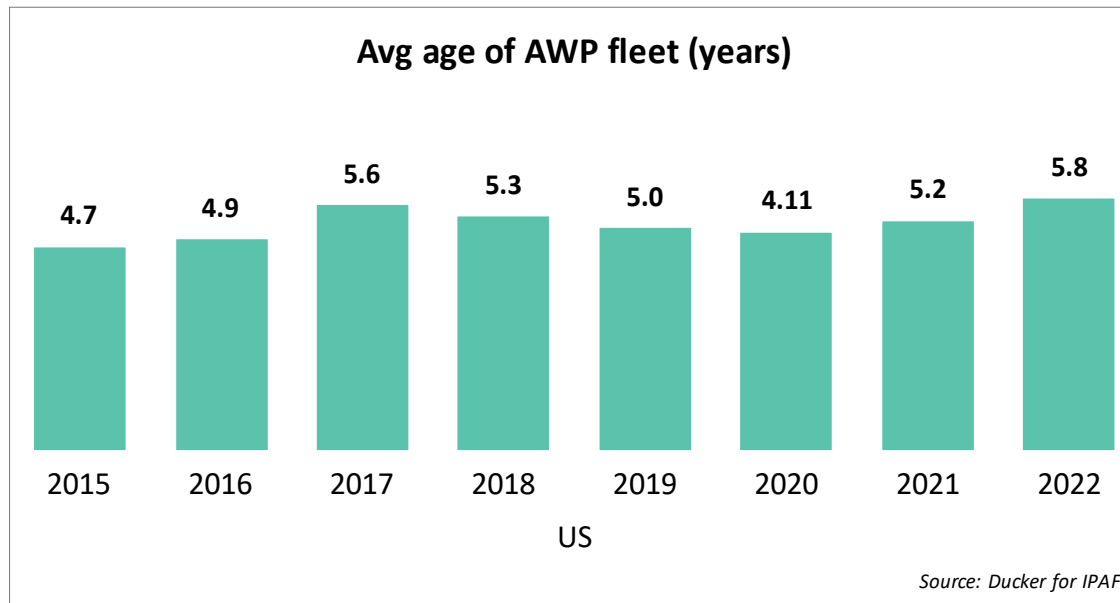
Average utilisation is defined as a physical number of machines out on hire as % of total number in fleet at any given time.

“

“2023 is still going to be a strong year overall. Not as incredible as 2022, it will slow down – we have to manage time utilisation better, there will be rate pressure to manage inflation drops during the second half of the year – but it will likely remain a double-digit growth rate.” – MEWP rental company manager

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Average retention period increased by six months in 2022, to stand at five years and eight months on average, compared to five years and two months in 2021. Lead times on the delivery of new equipment recovered slightly, but backlogs remain, meaning retention period is likely to stay at similar levels until OEM lead times return to pre-pandemic levels. Restrictions on the importation of Chinese-made machines, in the form of tariffs, reduced the supply into the US market even further.



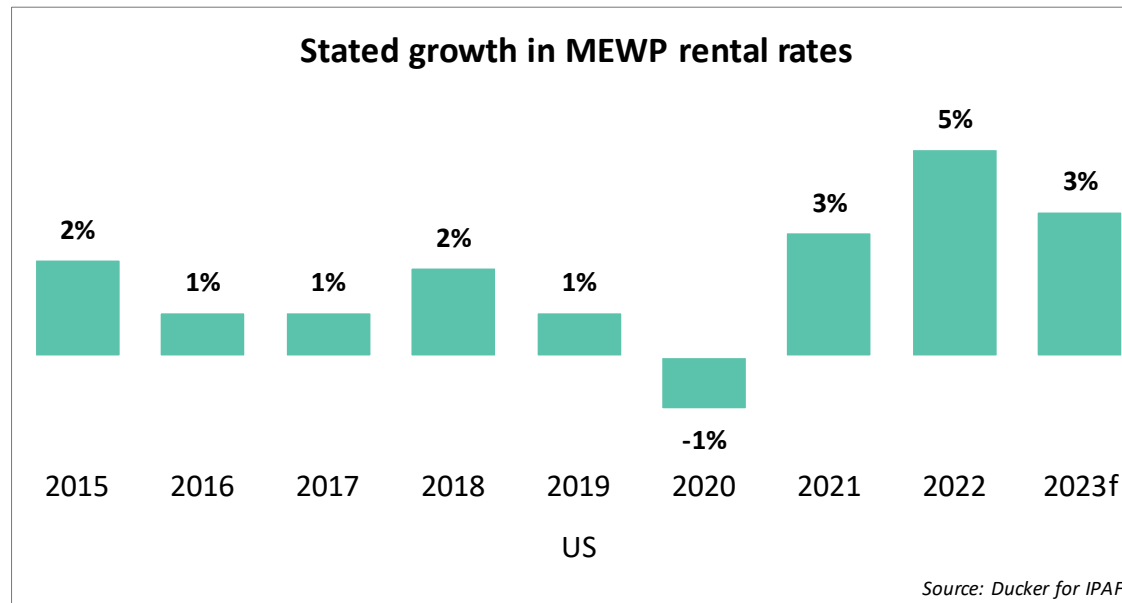
5.8 = 5 years and 8 months

Average retention is a period of time that a machine is kept in fleet = selling age if acquired new.

“We are keeping units slightly longer this year as supply-chain issues remain; but I wouldn’t expect that to impact our practices by more than a few months on average. Overall, the aim is to maintain a stable level, despite the issues that we have faced in the past two years.” – MEWP rental company manager

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Rental rates rose by around five per cent in 2022, in part owing to rising demand, MEWP availability and increasing costs, but mostly down to inflationary pressures and rising MEWP purchase prices. Rental rate growth is expected to continue to rise slightly during 2023, to further counterbalance the ongoing impact of inflation and other upward price pressures.



“Rental rates grew as every company had to adjust to inflation costs. New equipment coming in will be more expensive, so we will continue trying to recoup more through increased rental rates.” – MEWP rental company manager

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A PERSPECTIVE FROM THE EDITOR OF
ACCESS INTERNATIONAL MAGAZINE
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The US economy is strong, as is demand for access equipment. One thing getting in the way of this are lead times on new equipment, with companies still reporting record backlogs. Despite indications they may be improving through the work carried out to optimise production and relationships with suppliers, it may take the rest of this year or longer to iron these out.

The American Rental Association (ARA) strikes a word of caution. Following 2022's vibrant equipment rental markets across the US and Canada, the construction and industrial industries should prepare for limited revenue and growth this year, according to expert economists who provided an updated outlook during the 2023 ARA Show. "There's no joy coming out of the housing market," said Scott Hazelton, director, S&P Global Market Intelligence. "We're not out of the woods yet."

Hazelton and John McClelland, ARA's vice president for government affairs and chief economist, predicted a slight recession for the first and second quarter this year, noting that the federal government will continue to raise interest rates, to address continued inflation. While the IIJA infrastructure bill, introduced in 2021, is set to inject up to £1.2 billion into related projects, its impact will not fully be felt until 2024 – and even then, the industry will only see 1.9% growth for construction and industrial rental. Peak spending related to IIJA work won't surface until 2025, both economists noted.

Despite these ripples, the long-term market in the US looks very positive. Following JLG's 2022 full-year results, parent company Oshkosh's president and CEO John Pfeifer said demand remains "very strong" for JLG products and is being driven by "strong utilisation rates, elevated fleet ages and the large number of mega projects underway across the United States".

The percentage of access equipment in rental fleets deployed in mega projects – generally defined as projects with a value of \$400 million or more – has more than doubled over historical levels. Ashtead is increasing its capital investment this financial year to US\$3.5-3.7 billion – slightly ahead of its previous guidance – and will further accelerate its 2023-24 investment to between \$4 billion and \$4.4 billion.

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A recent major acquisition in the US this year was that of Ahern Rentals by United Rentals. A commonly held view is that, while this was no doubt perfect timing for owner Don Ahern to sell the business he had built over decades, it was also an opportunity for United Rentals to add much-needed equipment to its fleet. Indeed, the need for more kit has become a primary reason for acquisitions, rather than the traditional desire to move into new geographical locations or build market share.

Chinese manufacturers were affected considerably by the tariffs imposed last year by the US Government on MEWPS made in China entering the US. However, this has not stopped them from seeking business in the country and looking at ways around the issue. A solution being adopted by some of those manufacture is building factories in Mexico, where labour is less expensive. It must be noted that Mexico has also been identified as a more cost-effective solution by North America-based manufacturers, which have set up major facilities in the country.

Another issue in the US, pointed out by Italian spider lift manufacturer CTE Lift, which is seeking to expand sales in North America, is rising interest rates, a factor being experienced around much of the world, combined with the direct extra cost of power and borrowing rates. This has had a particularly detrimental effect on smaller “mom & pop” rental companies, which do not have the financial reserves or the backing of larger companies.

Exhibitions continue to demonstrate their value post the Covid pandemic. The 2023 edition of ConExpo-Con/Agg has been confirmed as a resounding success. Along with the collocated fluid power, power transmission and motion-control IFPE show, a record-breaking 139,000 visitors were registered through the gate at the Las Vegas showground.

“The innovations in the construction industry unveiled [at the show] will play a role in helping construction professionals drive meaningful and sustainable economic growth,” said Phil Kelliher, Caterpillar senior vice president and ConExpo-Con/Agg show chair.

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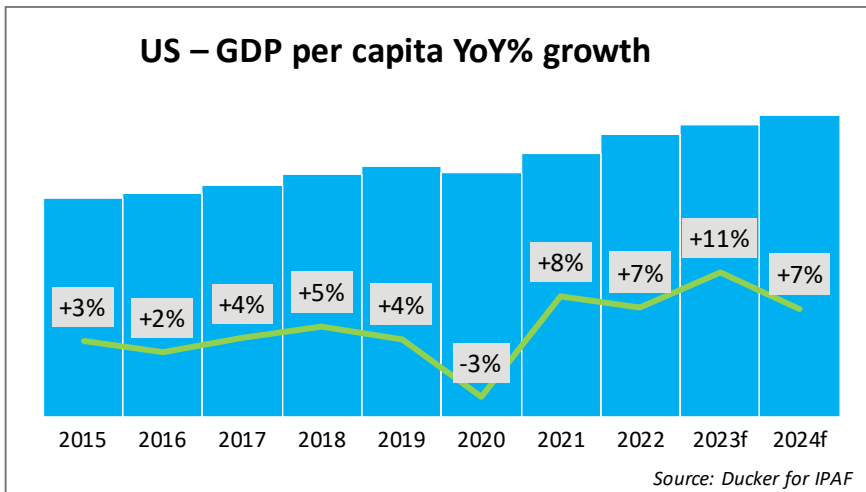


MARKET TRENDS AND DRIVERS
IPAF Powered Access Rental Market Report 2023
US

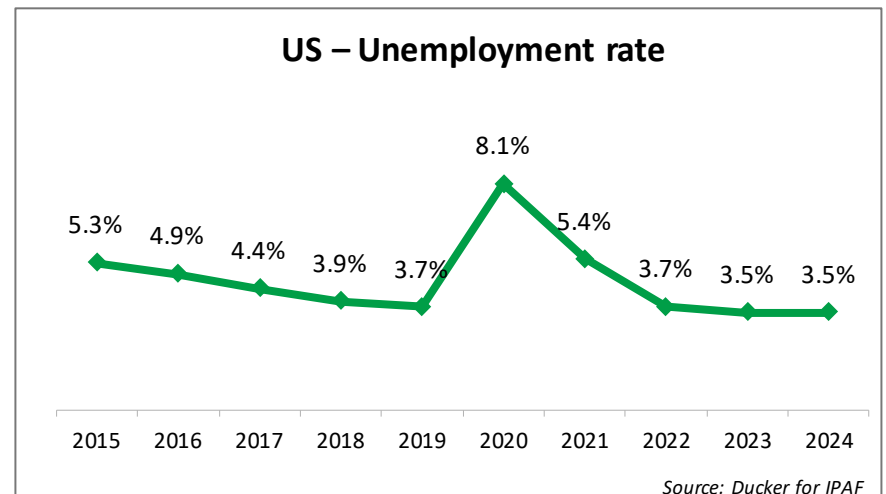
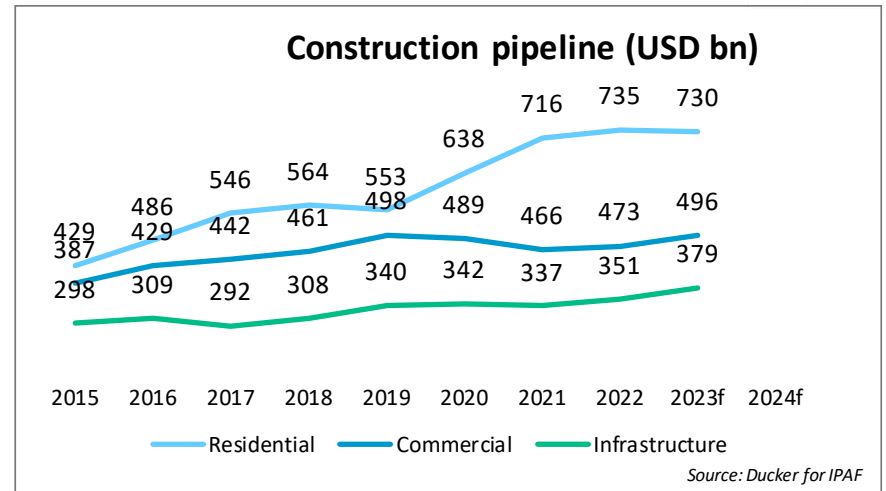
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US – market trends and drivers

Both GDP and construction output grew significantly in 2022. After an eight per cent increase in 2021, GDP increased by a further seven per cent in 2022, partially owing to a very strong year in all construction sectors. Construction output increased by around \$40 billion, driving strong demand in MEWP rental market.

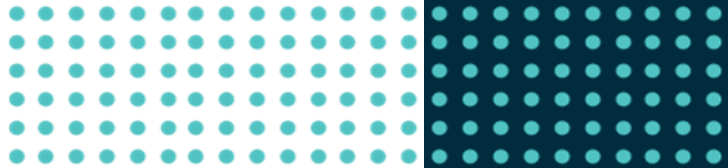


CAGR: Compound annual growth rate



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Canadian MEWP rental companies witnessed another year of revenue growth at close to 15 per cent across 2022, driven by several factors:

- High levels of demand in both construction and non-construction sectors;
- increased rental rates;
- outlook for 2023 remaining positive for the level of demand in the market, though at a more modest pace than 15 per cent year-on-year, owing to declining output in the residential construction market.

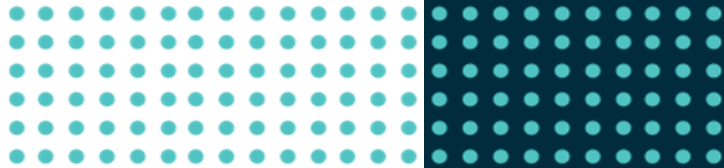
In 2022, the rental MEWP fleet of Canada grew to in excess of 85,000 units. Before the end of 2024, the Canadian MEWP fleet size is expected to surpass 100,000 units. Though lead times started to improve throughout 2022, some delays in deliveries of new equipment from manufacturers persist. Fleet aging issues and a desire to renew fleet were ongoing in 2022 and are likely to continue through 2023 and potentially into 2024.

The current split between main MEWP equipment categories is approximately at 66:34, with scissors slightly increasing share over the year. Tariffs imposed on Chinese imports into the US led to an increased share of Chinese equipment being redirected to Canada, especially when it comes to scissor lifts. Through both fleet renewal and expansion, Canadian MEWP rental companies are transitioning their fleets towards green technologies, owing to construction site legislation that is somewhat stricter in regard to emissions than in the US.

In 2022, the average MEWP utilisation rate further increasing to 69-70 per cent, an unusually high level showing the tense market situation and pressure owing to delays in new equipment deliveries. Utilisation rate is expected to slowly decline owing to decreased demand and expanding fleets, leading to healthier utilisation levels of 65 per cent.

Rental rates grew in 2022 by approximately 3-4 per cent, partly owing to rising demand, but mostly down to inflationary pressures and the increasing price of MEWP purchases. MEWP rental companies expect rental rates to rise by 1-2% in 2023.

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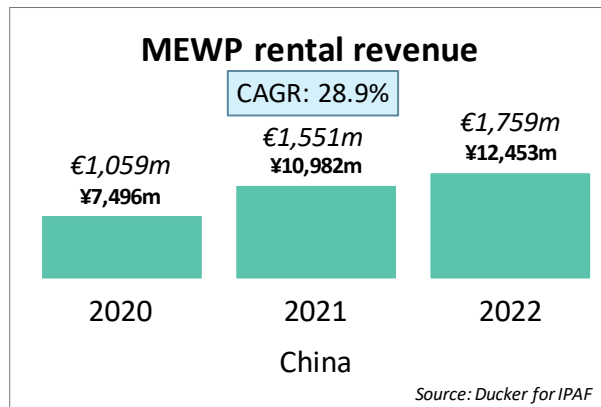


CHINA FOCUS
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CHINA

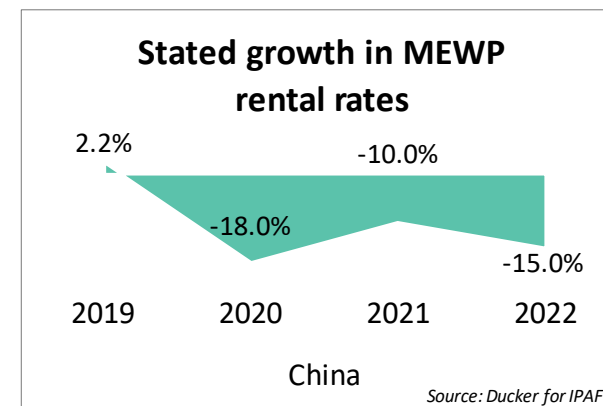
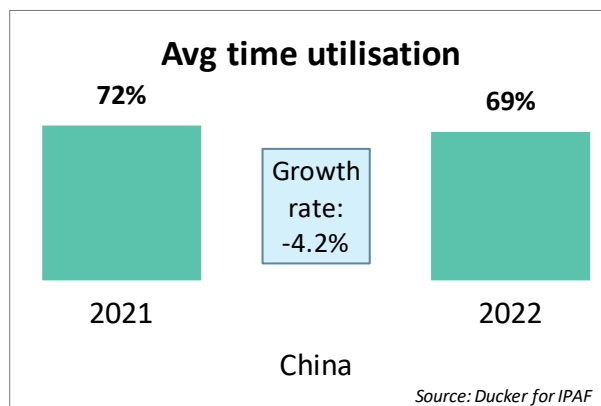
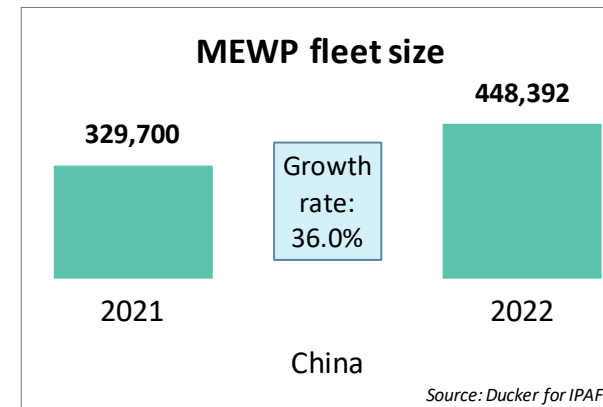
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China – key findings

In 2022, Chinese MEWP rental revenue grew by 13 per cent, primarily driven by the expansion of rental company fleets. However, both rental and utilisation rates decreased in 2022 owing to insufficient demand during pandemic lockdowns and enduring fierce market competition, exacerbated by rapid fleet expansion. With rental demand recovering in the first quarter, utilisation is expected to rise in 2023 from the lows of the pandemic.



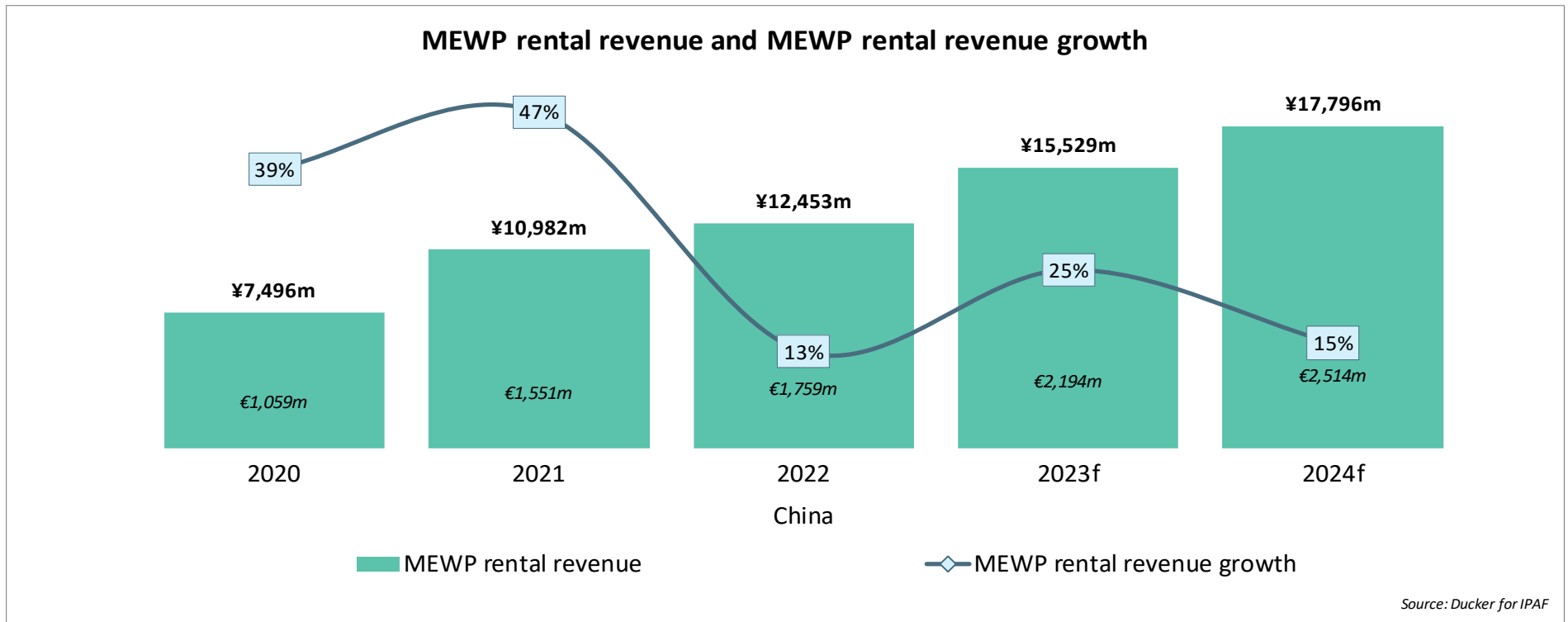
CAGR: Compound annual growth rate



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China – rental market value and growth

Chinese MEWP rental revenue grew at a more moderate pace in 2022 compared to previous years, reaching 12,453 million RMB (€1,759m), and mainly owing to major fleet expansion. The pace of MEWP rental revenue growth slowed in 2022, owing to declining utilisation and rental rates. The rental market showed promising signs of recovery in the first quarter of 2023, with both market demand and MEWP sales growing steadily.

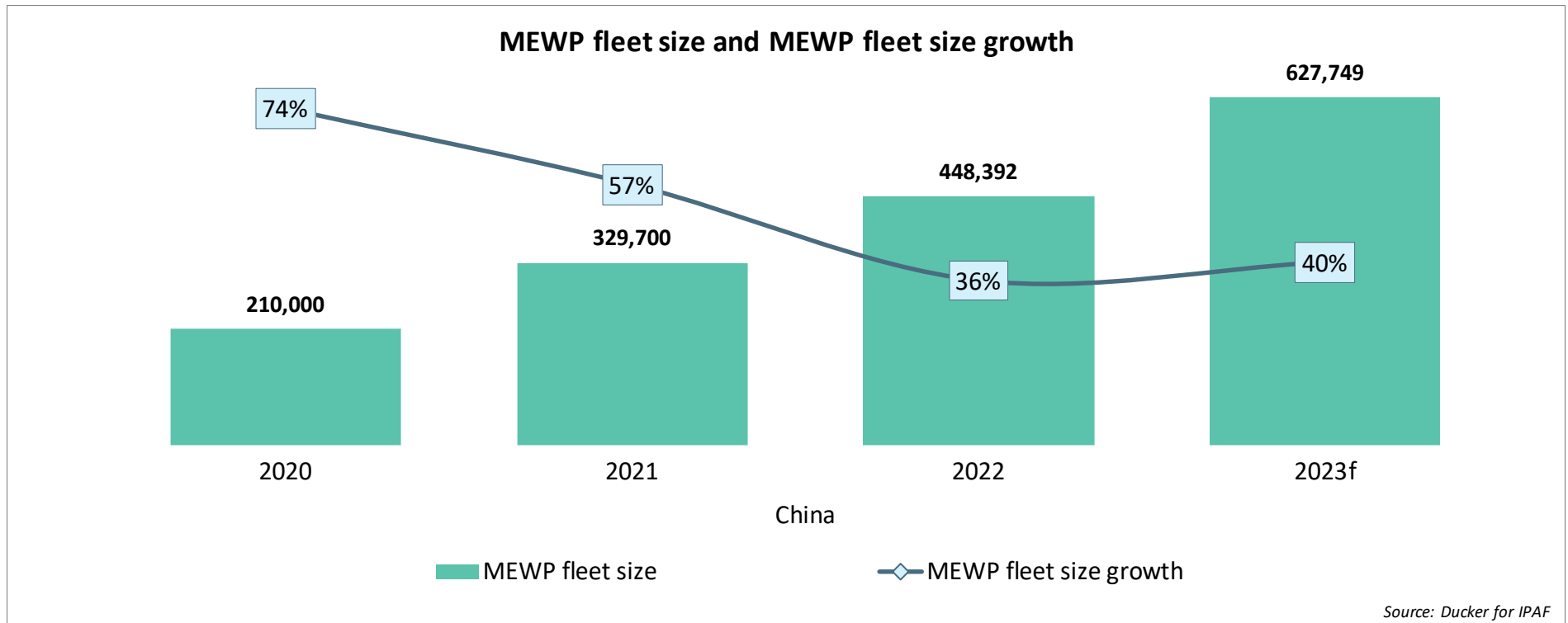


“Sales of MEWPs in the first quarter of 2023 are strong and expected to be stronger in the rest of the year: Many rental companies have revealed that they plan to invest heavily in fleet expansion this year.” – Industry expert

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China – market size in units

In 2022, Chinese MEWP fleet size grew significantly to almost 450,000 units, primarily driven by the expansion of rental company fleets. Some rental companies have become more open to a collaborative approach with MEWP OEMs. Local MEWP manufacturers helped by ramping up the production and providing supporting measures to promote sales, such as lowering price and offering favourable financial terms (eg down-payment and up to 6-9 months credit period).



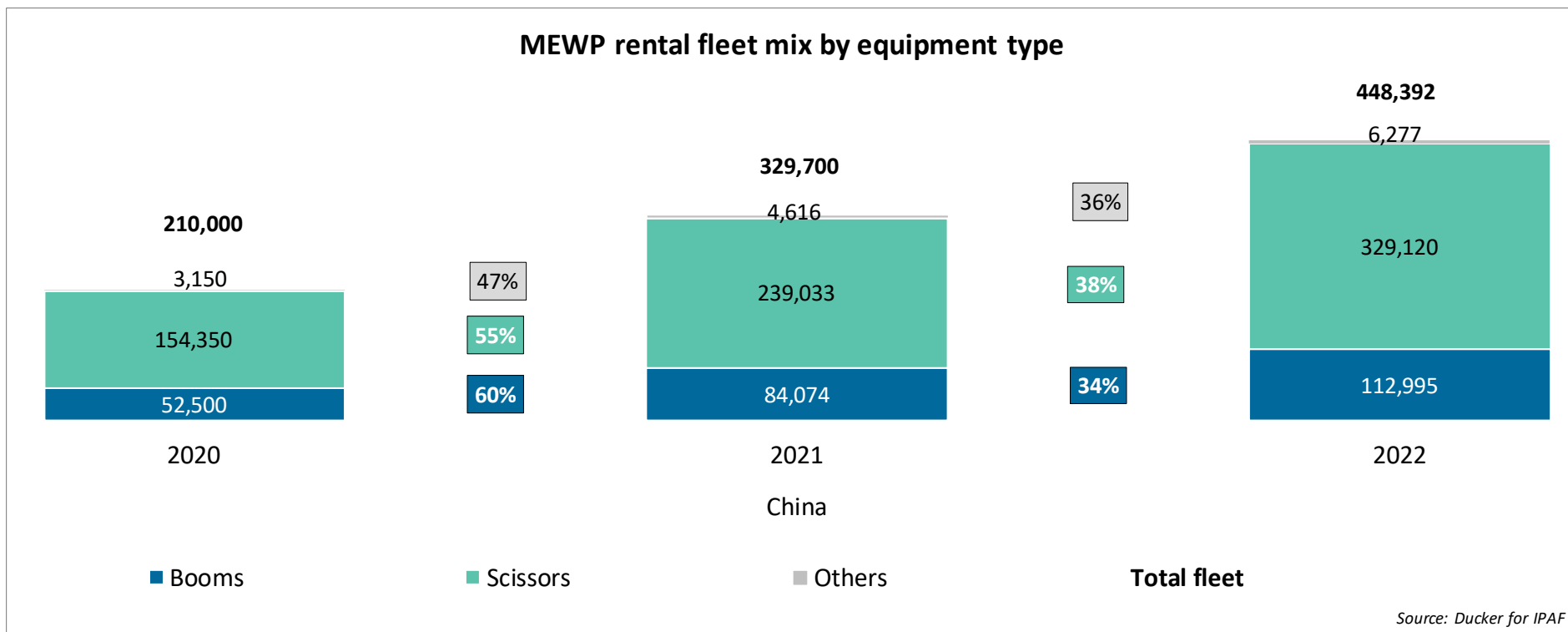
Included: All booms, scissor lifts and vertical masts

Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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China – market size in units

The typical MEWP fleet mix currently breaks down as 73.5% scissors, 25% booms, and 1.5% other types of equipment category. While all categories underwent overall fleet expansion, scissors grew at a slightly faster pace than booms and other categories. Fleet mix is not expected to change significantly in the next few years, as scissors and booms are perceived as complementary equipment to hold in growing rental fleets for use in a variety of end applications.



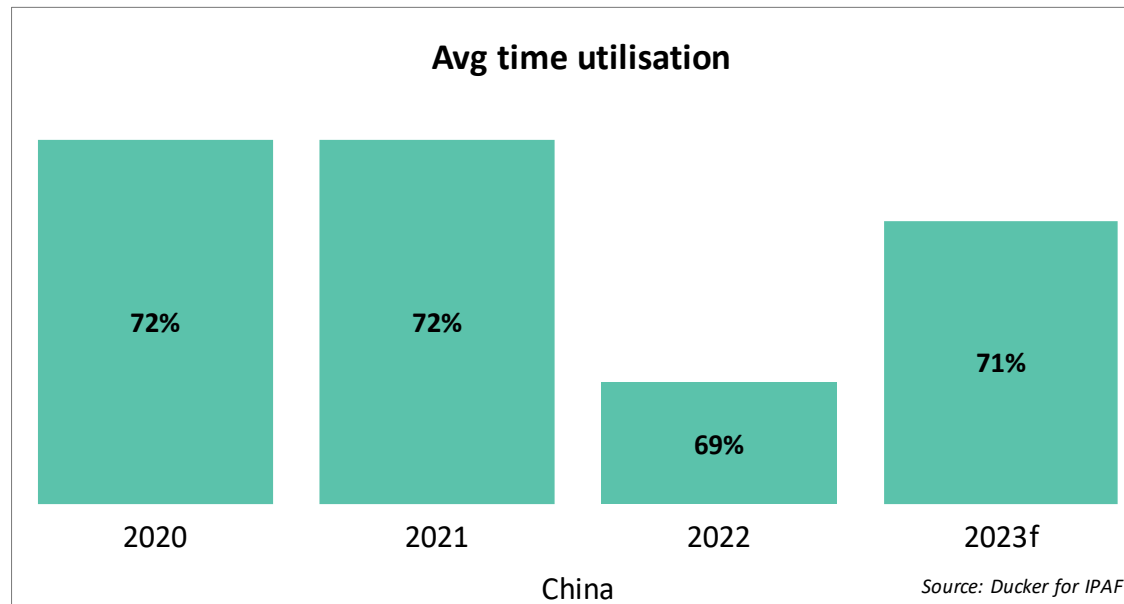
+X% % unit growth, eg booms fleet increased by 34% from 2021 to 2022.

Others include: Vertical lifts, vertical masts, push-around verticals, trailer mounted/towable.

Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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Utilisation rate decreased by 3% in 2022, due to ongoing pandemic restrictions and significant fleet expansion. In the first quarter of 2023, utilisation steadily increased owing to demand from the rapid resumption of construction pipeline and over the course of the year, it is expected to fully rebound from the low of 2022. In 2024 and beyond, the utilisation rate is expected to remain stable or slightly decrease owing to oversupply caused by years of rapid fleet expansion.



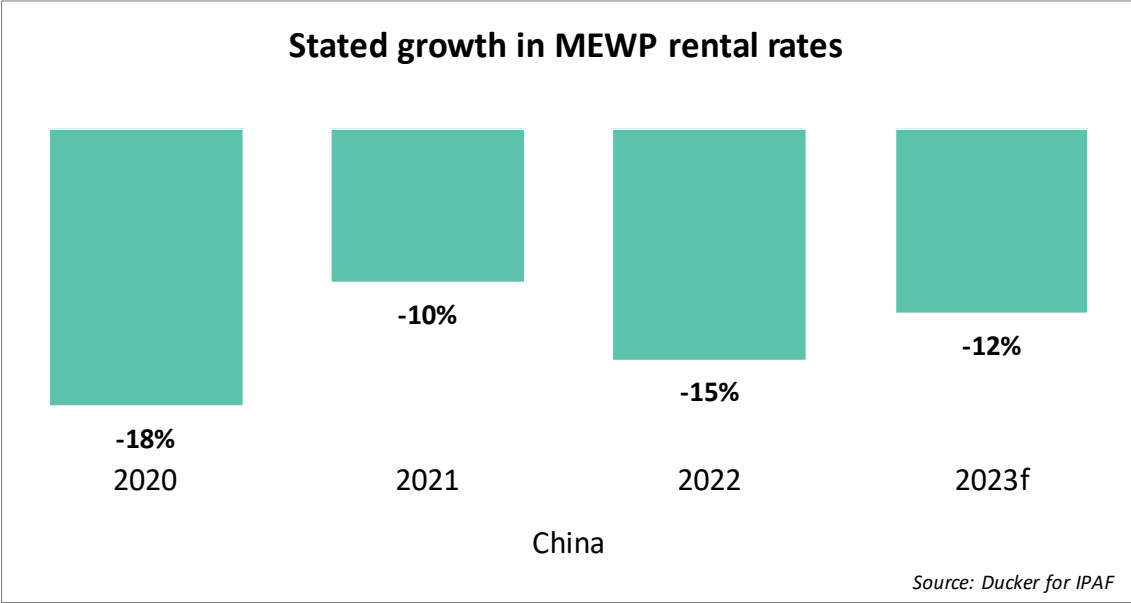
Average utilisation is defined as a physical number of machines out on hire as % of total number in fleet at any given time.

“

“The rental market seems to have recovered quickly in 2023 and is as good as it was before the pandemic. Utilisation is very good; I believe the current rate is at an all-time high since the pandemic.” – MEWP rental company manager

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Rental rates continued falling in 2022 and are expected to fall further in 2023, owing to significant rental fleet expansion and the expected slowdown of overall demand. Rental rate decline for scissors slowed; especially for the most popular sizes such as 10m and 12m machines. Booms saw a greater decline in rental rates, partly down to the rapid expansion of the overall fleet size, which led to an increase in the number of booms available for rent.





A PERSPECTIVE FROM THE EDITOR OF
ACCESS INTERNATIONAL MAGAZINE
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China

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According to KHL senior editor Neil Gerrard, new analysis of *International Construction's* Top 200 construction companies illustrates just how rapidly Chinese construction companies have grown their share of the global construction market. In the past decade, Chinese construction companies have almost doubled their share of all the revenue generated by the Top 200. Whereas in 2012 Chinese firms accounted for 23.2% of total revenue, by 2022 it was 44%.

More recently, China has faced a slowdown. The end of 2022 saw a gradual decline in confidence among construction buyers, with the Purchasing Managers Index (PMI) dropping to a score of 54.4 in December from 58.2 in October 2022. China has also seen a slump in its housing market, as the country's leaders tightened up rules on borrowing to build. But the market is now expected to revive, as China eases rules on borrowing again in the hope of arresting a decline in property sales. Meanwhile, the country has removed its strict covid-19 controls.

Ratings agency Moody's said it expected China's economic growth to accelerate "modestly" to 4% in 2023, from 3% in 2022, with the possibility of better growth if the removal of covid controls releases pent-up demand. It forecast 10% annual revenue growth for Chinese constructions firms, although margins would tighten related to companies' exposure to the struggling property sector.

From a global perspective, sales of construction equipment fell by 4% in 2022, according to trade association VDMA – the negative outcome was "entirely due to China", indicating that the housing crisis, combined with zero-tolerance policies on Covid had caused the world's largest market to slump by 43%.

The competition in the China MEWP industry both for manufacturing and rental is intense. Some manufacturers in China are moving to a rental model themselves, where they rent units to rental companies rather than selling them. US-based manufacturers there remain committed to retaining factories in China, but Genie is moving some scissor lifts currently being produced there to its new facility in Monterrey, Mexico, later in 2023 as part of a wider restructuring of production.

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On the other hand, Skyjack is moving production to China for the first time. Company president Ken McDougall concedes that Skyjack has been late to the market but believes the company may have escaped some of the pitfalls by doing so. A new 400,000 square ft facility in Tianjin is under construction and is set to open in the third or fourth quarter of 2023.

There are now three China-based rental companies in the top 10 of *Access International's* Access50 listing of the world's largest rental companies, compared to five years ago, when there were none. Total fleet size of the Chinese rental companies in the top 25 of the listing is 229,544 units, compared to 142,039 last year and zero in 2017. Overall, it is thought the population of MEWPs in China is growing around 40% year-on-year, though that may only continue for another couple of years, then it is likely to slow and level off.

Reports from the country suggest that competition between the major rental players has helped to drive down rental pricing in the country to historic lows, which is one of the factors that indicates the country's access market is not yet mature.

As Shugen Xu, founder of Dingli points out, the difference between a mature and immature rental market comes down to three factors. In a mature market companies follow the 'life cycle profit' model, which combines rental rates, residual value and total cost of ownership. This is compared to the current Chinese rental model, which is based primarily on the cost of new equipment – with the lowest cost units winning out over all else.

Zeng Guang'an, chairman and CEO of generalist construction equipment manufacturer Guangxi Liugong Machinery, which officially launched its MEWP division at the beginning of 2021, said that the rental giants have the edge on manufacturers in China: "The rental companies have much more power than any of the manufacturers; they are driving the price down very fast and asking for monthly payments in instalments and over three to four years.

“They have the advantage that they buy a large amount of equipment, which puts them in a good position for parts, payment and service, but there are disadvantages because the company is too big.”

Another new dynamic between the large rental companies, and what appears to be a new business model, is that there is a trend for rental companies not to buy their equipment from manufacturers but effectively to rent it. This means manufacturers retain ownership of the units and receive monthly fees from their customers. “The manufacturer own those assets and they are operated by large rental companies. So, this reduces big companies’ finance depts – which is an interesting new model.”

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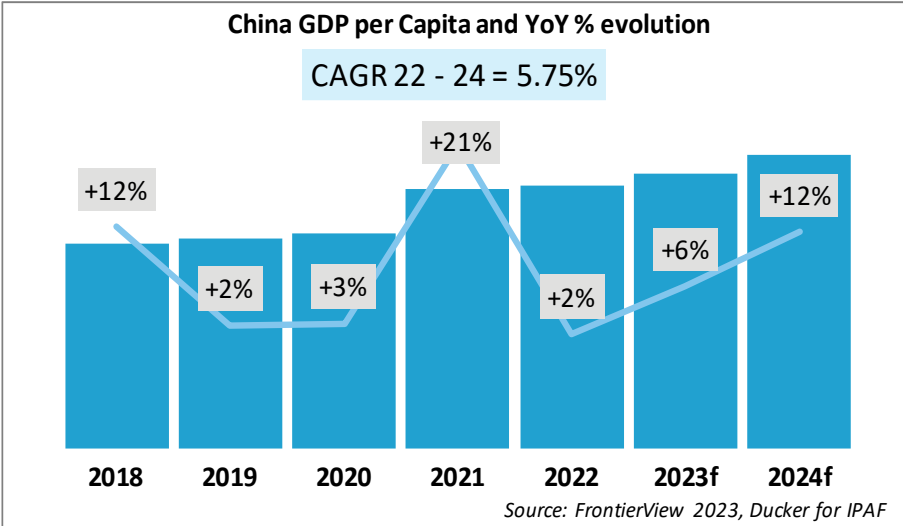
APPENDIX
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The currency exchange rate used for the China is shown below:

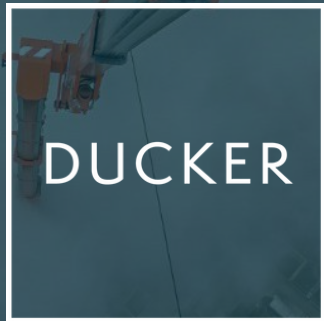
	Currency Unit	Converter to Euro
China	¥ 1	0.141

The GDP of China grew by around three per cent in 2022, and the target for 2023 has been set at around five per cent. The macro-economic outlook for 2023 is generally more optimistic than 2022. Construction activity is expected to remain strong.



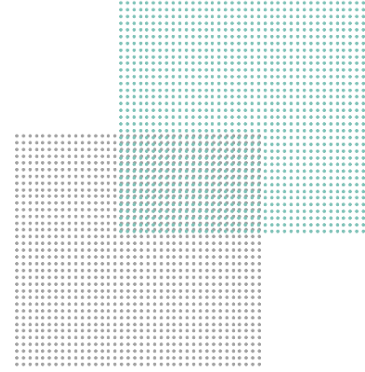
CAGR: Compound annual growth rate

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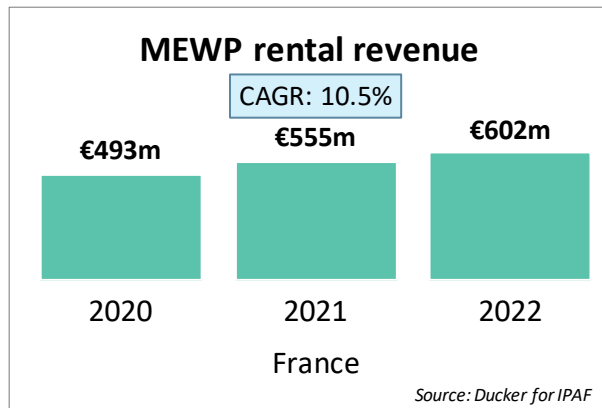


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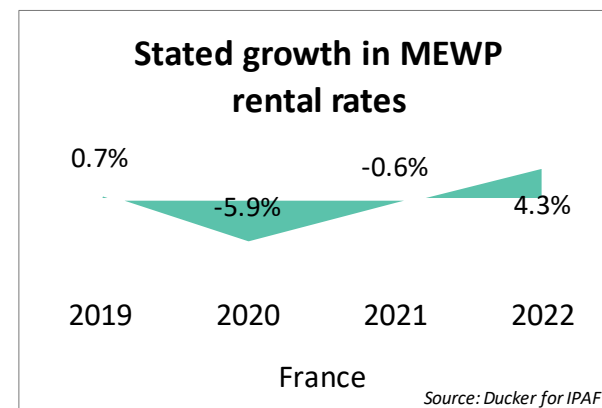
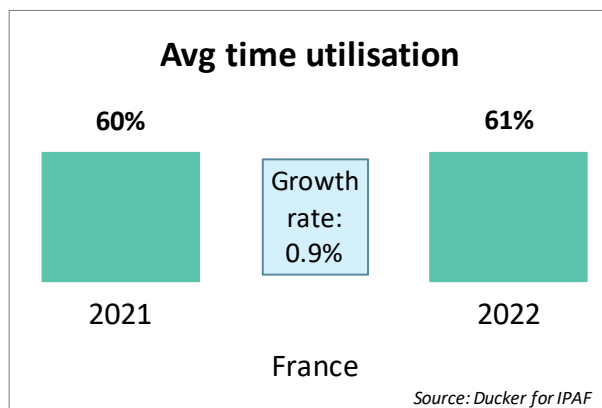
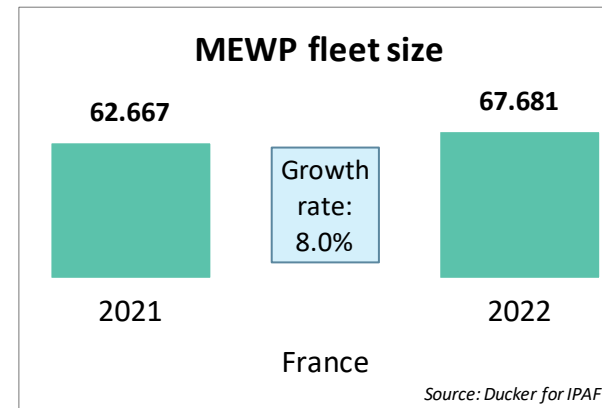
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In 2022, the MEWP rental market in France seemed to have fully recovered from the pandemic, with clear signs of significant growth. All indicators increased during 2022, revenue growth being driven by expansion of fleet size, along with increases in rental rate and utilisation rate. All indicators reached or surpassed pre-pandemic levels in 2022 and are expected to continue increasing during 2023.

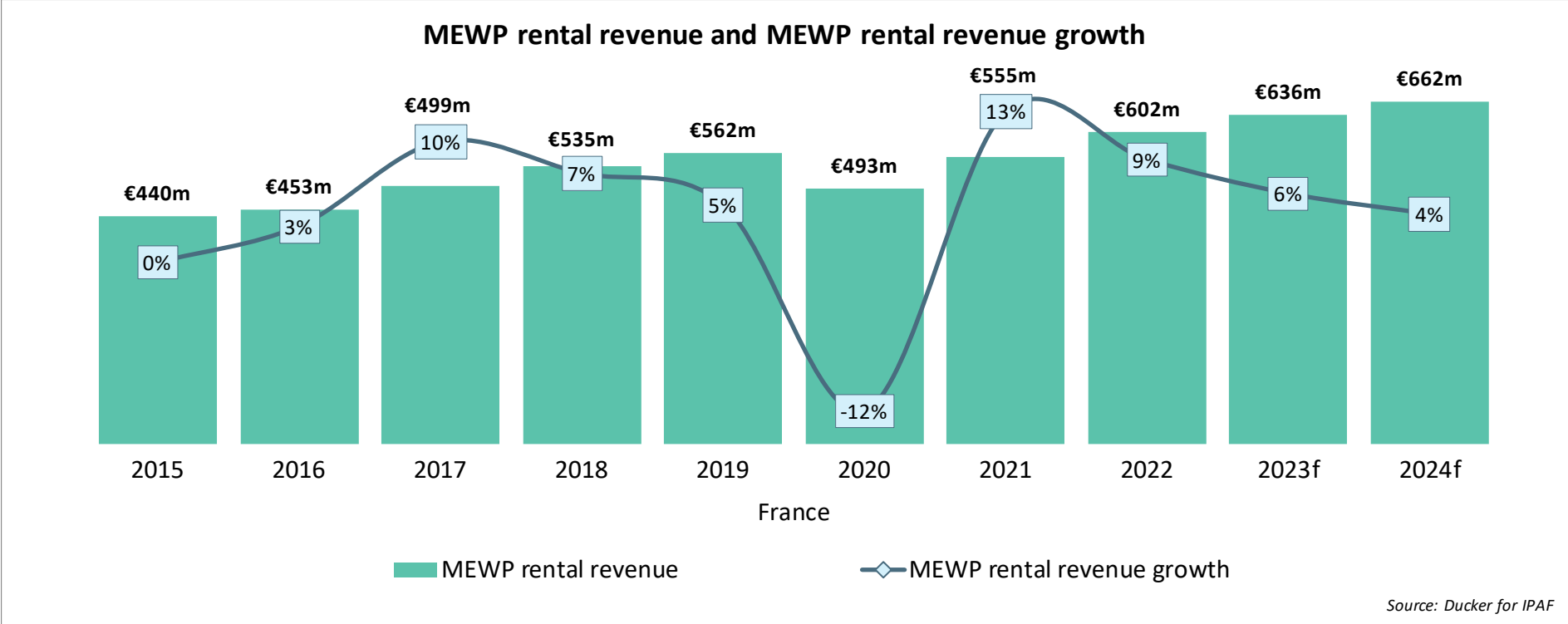


CAGR: Compound annual growth rate

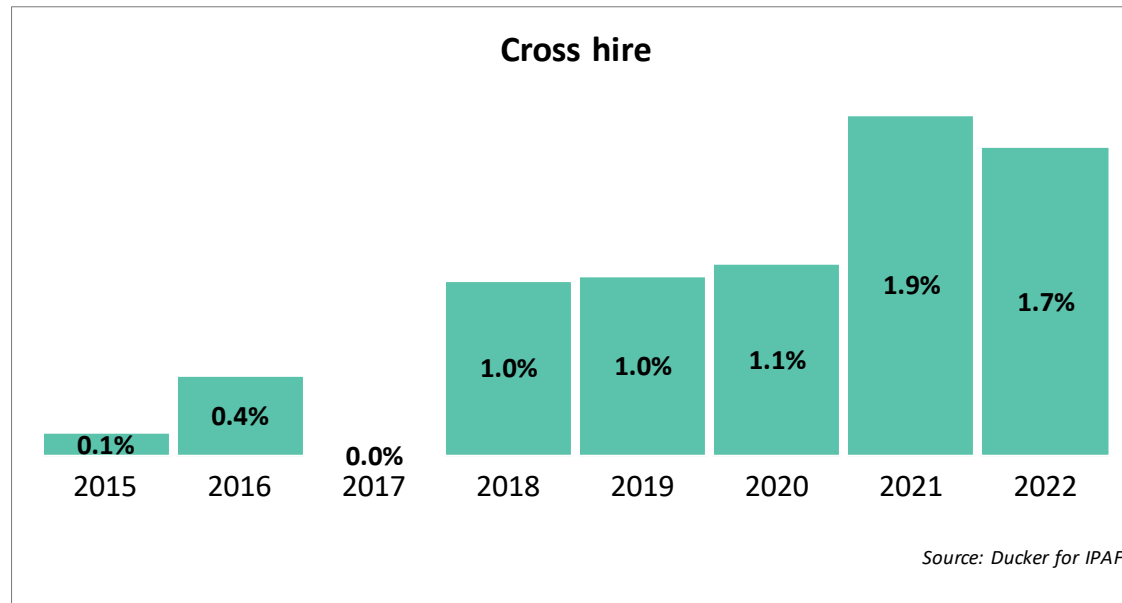


France – rental market value and growth

Average MEWP rental revenue in France rose by around nine per cent in 2022, to exceed pre-pandemic levels. Further growth is expected in 2023 and 2024, owing both to increasing rental rates and high levels of demand. Although certain market uncertainties remain, rental companies generally have a positive outlook for 2023. Service charges slightly decreased in 2022, after a significant increase in 2021 owing to rising fuel costs and raw materials shortages.



Cross hire decreased slightly in 2022, owing to strong growth in average fleet size in France. As lead times on new machines from the manufacturer are stabilising, cross hire is expected to decrease further and remain around the one per cent mark.



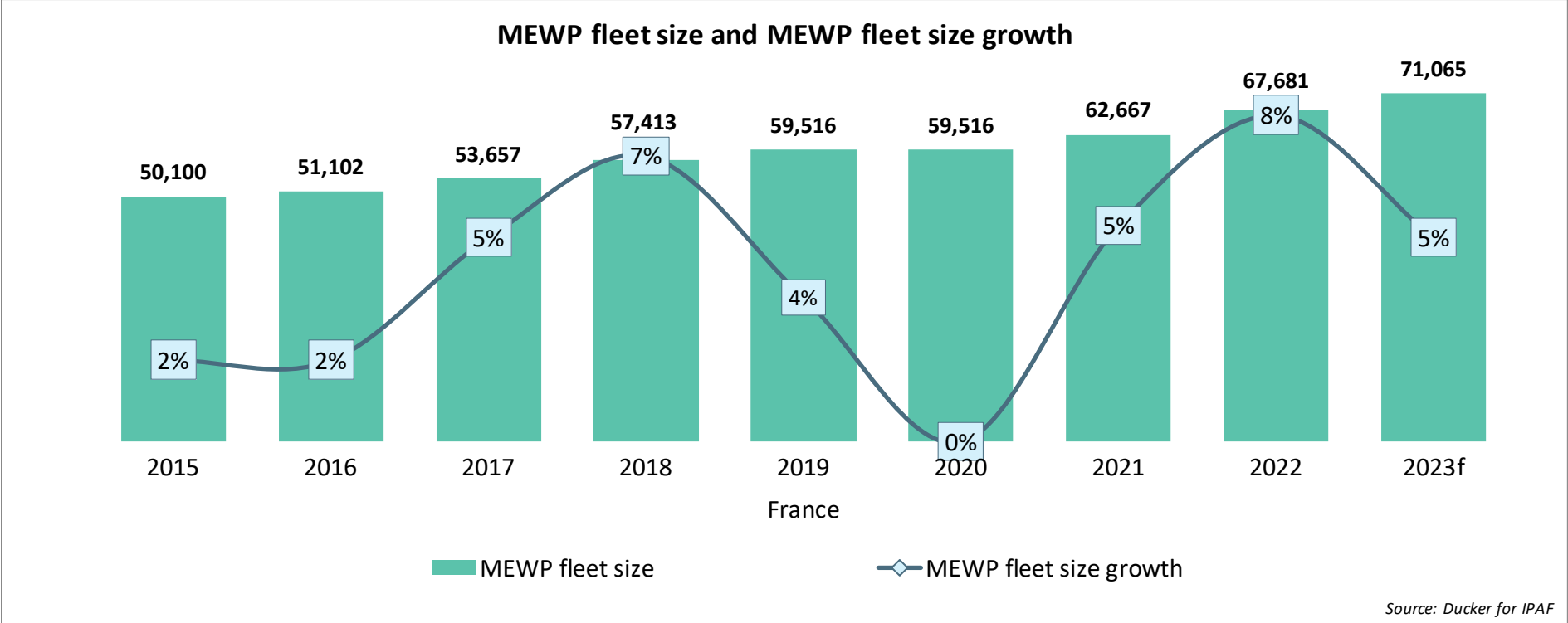
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“In a competitive market such as the French rental market, we sometimes have to rely on cross hire, but we try to avoid it where possible as it additionally cuts margins.” – MEWP rental company fleet manager

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France – market size in units

In 2022 there was a marked return to fleet expansion: The average MEWP rental fleet in France grew by eight per cent, leading to an overall estimated fleet size of more than 67,000 units. This strong growth was partly driven by backlogged orders of new machines arriving into fleets, and fleet is forecast to continue growing in 2023, leading to an expected increase of around five per cent overall across this year. This would see the total French fleet exceeding 71,000 units.



Included: All booms, scissor lifts and vertical masts

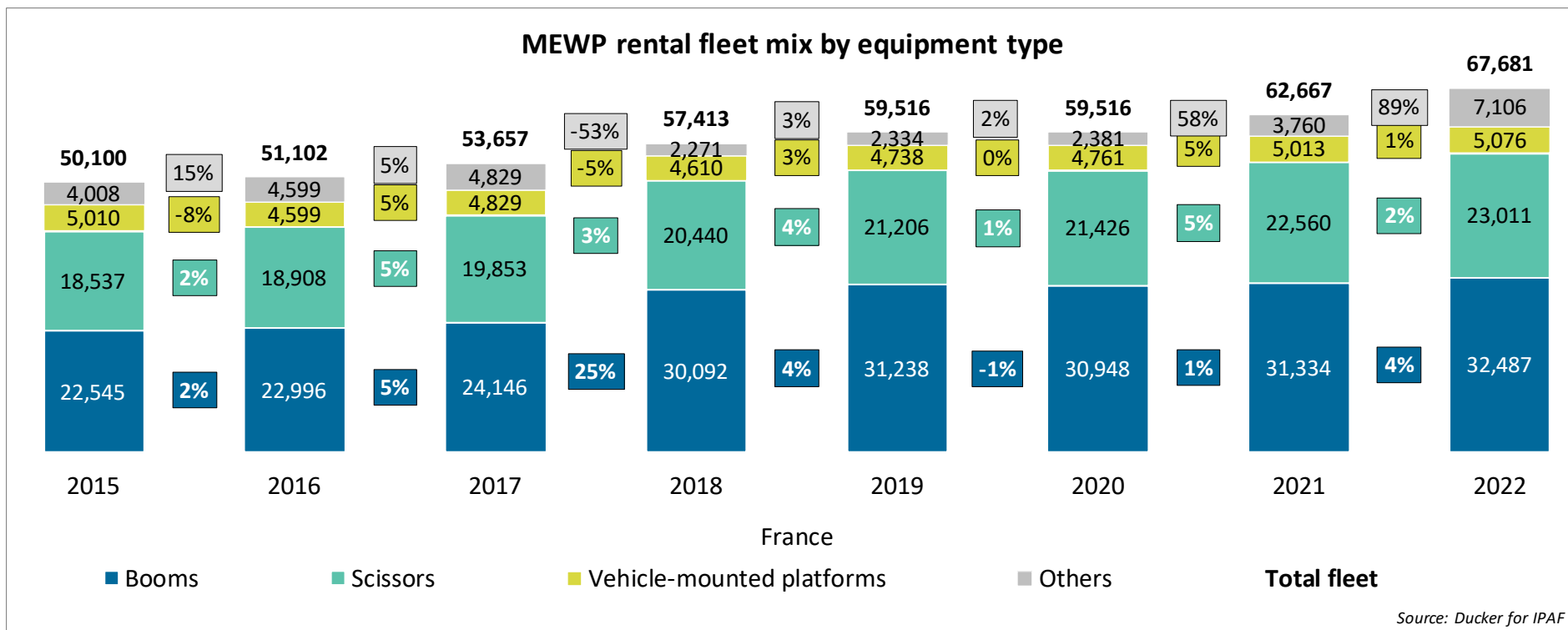
Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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France – market size in units

All MEWP categories saw an increase in 2022, albeit at varying rates of growth. Medium to long-term, the trend is towards electric-powered equipment, as far as fleet renewal cycle and fleet expansion rates allow. The trend to replace older equipment with electric machines continued, though the rate at which the transition is happening is restricted by longer than usual lead times from certain MEWP manufacturers. Vertical masts saw an increase in demand during 2022.



+X% % unit growth, eg booms fleet increased by 4% from 2021 to 2022.

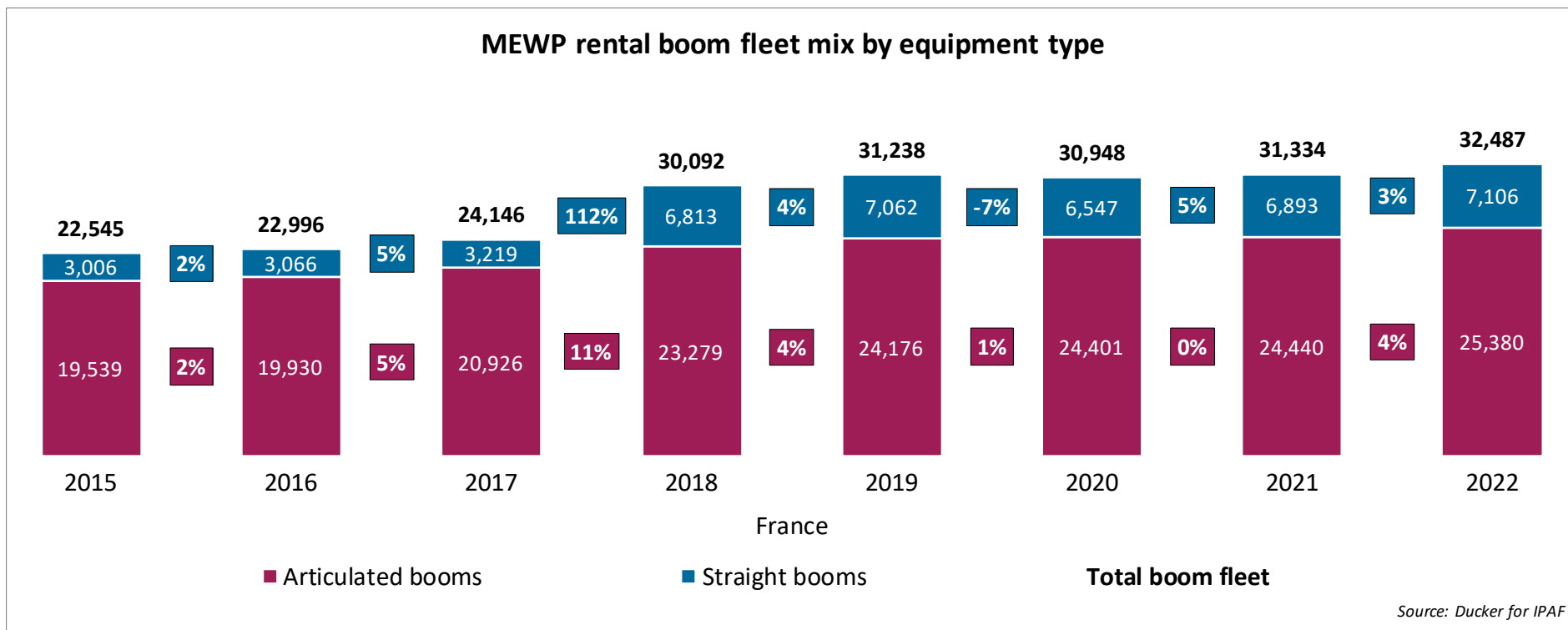
Others include: Vertical lifts, vertical masts, push-around verticals, trailer mounted/towable.

Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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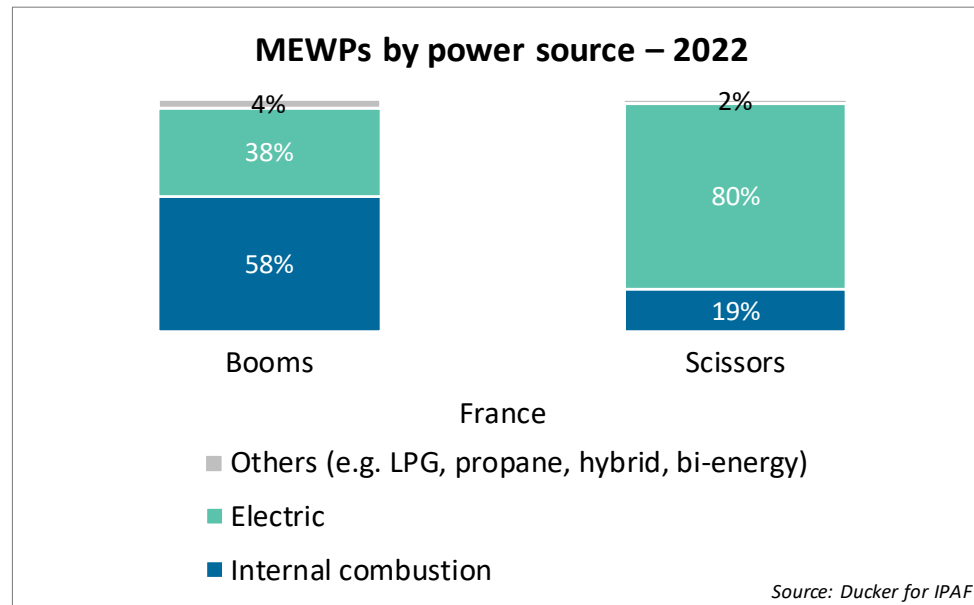
France – market size in units

Total boom fleet exceeded 33,000 units, with growth in both categories. Articulated booms increased share slightly, which resulted in the current ratio between articulated and straight booms in the French fleet standing at 79:21. Demand for articulated booms in France is expected to grow further, owing to increased availability of electric and hybrid units, as well as increasing demand from the construction end-users.



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Transition to electric power sources continued for both main MEWP categories in 2022. An increasingly rapid transition was reported in terms of articulated booms. Electric MEWPs represent 38% of all booms, increasing by one per cent over 2021. Due to the already high proportion of clean power sources among scissors, the ratio is expected to remain steady in 2023. Rental firms continued to switch towards electric MEWPs, owing to rising demand from customers and strict regulations.



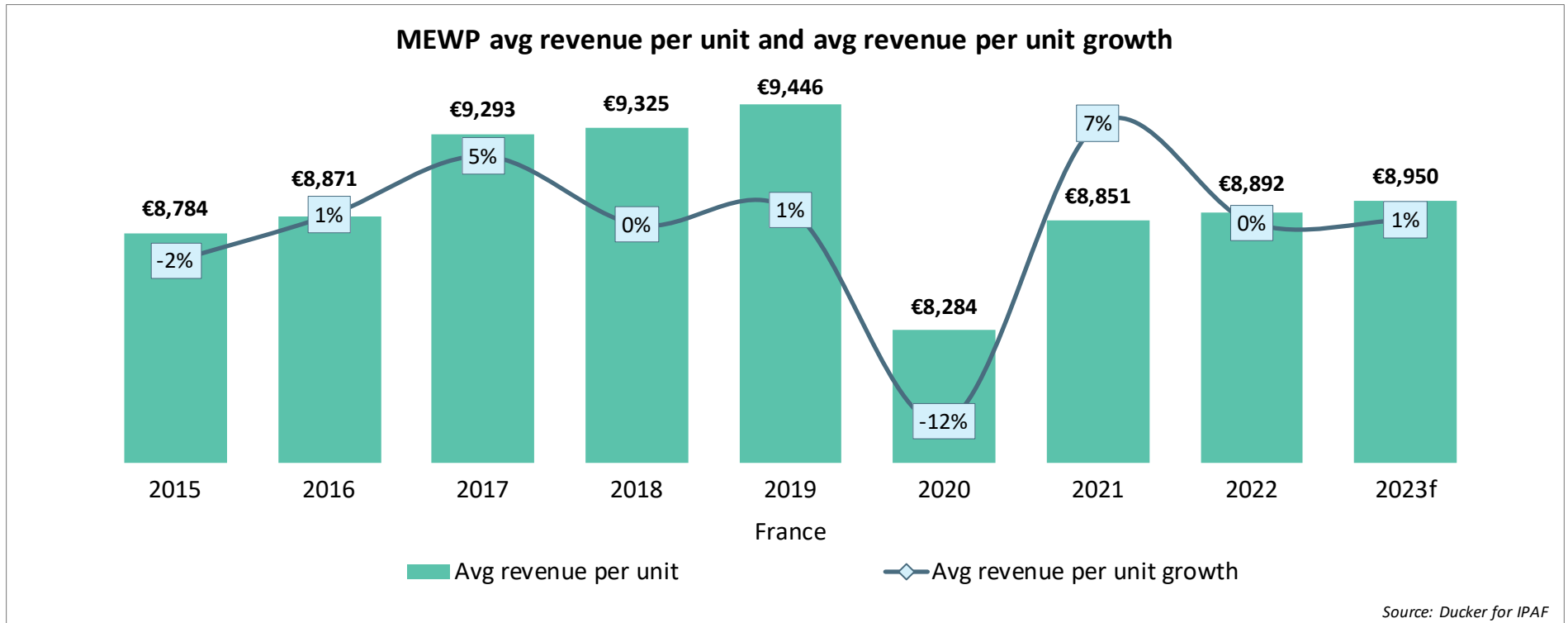
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“Hybrid MEWPs are increasing, but it is 25-30% more expensive and we don’t transfer this increase on to our rental rates. We know that internal combustion machines are too present in our fleet and slowly we tend towards more electric. Booms are mainly internal combustion, whereas scissors are more typically electric.” – MEWP rental company fleet manager

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France – revenue per unit

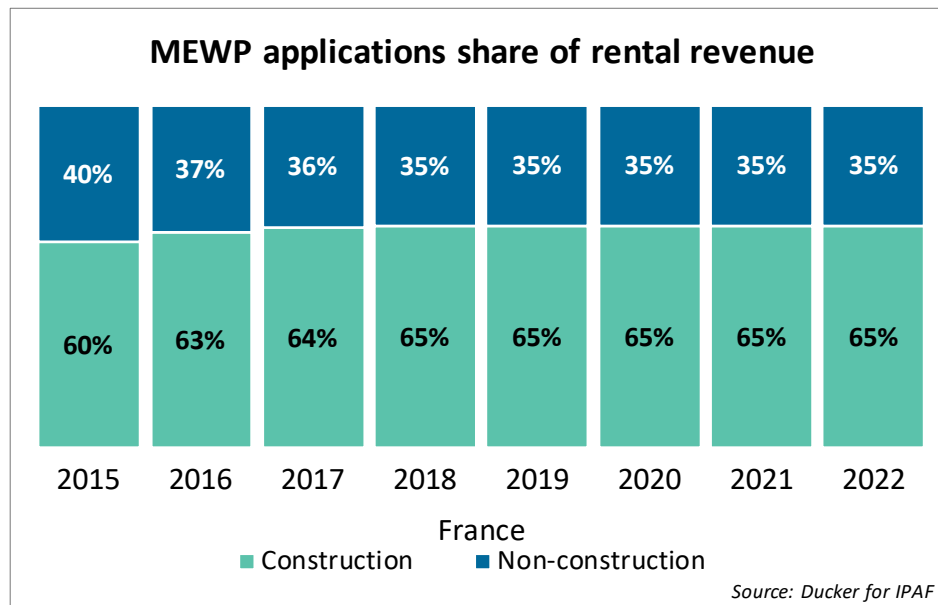
Average revenue per unit increased marginally in 2022, but remains below pre-pandemic levels. Average revenue increase is mainly driven by increased rental rates, but is not expected to exceed €9,000 before 2023 at the earliest. After a drop in 2020, average rental revenue has been increasing year on year. Although demand and rental rates are rising, rental firms don't expect to return to or exceed pre-pandemic levels any time before 2024.



Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

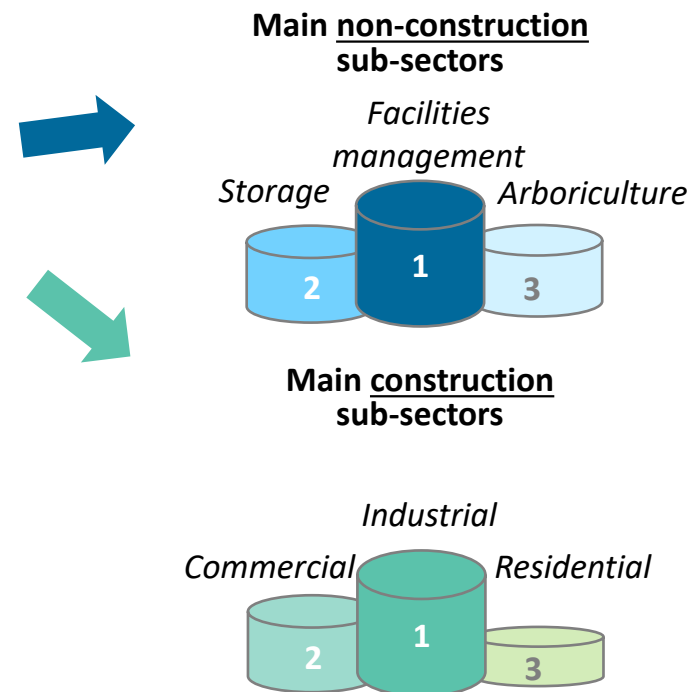
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Companies reported a stable split between MEWP applications, with no significant changes over the past five years. As both construction and non-construction sub-sectors are currently experiencing healthy activity, this 65:35 ratio in France is likely to remain unchanged over the next few years. Renovation activities are expected to pick up in the next few years, driven by retro-fitting of homes and commercial premises in order to comply with new environmental regulations.

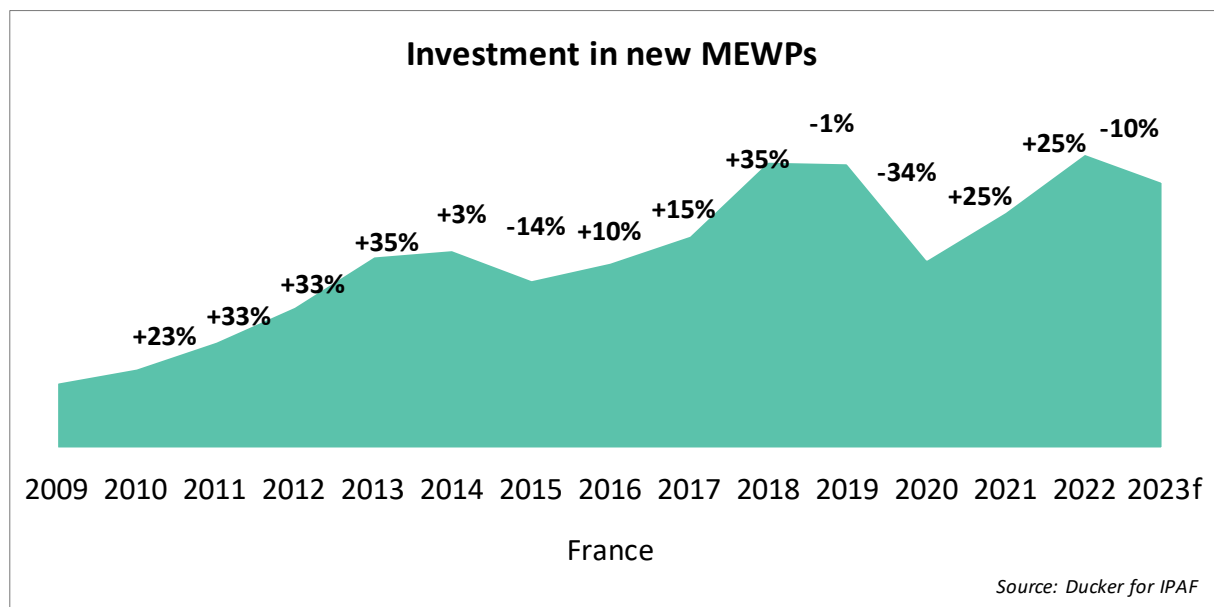


Non-construction activities include industry, maintenance, cleaning, utilities and events.

Construction includes new-build and renovation; including residential, commercial, retail and industrial.



In 2022, investment in new MEWPs increased by a quarter, with rental companies investing in fleet expansion and capitalising on the improved availability of new MEWPs. This growth in investment highlights rental firms' intent to develop their fleet in line with green investment strategies and keep up with growing user demand in that regard. The increasing cost of equipment is turning many rental companies towards Chinese MEWPs, which are often very competitively priced.

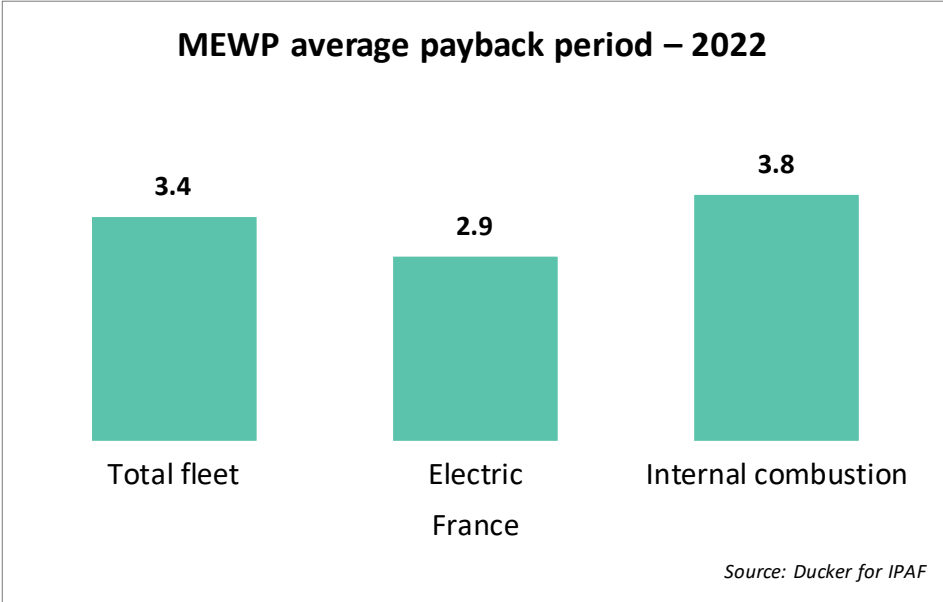


“The trend of fleet expansion will keep going in 2023 and 2024, though prices increases, delays etc. are still restricting growth in some cases. There remain some MEWP types that are relatively scarce, with lead times subject to significant delays, and prices can keep rising even after contracts are signed. – MEWP rental company purchasing manager

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France – typical payback period

Average payback period across the total fleet as well as each power source individually remained stable compared to in previous years, at around 3.4 years on average in 2022. Electric MEWPs offer a shorter average payback period, owing to better average rental and utilisation rates, as well as increasing end-user demand.

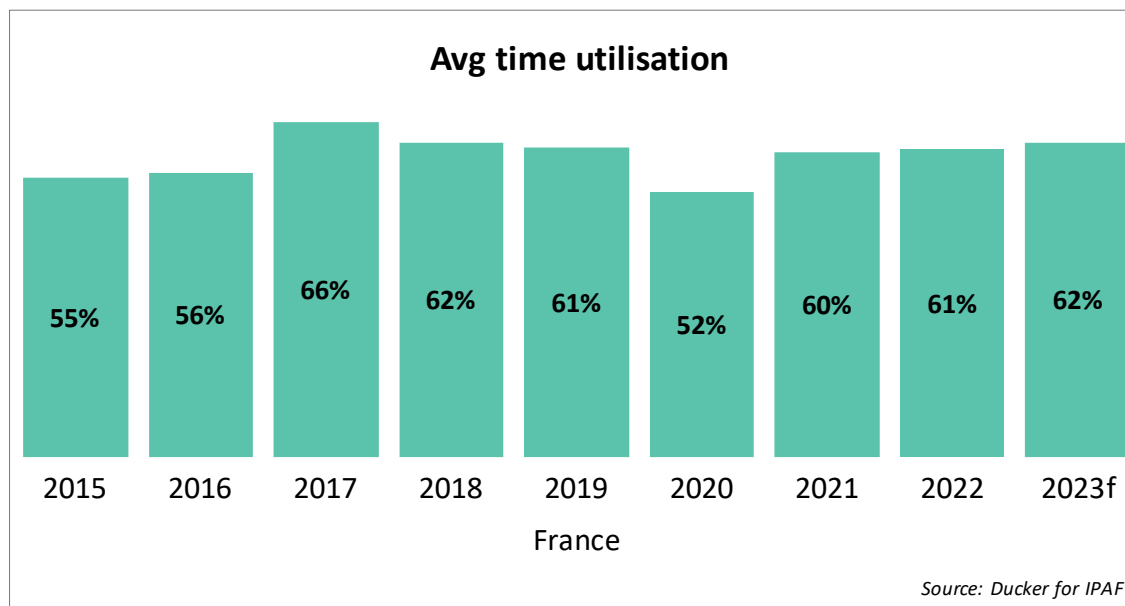


3.4 = 3 years and 4 months

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In 2022, utilisation rates rose slightly, by around one per cent on average, owing to healthy levels of activity in both construction and non-construction sectors. Booms experienced a slightly higher average increase in utilisation, owing to several construction projects commencing in 2022, with increasing demand for internal combustion-powered booms. In 2023, rental companies expect utilisation rates for scissors to increase.



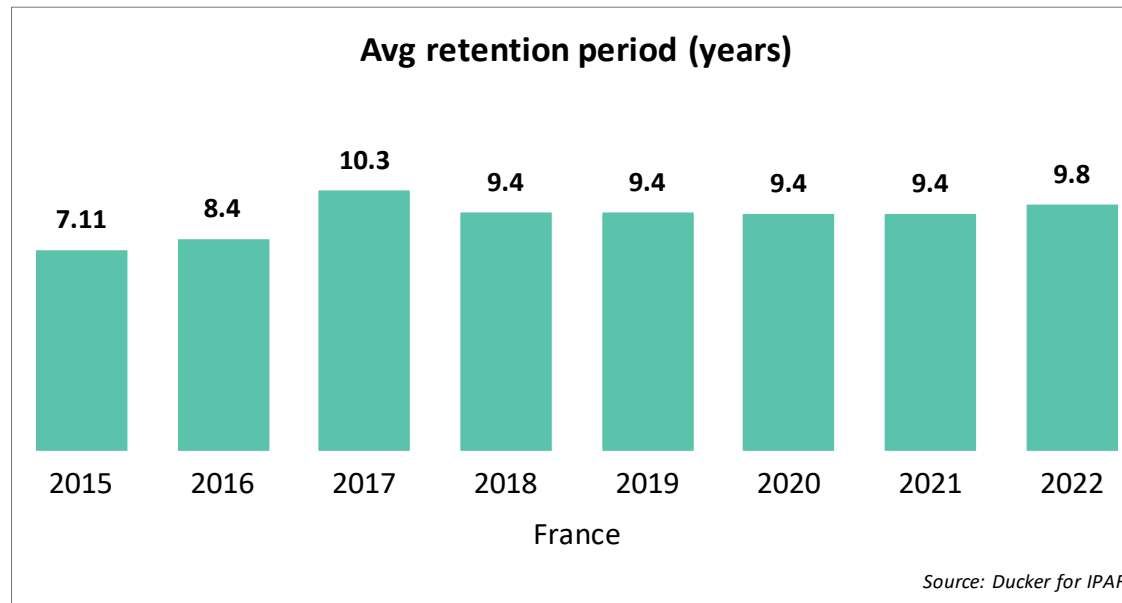
Utilisation of largest MEWP groups in 2022: Scissors: 60%, booms: 61%.

Average utilisation is defined as a physical number of machines out on hire as % of total number in fleet at any given time.

“In 2021, the utilisation rate of electric MEWPs was high (61%) because we were ending what I would call a building cycle. In 2022 we started a new one, therefore electric MEWPs have been a bit less used. The next years, as the building cycle will progress, electric MEWPs will have higher utilisation rates.” – MEWP rental company manager

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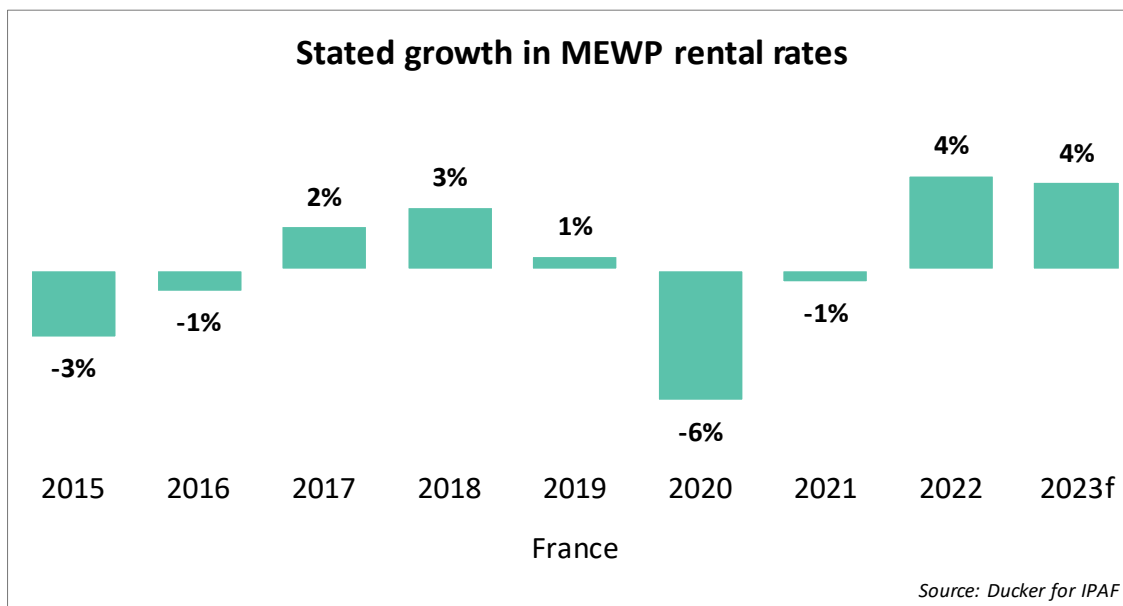
Average retention period increased marginally by four months in 2022, to stand at nine years and eight months on average, compared to nine years and four months in 2021. Lead times recovered slightly, but rental firms remained cautious, meaning retention period is likely to stay at similar levels until OEM lead times return to pre-pandemic levels.



9.8 = 9 years and 8 months

Average retention is a period of time that a machine is kept in fleet = selling age if acquired new.

After two years of rental rate decreases, French rental companies increased rental rates by an average of four per cent in 2022. This increase was largely down to two factors: Rising demand and increasing input prices, mostly down to inflationary pressure and increasing MEWP purchase prices. Rental companies expect to progressively revise rental rates over the next year or two to further counterbalance the ongoing impact of inflation on overheads and margins.



‘Everyone has increased their prices either by increasing rates, services or transports. There is the context of inflation, but also the increase of purchase prices of machines and the increase of prices of energies.’ – MEWP rental company manager

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A PERSPECTIVE FROM THE EDITOR OF
ACCESS INTERNATIONAL MAGAZINE
IPAF Powered Access Rental Market Report 2023
France

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According to the Committee for European Construction Equipment (CECE), construction output in France increased by 3% for civil engineering and 10% for building work in 2022. However, with price increases of around 6% to 7% in 2022, building activity only increased by 3.7%, and civil engineering fell by 4%.

Construction equipment sales in Europe rose 4% in 2022 to 216,861 units according to Off-Highway Research's Global Market Review. France performed well with an 8% rise in sales, thanks to broad demand for both heavy and compact equipment. However, according to CECE, the outlook for construction activity in France in 2023 is subdued owing to low economic growth of 0.1%, elevated inflation and high interest rates. Higher prices for construction materials and higher wage levels, together with tighter environmental standards, impact significantly on building costs. In addition, supply chain issues for some materials are still causing delays on construction work.

The European Rental Association (ERA) and IRN RentalTracker for the fourth quarter of 2022 said that the response from French companies to the survey only allows for the conclusion that the country seems to be one of the least buoyant of all European nations. Most notable is the fact just 4% of respondents to the tracker in France reported improving business conditions at the end of 2022. This finding tallies with a recent DLR Association survey, which reported deteriorating confidence.

Nevertheless, the rental sector is reporting strong potential. Supporting this is Europe's largest rental company Loxam, based in France, which reported a 10% increase in revenues in 2022 to €2.4 billion. While those rises were driven significantly by the Nordic region, the fortunes for rental in France will be raised by future projects.

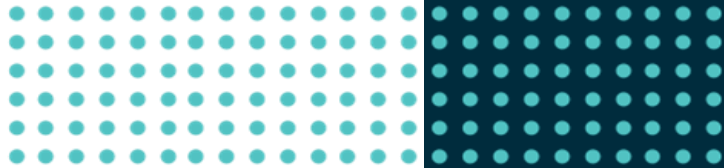
Loxam's new Major International Sporting Events (MISE) unit has already won a contract for temporary power supply for the Paris 2024 Olympic and Paralympic Games. Stéphane Hénon, Loxam's managing director, said: "The two years of 2023 and 2024 will be a watershed moment for our MISE department, thanks to the global reach of the Rugby World Cup 2023 in France and the Paris 2024 Olympic and Paralympic Games."

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In April this year, fellow France-based rental group Kiloutou announced record revenues for 2022, with turnover passing €1 billion for the first time in its history. The company said the 28.4% increase in revenues was “driven by its ambitious growth strategy”, with Kiloutou having completed the acquisition of France-based specialist rental company Bernard Location. The company also acquired portable accommodation rental company Jamart Location Modulaire in France. Looking forward, Kiloutou has committed 35% of its investments to low-carbon equipment this year, as it reaffirms its plans to accelerate the transition of its equipment fleet through a “proactive investment policy”.

Another factor that will accelerate demand for electric MEWPs is the fact that France has already introduced regulations applying to new developments. The RE2020 initiative governs both operational and embodied carbon, and the plan is to halve carbon emissions related to the building sector by 2030, compared to 2015, before creating a fully net zero building sector by 2050. The rules mean project managers will have to file declarations that buildings comply with limits defined by the government as part of a building permit application.

Another example of France’s leading edge in the low-emission trajectory is the deal Manitou has signed with Kiloutou to investigate retrofit electrification kits for the manufacturer’s diesel-powered telehandlers. Manitou described it as the first heavy equipment retrofit project involving a manufacturer and a rental company.

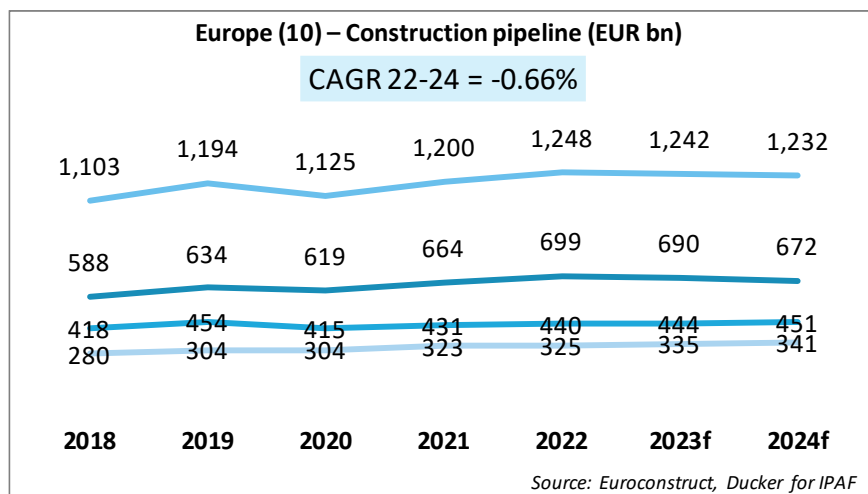
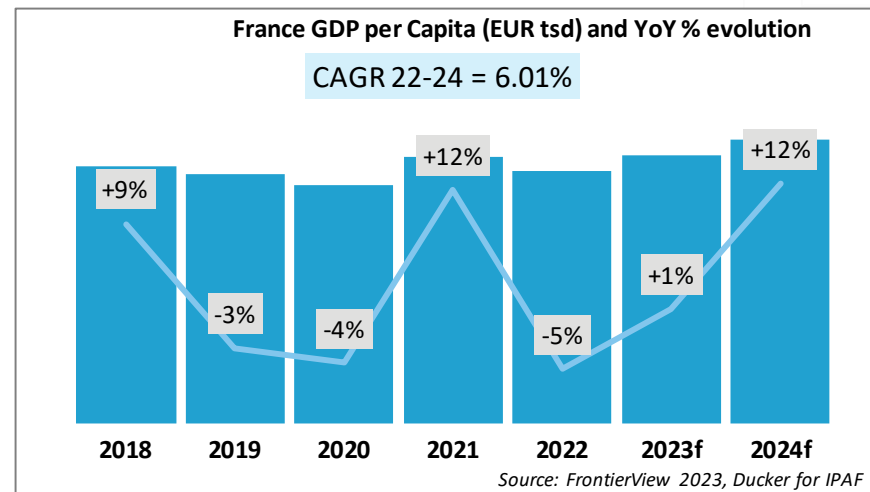


APPENDIX
IPAF Powered Access Rental Market Report 2023
France

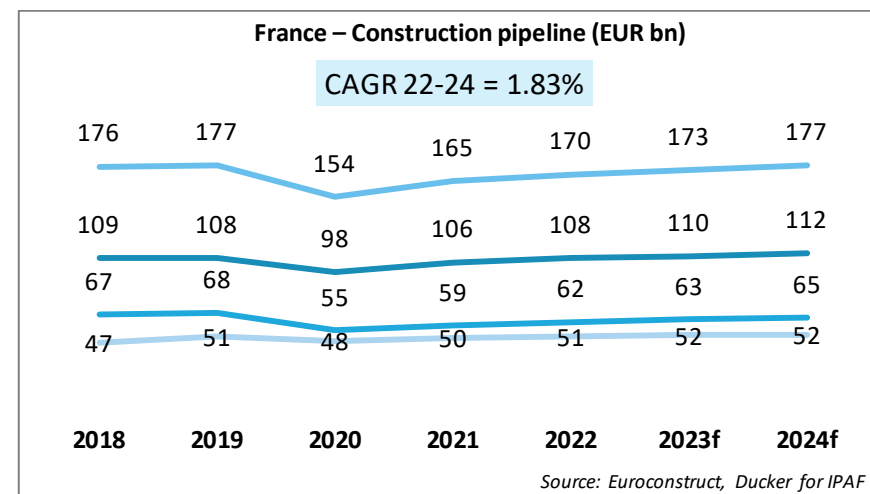
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France – construction statistics

Both the construction sector and GDP as a whole fell in France during 2020. Both started recovering in 2021 and, while the construction sector increased further in 2022, overall GDP saw a significant decrease. Total GDP is expected to increase in both 2023 and 2024.



- Residential construction
- Non-residential construction
- Total construction
- Civil engineering / Major infrastructure



CAGR: Compound annual growth rate

Europe (10) includes Germany, France, UK, Italy, Spain, The Netherlands and the Nordics: Finland, Sweden, Norway and Denmark.

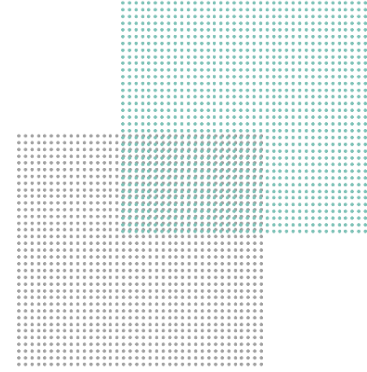
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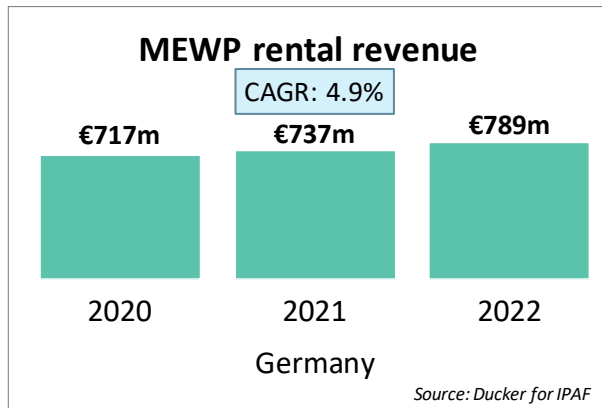
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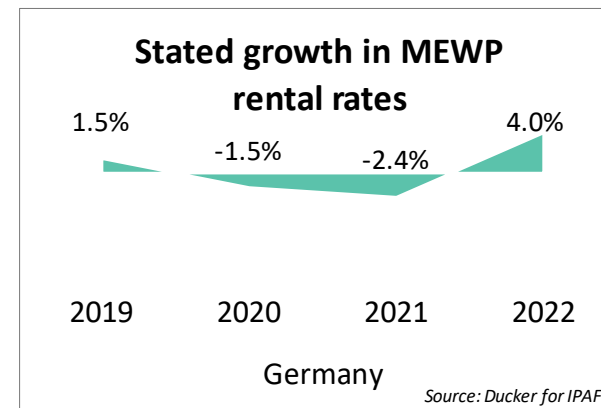
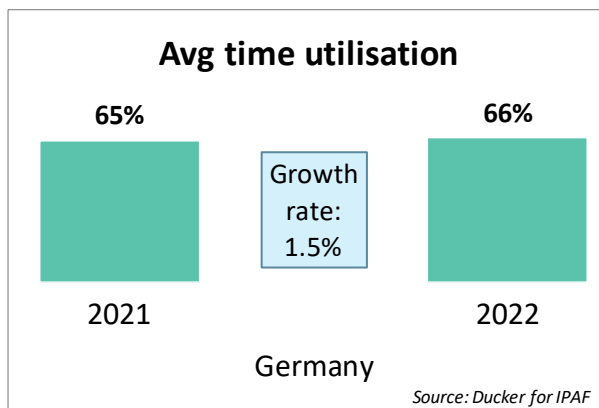
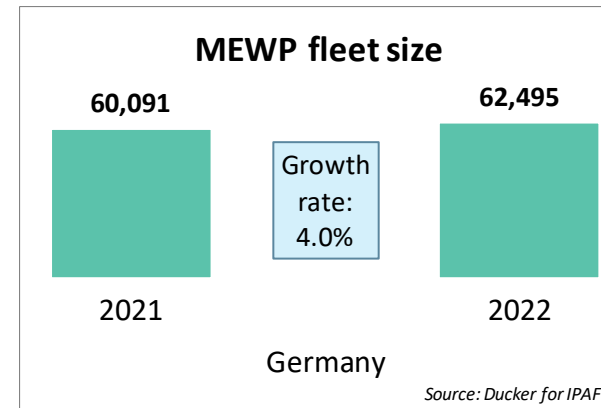
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Germany – key findings

In 2022, all indicators except utilisation rate reached or surpassed pre-pandemic levels and are expected to continue increasing during 2023. Rental revenue growth is being driven both by expansion of fleet size, along with increases in rental rates. German rental revenue increased by €52 million, exceeding expectations. Utilisation rate remained stable year-on-year, after having improved markedly during 2021.



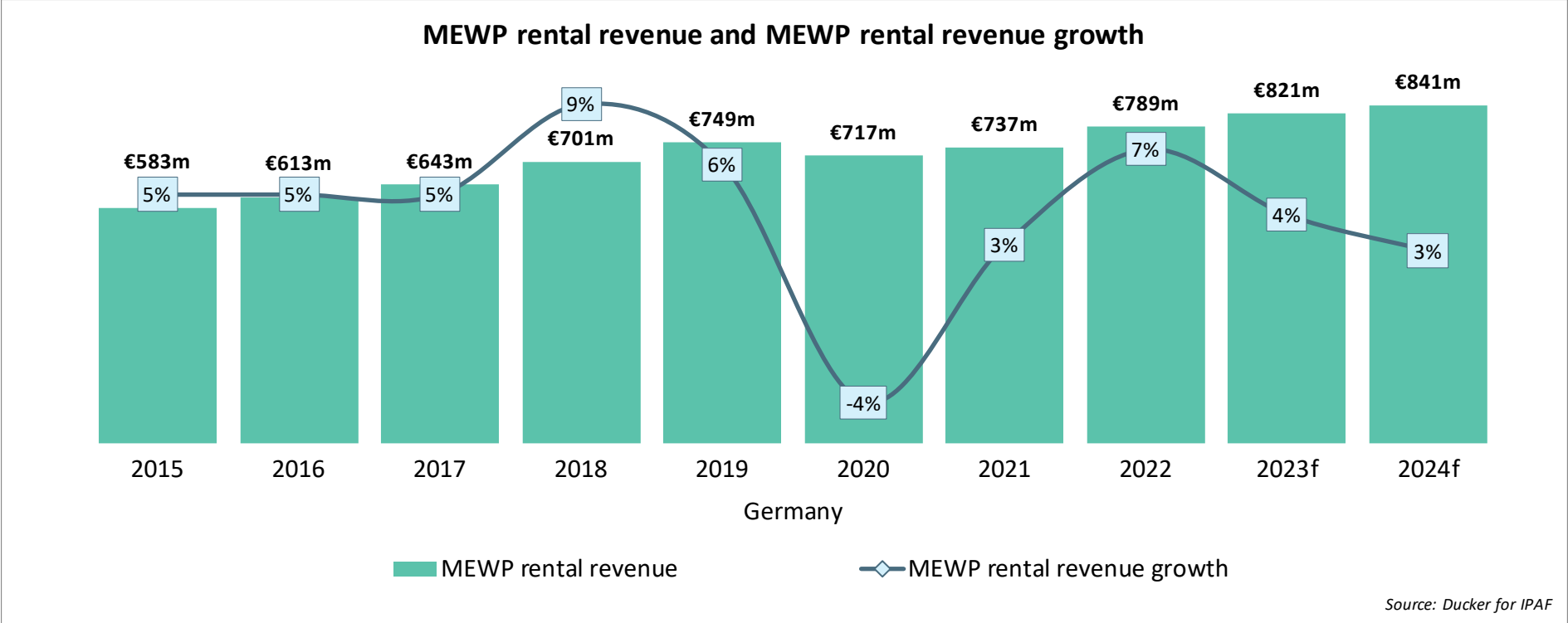
CAGR: Compound annual growth rate



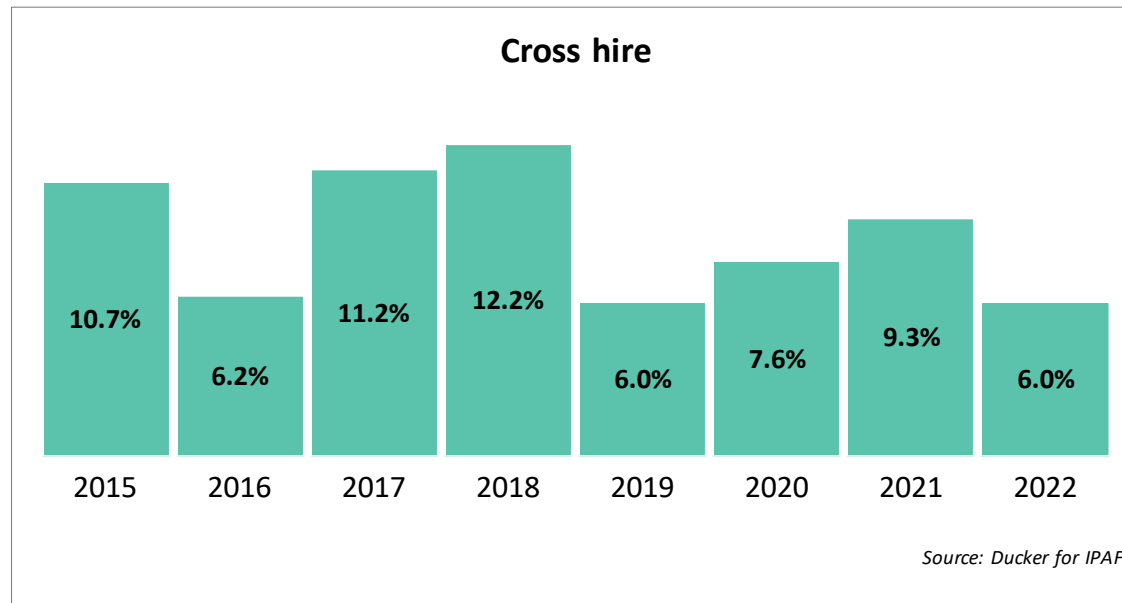
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Germany – rental market value and growth

Activity in the MEWP rental industry exceeded both previous years' expectations and pre-pandemic levels. MEWP rental revenue rose by seven per cent, driven mainly by increases in rental rates and demand from the construction sector. Rental revenue is expected to continue growing over the next two years, though at a slower rate, owing both to increasing rental rates and high levels of demand. Service charges underwent an increase in 2022 owing to incidental costs increasing.



Cross hire decreased significantly in 2022, largely down to an increase in the size of the typical German fleet. Owing to further fleet increases expected in 2023, cross hire activities are expected to remain fairly steady, at around six per cent.



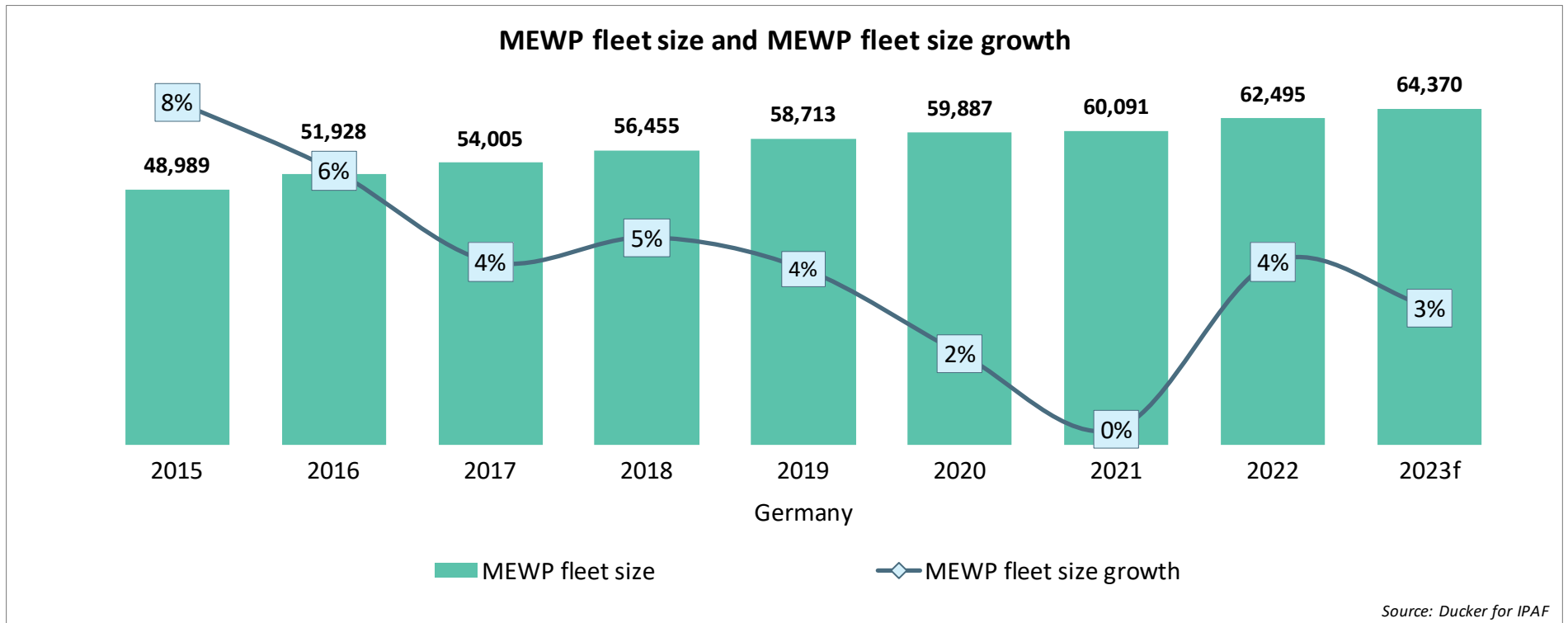
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“The fragmentation of the market, with a high share of small to medium rental companies, favours cross hire activity and it is comparably higher in Germany than in other European countries.” – Rental company fleet manager

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Germany – market size in units

Total fleet size stood at almost 62,500 MEWPs at the end of 2022, an increase of around four per cent on 2021. This is expected to grow further in 2023, as manufacturer lead times continue decreasing. The country's MEWP fleet is expected to rise by three per cent (circa 1,800 units) in 2023, with companies having secured new equipment purchases by placing orders months in advance, with MEWP rental companies having increasingly turned to new OEMs, including Chinese firms.



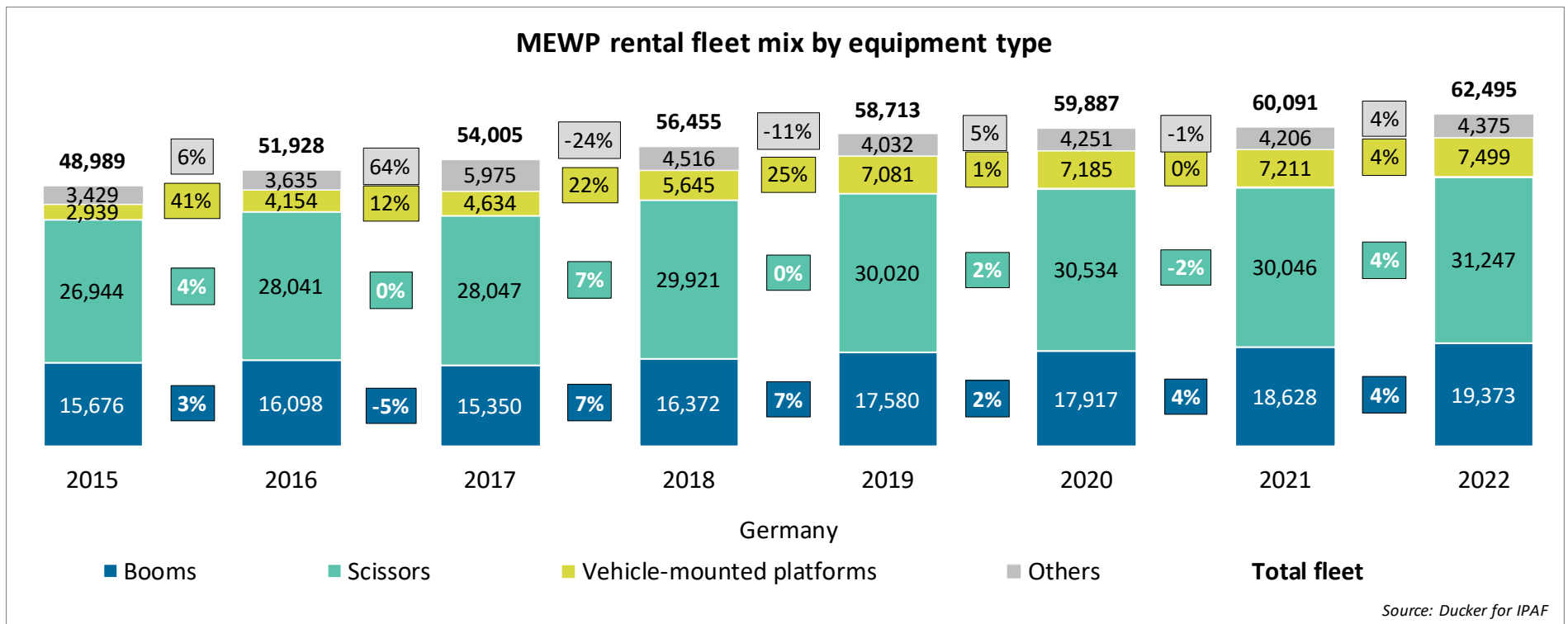
Included: All booms, scissor lifts and vertical masts

Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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Germany – market size in units

All MEWP categories saw a similar increase in 2022, so overall fleet mix remained broadly the same as in previous years. Medium to long-term, the trend is towards electric-powered equipment, as far as fleet renewal cycle and fleet expansion rates allow. The trend to replace older equipment with electric machines continues, though the rate at which the transition is happening is restricted by longer than usual lead times from some MEWP manufacturers.



+X% % unit growth, eg booms fleet increased by 4% from 2021 to 2022.

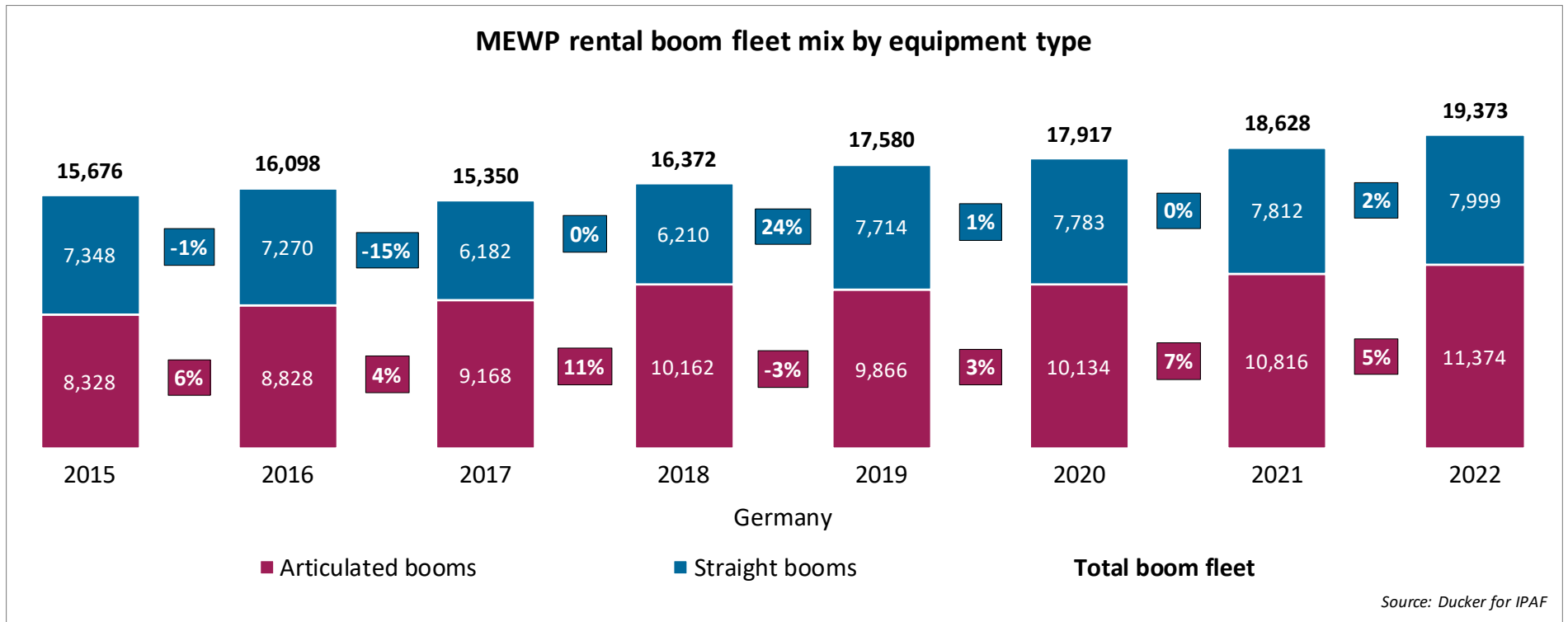
Others include: Vertical lifts, vertical masts, push-around verticals, trailer mounted/towable.

Included powered access lifts: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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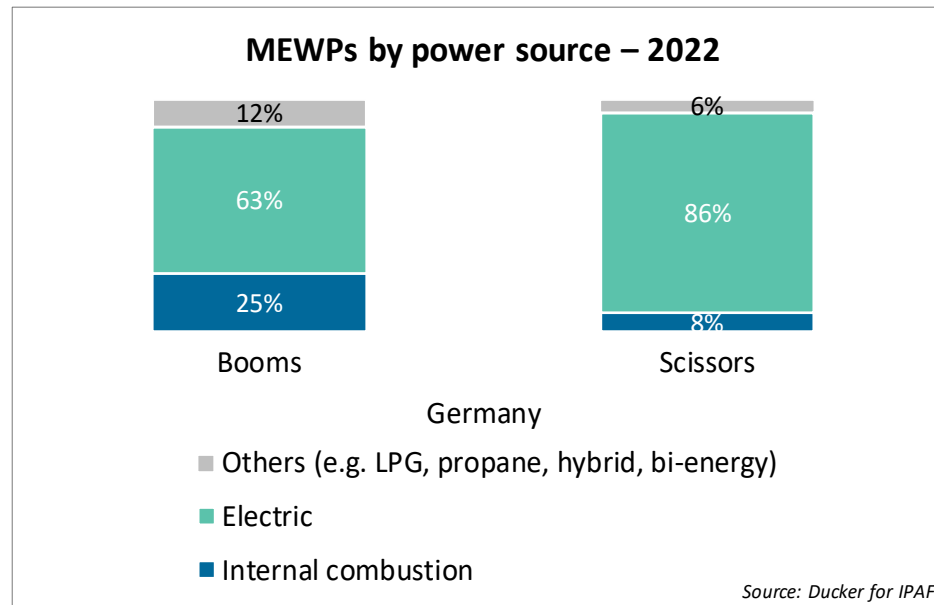
Germany – market size in units

By the end of 2022, the overall boom category in Germany exceeded 19,000 units. While the number of straight booms in Germany increased by two per cent during 2022, the share of articulated booms increased by seven per cent. The ratio between articulated and straight booms in the German fleet stands at 59:41, in line with the trend of the past two years. The German boom fleet grew by around 700 units in 2022, driven by strong demand for booms in the construction industry.



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In 2022, transition to clean power sources continued for both main equipment categories, owing to an increased client demand for a sustainable fleet. The limited availability of large outreach electric booms and infrastructure challenges in certain construction end uses are the main drags on this transition to electric booms, further increasing the share of hybrid engines. Electric scissors are increasingly powered by lithium-ion batteries for higher energy density and longer cycle life.

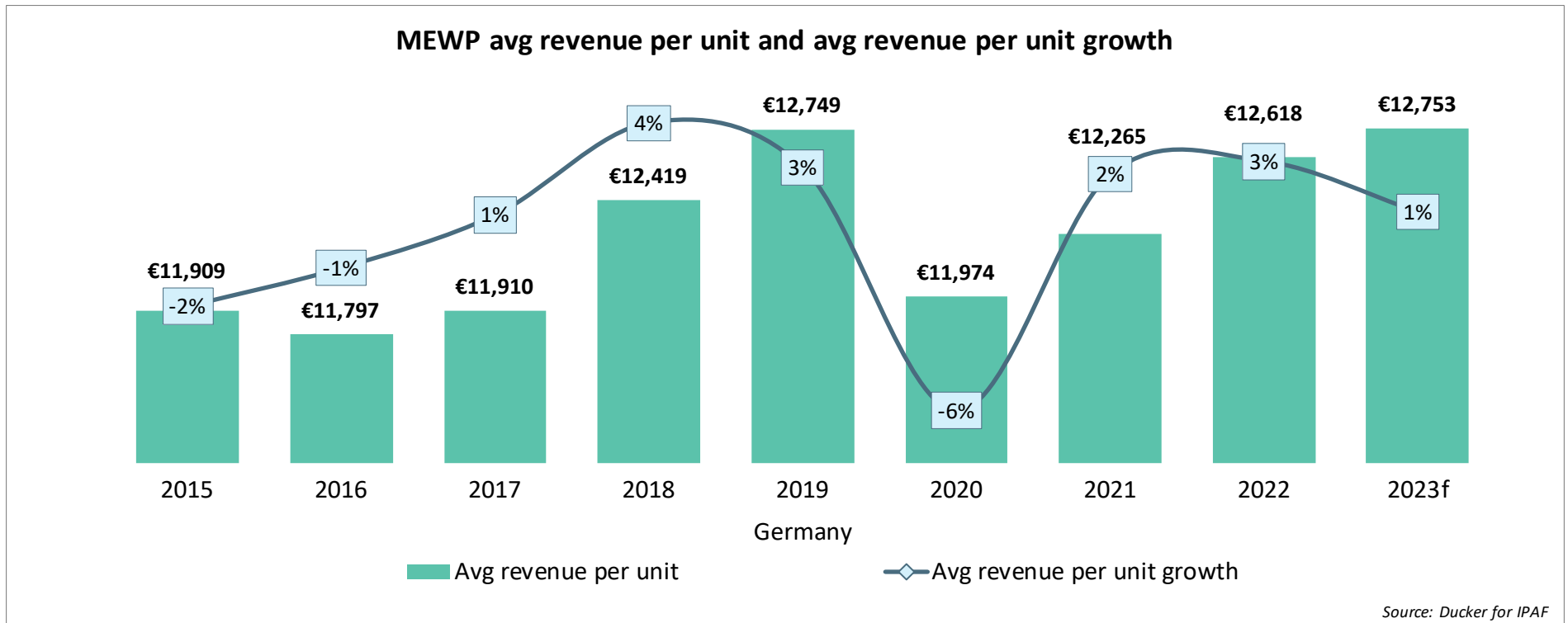


“Hybrids are increasing as they can be used inside and outside and have a green footprint. Electric scissors are shifting towards lithium-ion batteries and, although more expensive, these require less maintenance and offer longer life.” – MEWP rental company fleet manager

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Germany – revenue per unit

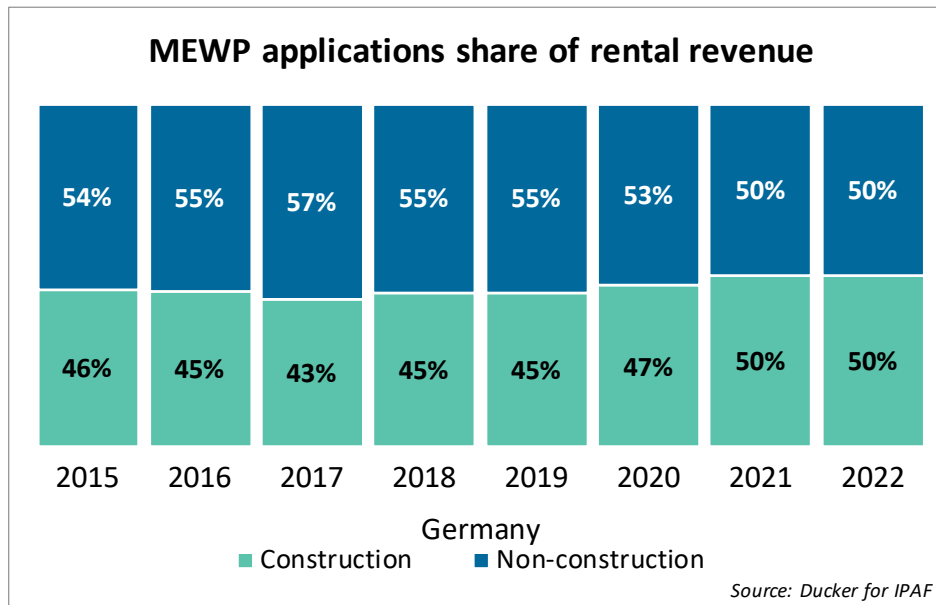
Owing to an improvement in rental rates, average revenue per unit grew by around three per cent in 2022, but the metric has not yet returned to its pre-pandemic level. After a drop in 2020, average rental revenue has been increasing year on year and did almost recover to pre-pandemic levels, owing to stable utilisation rate and increased rental rates. With demand increasing and rental rates rising, rental companies expect to reach or exceed pre-pandemic levels during 2023.



Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

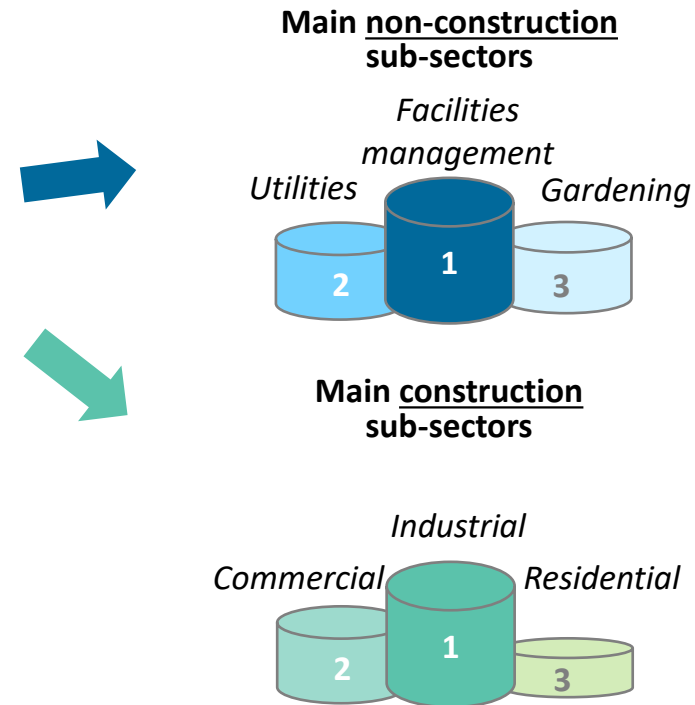
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In 2022, construction end uses further stabilised, remaining at 50% rental revenue share. Construction activities increased with a return to major projects, while non-construction end uses saw a healthy level of activity with a peak in demand to service data centres and events boosting activity in 2022. Some rental companies reported a shift in specialisation towards certain end uses and specific equipment categories.

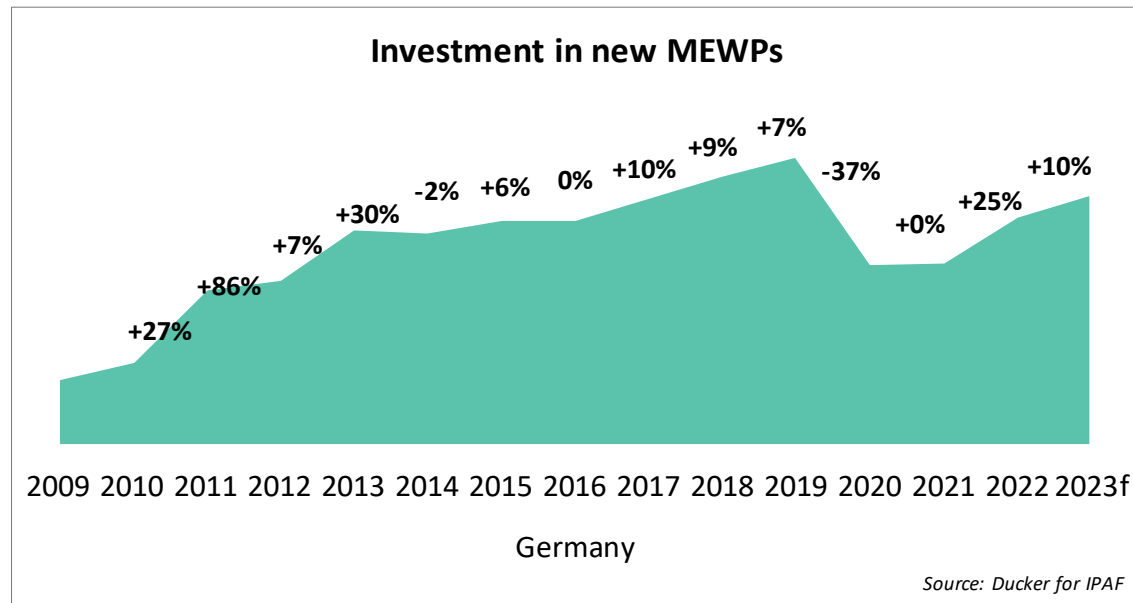


Non-construction activities include industry, maintenance, cleaning, utilities and events.

Construction includes new-build and renovation; including residential, commercial, retail and industrial.



Investment rose by 25% in 2022, in line with previous years' expectations, owing mostly to the post-pandemic recovery and companies resuming pre-2020 strategies after having largely paused investment in 2021. After focusing in 2021 on fleet reduction and consolidation, rental companies began investing again during 2022 in fleet expansion and renewal, owing to the generally positive market outlook and falling lead times on orders of new MEWPs from equipment manufacturers.

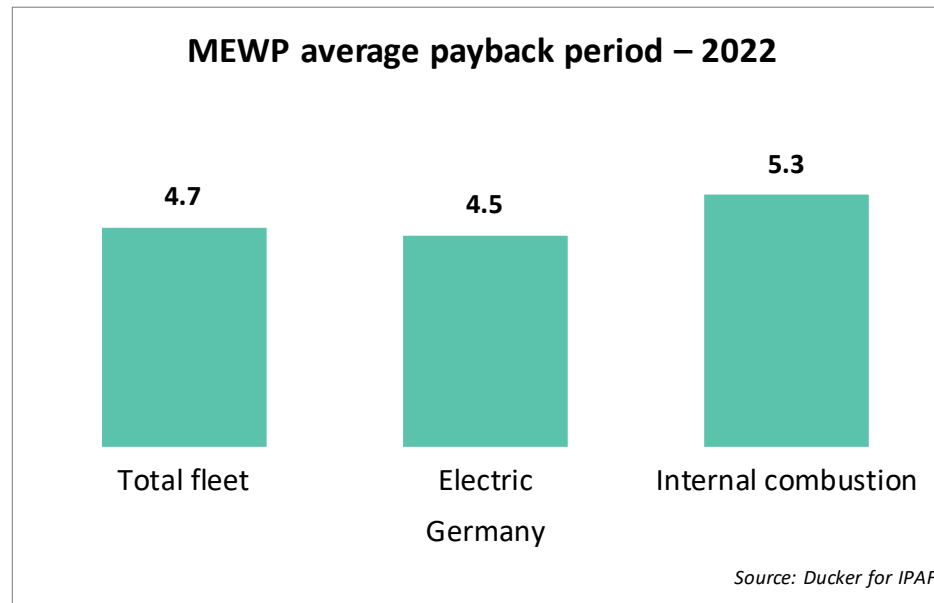


“Both back order and new purchases were delivered in 2022. Rental companies in return increased their investment or brought forward future investments to capitalize on this influx of available MEWPs. Some back-ordered inventory remains outstanding, and investment will continue to progress in 2023.” – MEWP rental company purchasing manager

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Germany – typical payback period

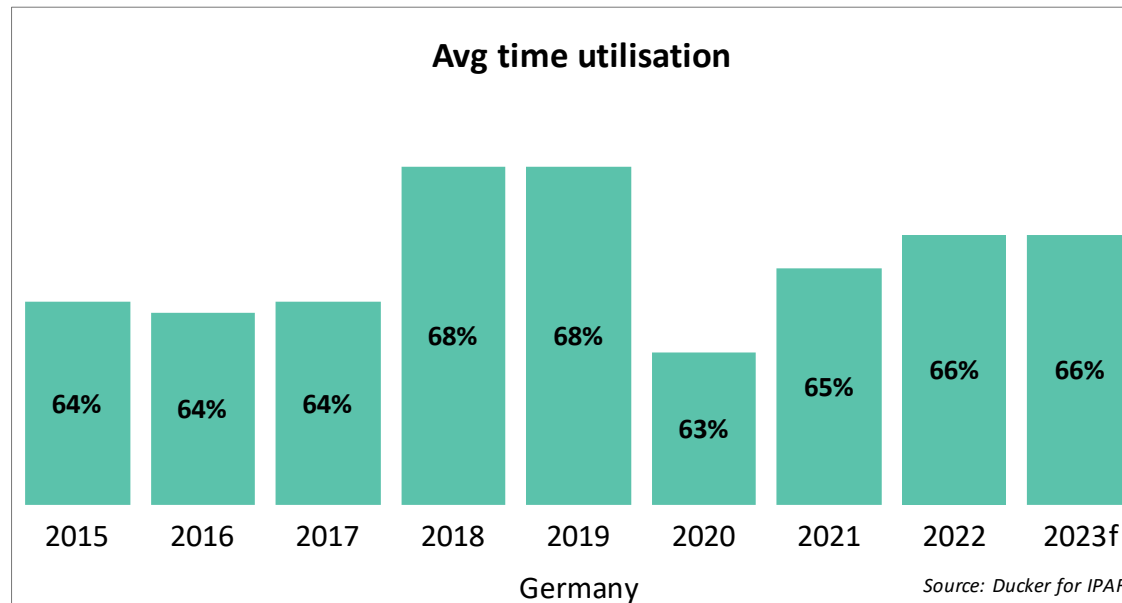
Average payback period for total fleet as well as each power source individually decreased by eight months compared to previous years, meaning on average four years and seven months. Electric MEWPs on average offer a shorter payback period than internal combustion powered machines, owing to better average rental and utilisation rates as well as increasing end-user demand.



4.7 = 4 years and 7 months

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In 2022, utilisation rates increased by one per cent over 2021, owing to healthy levels of activity in both construction and non-construction segments. Some larger rental companies struggled to grow their fleet as quickly as planned owing to ongoing issues with higher-than-usual lead times on orders of new machines. In 2023, rental companies expect utilisation rate to continue increasing at a modest rate, but do not expect rates to fully recover to pre-pandemic levels before 2024.



Utilisation of largest MEWP groups in 2022: scissors: 66%, booms: 65%

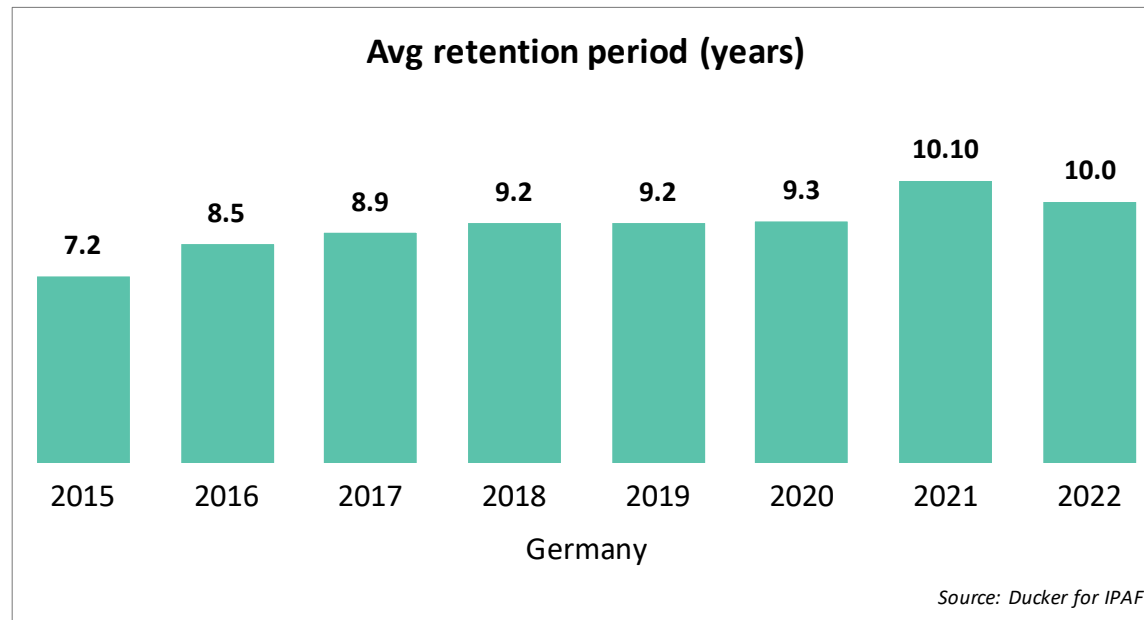
Average utilisation is defined as a physical number of machines out on hire as % of total number in fleet at any given time.

“

“Utilisation rose slightly, in some cases owing to supply chain issues restricting fleet growth, but we also witnessed a good year in both construction and non-construction activities, and events bounced back.” – MEWP rental company manager

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Average retention period decreased by ten months in 2022, after increasing by one year and seven months in 2021. This means MEWPs spend on average around ten years in German rental fleets. Although availability of new MEWPs did improve in 2022, longer-than-usual lead times from some MEWP manufacturers were still restricting fleet renewal and expansion.

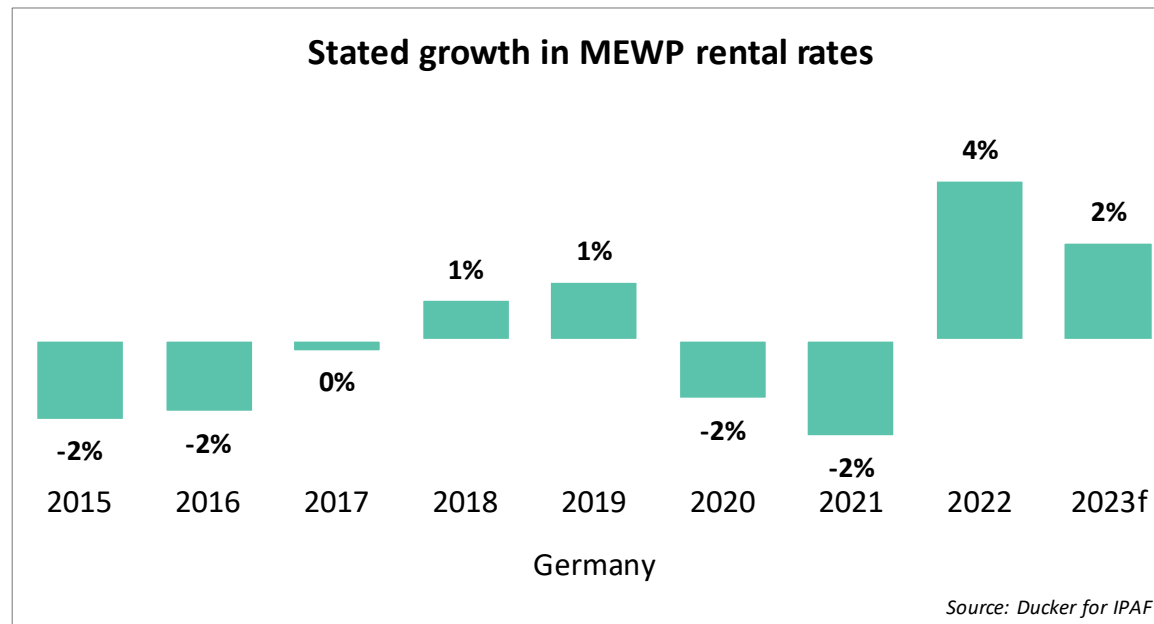


10.0 = 10 years

Average retention is a period of time that a machine is kept in fleet = selling age if acquired new.

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Rental rates rose by around four per cent in 2022, in part owing to rising demand and increasing costs, but mostly down to inflationary pressures and the increasing price of MEWP purchases. Rental rate growth is expected to continue to rise modestly during 2023, to further counterbalance the ingoing impact of inflation and other upward cost pressures.



“We had to increase rates after decreases in the past two years – more a stabilisation of rental rates. With both inflation and prices for new MEWP units increasing, these are playing a role in the increase.” – MEWP rental company manager

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Germany

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Rental reports in the past couple of years have noted mixed fortunes in the German rental and construction markets. This situation continues in 2023. Many Germany-based rental companies have been reporting positive results. For example, Zeppelin Rental published full year 2022 revenues of €666 million, up from €576 million in 2021. Peter Gerstmann, chairman of the board of Zeppelin Group, said: “Despite the particular challenges we have faced, especially the war against Ukraine and its effects, the sometimes-challenging political framework in some markets, highly dynamic price behaviour, and persistent bottlenecks among our manufacturing partners and suppliers, we have achieved a remarkable result.”

Riccardo Viaggi, Committee for European Construction Equipment (CECE) secretary-general, said its Barometer survey, which measures market confidence, demonstrated an “almost unexpected” level of optimism for the year ahead. Viaggi also pointed to a consistency of order intakes, with order books “normalising, which is positive news”. He added that survey respondents had reported an improvement in the production lead times of new equipment. While the ERA/IRN RentalTracker for the fourth quarter of 2022 confirms a faltering confidence in Europe that was first hinted at in June 2022, there is confidence for the future in Germany. Results from this survey show, “in as far as it is possible to say, the Benelux, Germany and Spain are the nations that seem to be most positive about business conditions. Germany’s rental sector has performed well for several years.”

CECE’s Annual economic report 2023, however, paints a bleaker picture. The highest annual increases in construction output in 2022 were seen in Slovenia (44%) and Romania (20.4%), while the largest decreases were recorded in Spain (-6.9%), Slovakia (-5.8%) and Germany (-1.2%). The outlook for the construction market in Germany is gloomy: The impact of higher construction costs, labour market constraints and a challenging financial environment for the industry will continue to weigh heavily on the market in 2023, CECE says. The impact will be most pronounced in the residential construction sector. However, a substantial number of infrastructure projects in the pipeline will offset wider cyclical decline in construction activity. This is partly due to efforts to diversify Germany’s energy supply following Russia’s invasion of Ukraine.

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In terms of the rental sector, Joachim Michels, first chairman of the BBI, the German association for sales and rental of construction equipment, distributors and rental companies, said comparatively high demand for equipment in 2022 is not as positive going forward as it seems. Michels added that theoretically the construction industry should look forward to full order books in the years ahead. The reality is a lack of materials, bottlenecks in the supply of gas, rising energy prices, inflation, rising interest rates and a lack of planning capacity. In 2022, for example, building permits in Germany fell by a double-digit figure compared to 2021. “Uncertain expectations will probably lead to lower demand for new machines and increased demand for rental machines. But rental companies cannot be expanded at will because of delivery times.”

The scarcity of new machines means rental companies cannot cater to demand. As a result, rental prices for construction machinery will continue to increase. The BBI added that the shortage of skilled workers will also be a central issue. Despite efforts to recruit and train employees, it will not be possible to meet requirements. Therefore, it will be vital to increase productivity, optimise processes, automation and digitisation. The presence of Chinese manufacturers in the European rental sector is worthy of note. This has occurred mainly owing to their increased presence and perseverance in European markets and because they have had new machine inventory more readily available, compared to other manufacturers.

In October last year, Germany hosted the first bauma Munich since the Covid pandemic. Ahead of the event, exhibitors wondered how the world’s largest construction exhibition would fair after an absence of three and a half years. Despite apprehension, and the confirmation that a significant number of major European and North American access equipment manufacturers did not attend, visitor numbers for bauma remained high. Major access equipment manufactures from China did attend, however, creating a different dynamic at the show. Attendance figures of almost half a million people from show organiser Messe München demonstrate that – while down on the more than 625,000 visitors in 2019 – the show still has significant pulling power.

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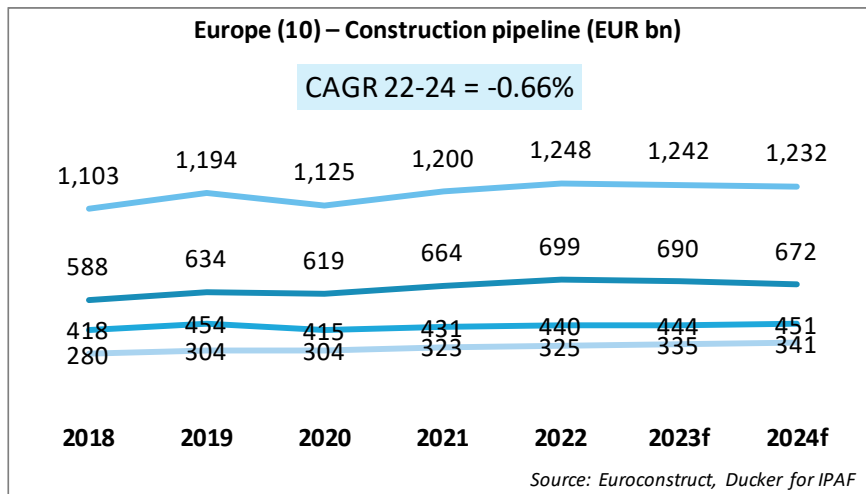


APPENDIX
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Germany

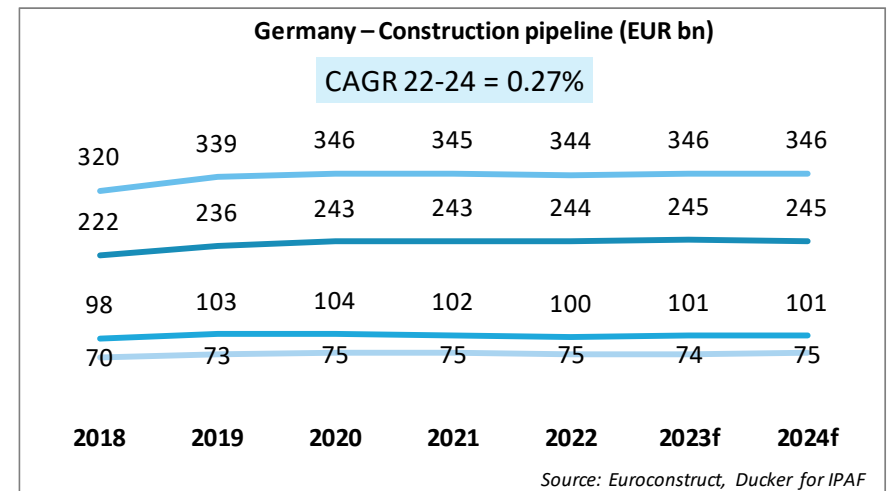
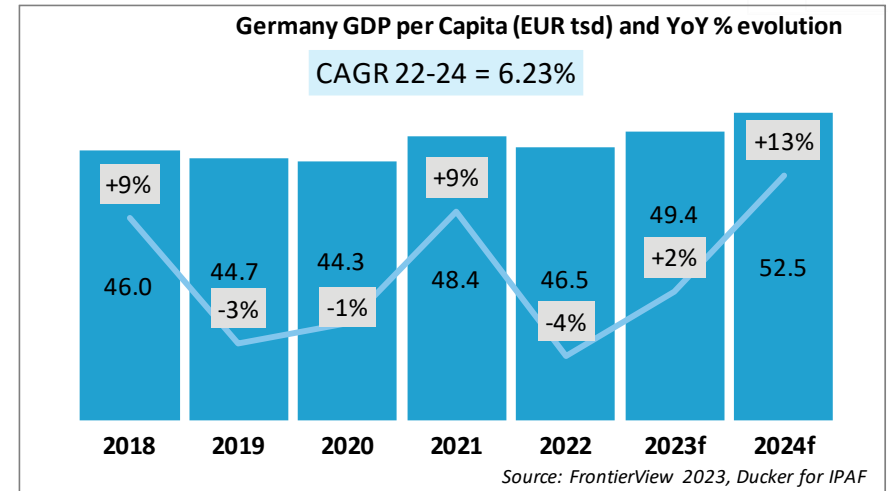
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Germany – construction statistics

The German construction sector was growing up to 2020, but has since decreased year on year, though 2023 is looking up. Overall GDP decreased slightly in 2020, with a strong recovery in 2021, declining in 2022, and growth expected again in both 2023 and 2024.



- Residential construction
- Non-residential construction
- Total construction
- Civil engineering / Major infrastructure



CAGR: Compound annual growth rate

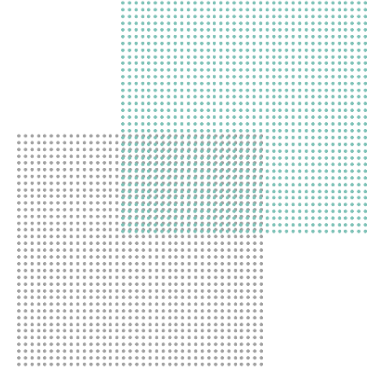
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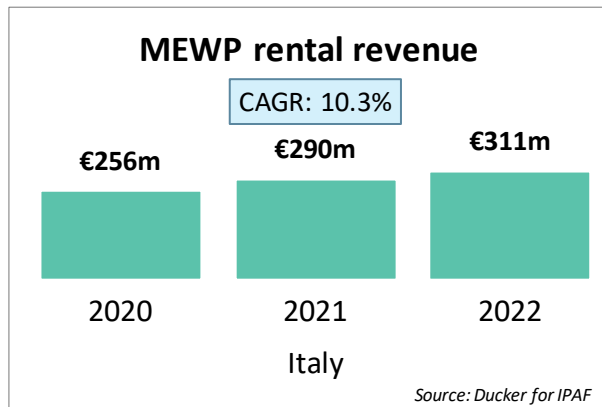


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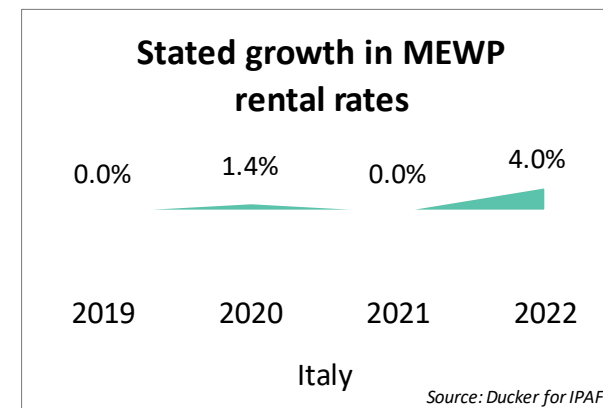
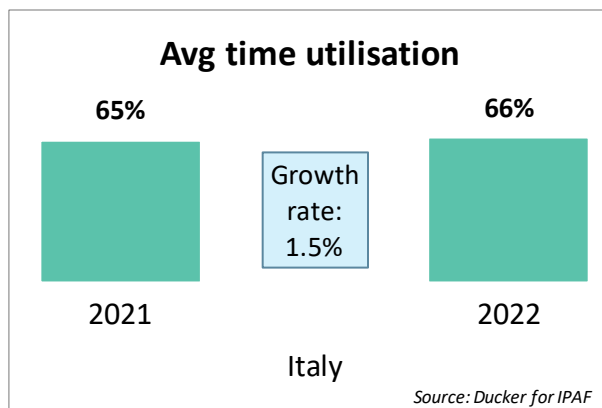
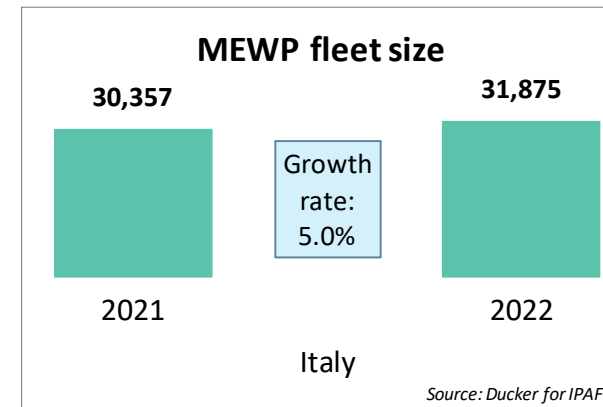
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In 2022, all indicators, except utilisation rate, reached or surpassed pre-pandemic levels and are expected to continue increasing in 2023. Rental revenue growth was driven both by expansion of fleet size, along with increases in rental rates. Italian rental revenue significantly increased by €21 million during 2022, broadly in line with expectations. Utilisation rate remained stable after rates improved considerably in 2021, picking up after the worst year of the pandemic in 2020.

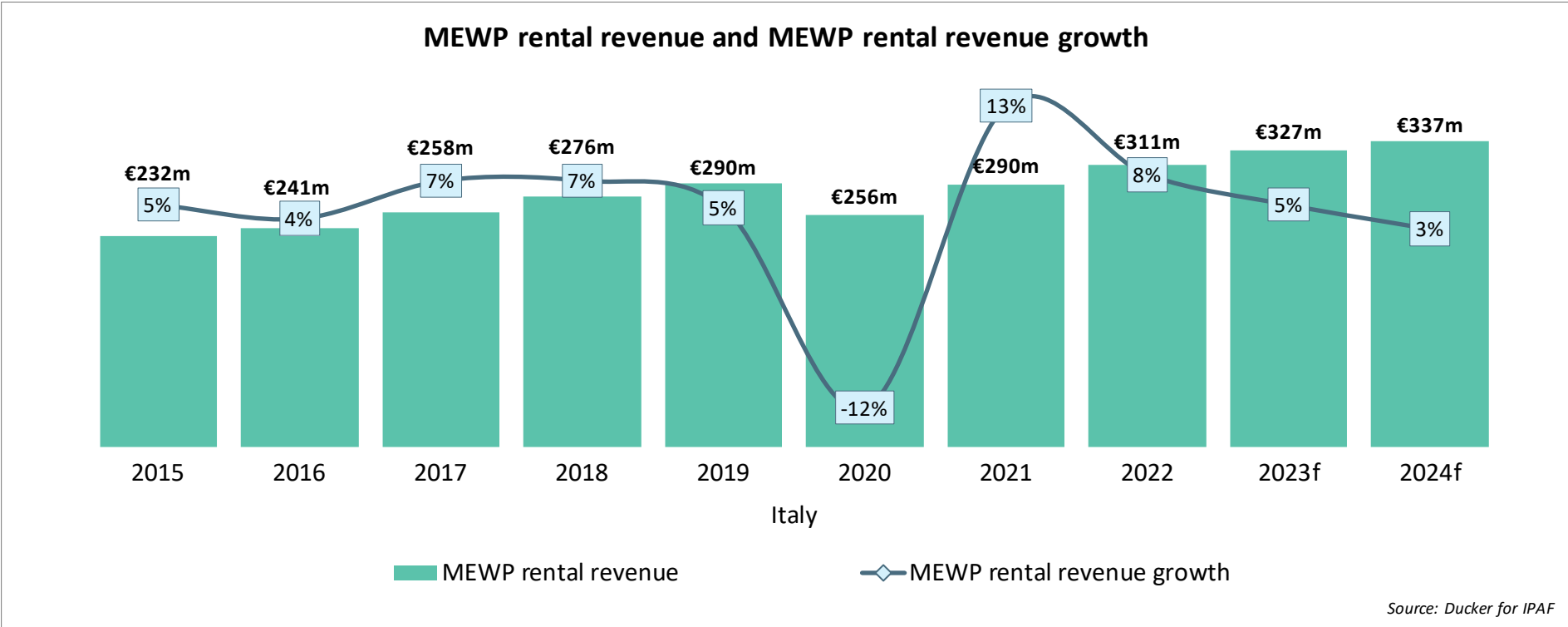


CAGR: Compound annual growth rate



Italy – rental market value and growth

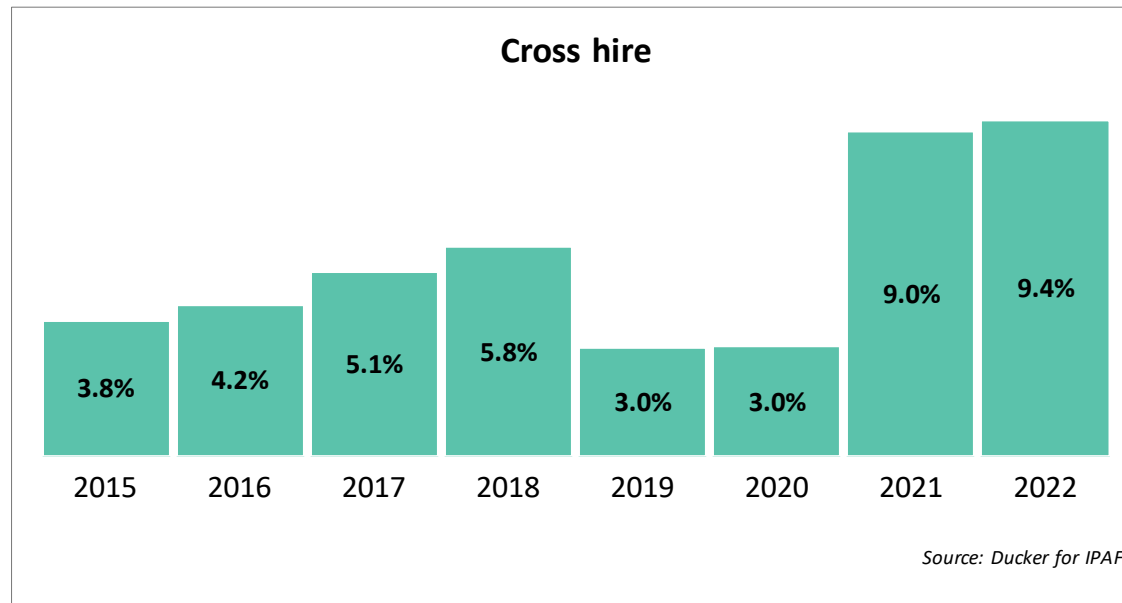
Rental market value grew by eight per cent during 2022 and is expected to maintain high growth over the next two years, supported by a positive market outlook and further increases in rental rates. In 2022, revenue exceeded pre-pandemic levels, driven mainly by a resumption of business activity in the first half of the year. Looking at 2023, rental companies are optimistic in their expectations, with the market as a whole forecast to generate €327million in revenue by year's end.



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In 2022, cross hire remained at similar levels as 2021, owing mainly to high levels of demand, where cross hire helped mitigate some of the gaps in rental company fleets. These gaps were largely the result of the pandemic and subsequent longer-than-usual lead times on delivery of new machines from some MEWP manufacturers.



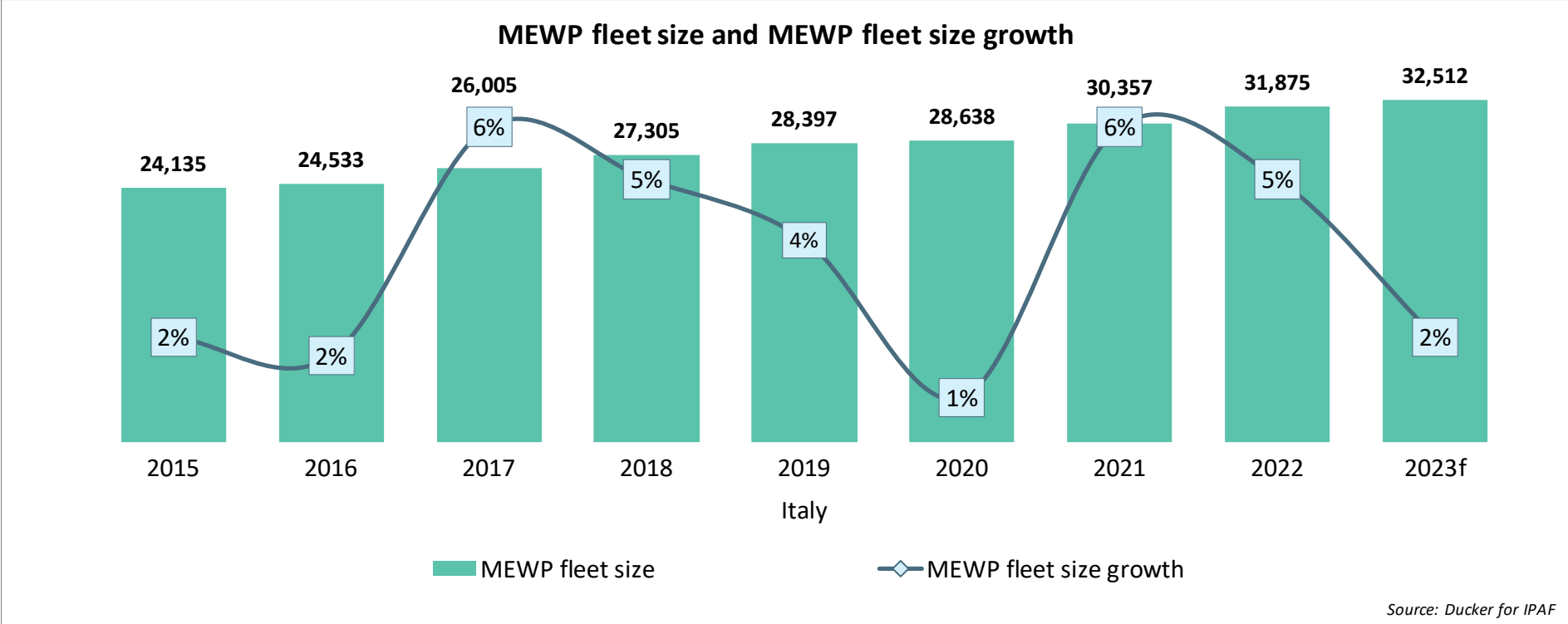
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“We needed to increase the share of cross hire over the past two years, but I would expect this to equally as quickly decrease again as most rental companies increase their fleet to meet the demand. That said, we have also learned that cross hire can be a good solution when needed, so it may persist.” – MEWP rental company fleet manager

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Italy – market size in units

The total fleet size stood at almost 32,000 MEWPs at the end of 2022. Rental companies modified and expanded their fleet in both 2021 and 2022, with a five per cent increase in fleet size across last year. In 2023, fleet is expected to grow further, but at a more moderate pace – perhaps around two per cent (amounting to about 700 units in total). As in 2021, the growth of the Italian fleet during 2022 led to increased investment in Chinese-manufactured MEWPs.



Included: All booms, scissor lifts and vertical masts

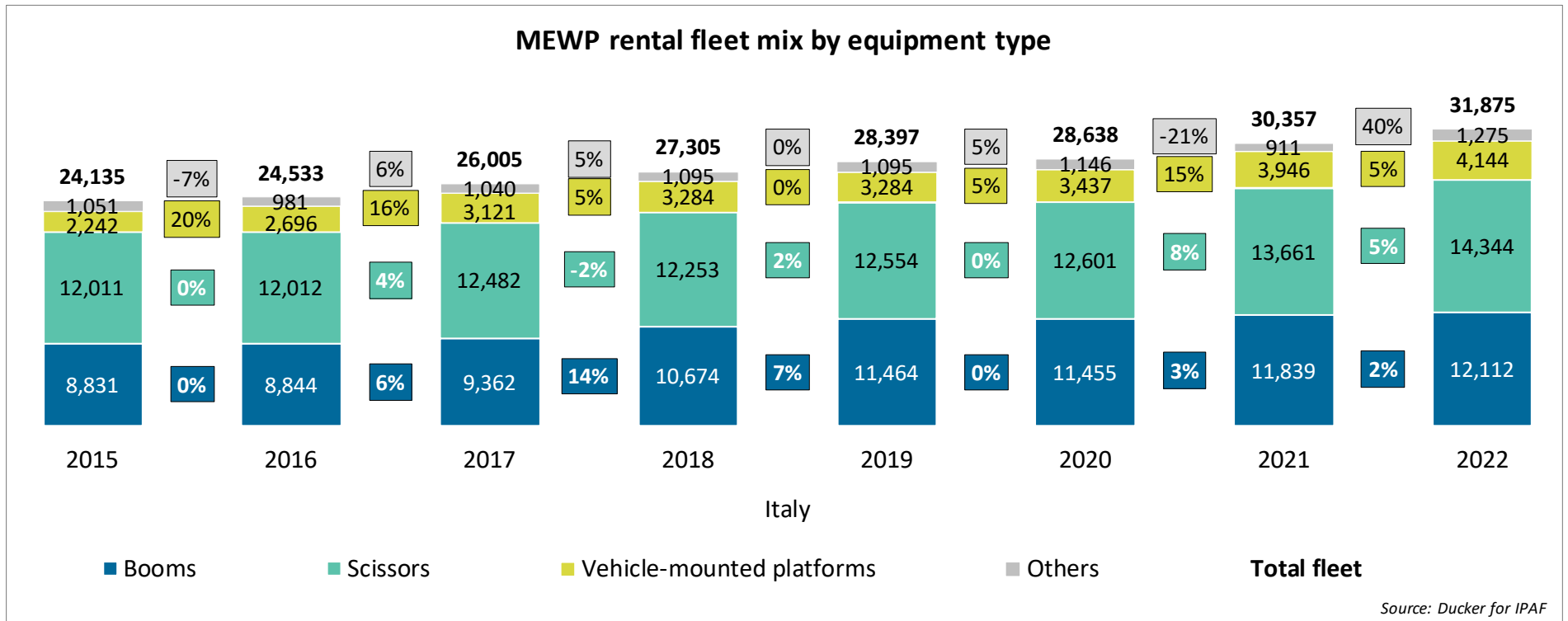
Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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Italy – market size in units

All MEWP categories grew within the total fleet in 2022, albeit at varying rates. Overall fleet mix underwent little change. Both scissors and vehicle-mounted platforms increased by five per cent, and strong growth rates were reported for vertical masts and spiders, which in turn led to the category of “others” increasing by 40% across the year.



+X% % unit growth, eg booms fleet increased by 2% from 2021 to 2022.

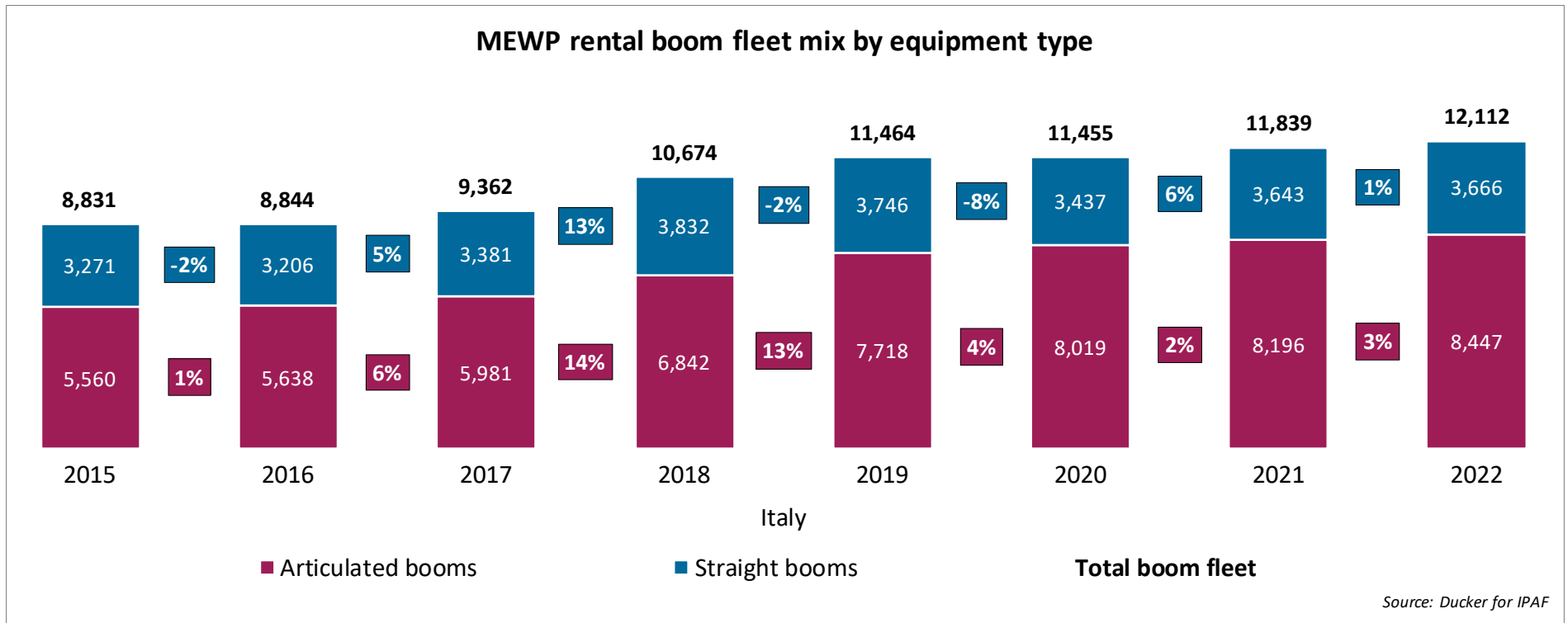
Others include: Vertical lifts, vertical masts, push-around verticals, trailer mounted/towable.

Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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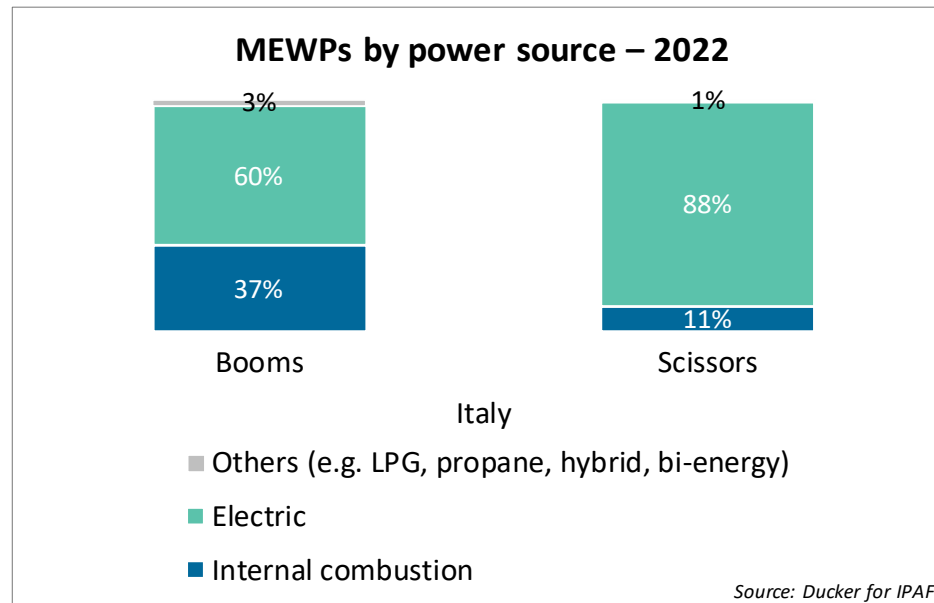
Italy – market size in units

Total boom fleet increased to almost 12,000 units, with both boom categories growing during 2022, albeit at differing rates. The current ratio between articulated and straight booms in the Italian fleet stands at 70:30. Thanks to increasing demand for articulated booms in recent years, this segment has grown at a faster pace, although with several Chinese manufacturers releasing large straight booms on to the Italian market, the rate of increase of this type is expected to increase in 2023-24.



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Like most other European countries under study, Italian rental fleets are switching over to electric power sources. Rental companies remain committed to switching to greener technologies over the next few years, but higher investment costs, especially for equipment over 20m in outreach, are proving a drag on rental companies making a quick transition, as many customers are not willing to pay a premium. As at end of 2022, 37% of booms and 88% of scissors were electric-powered.



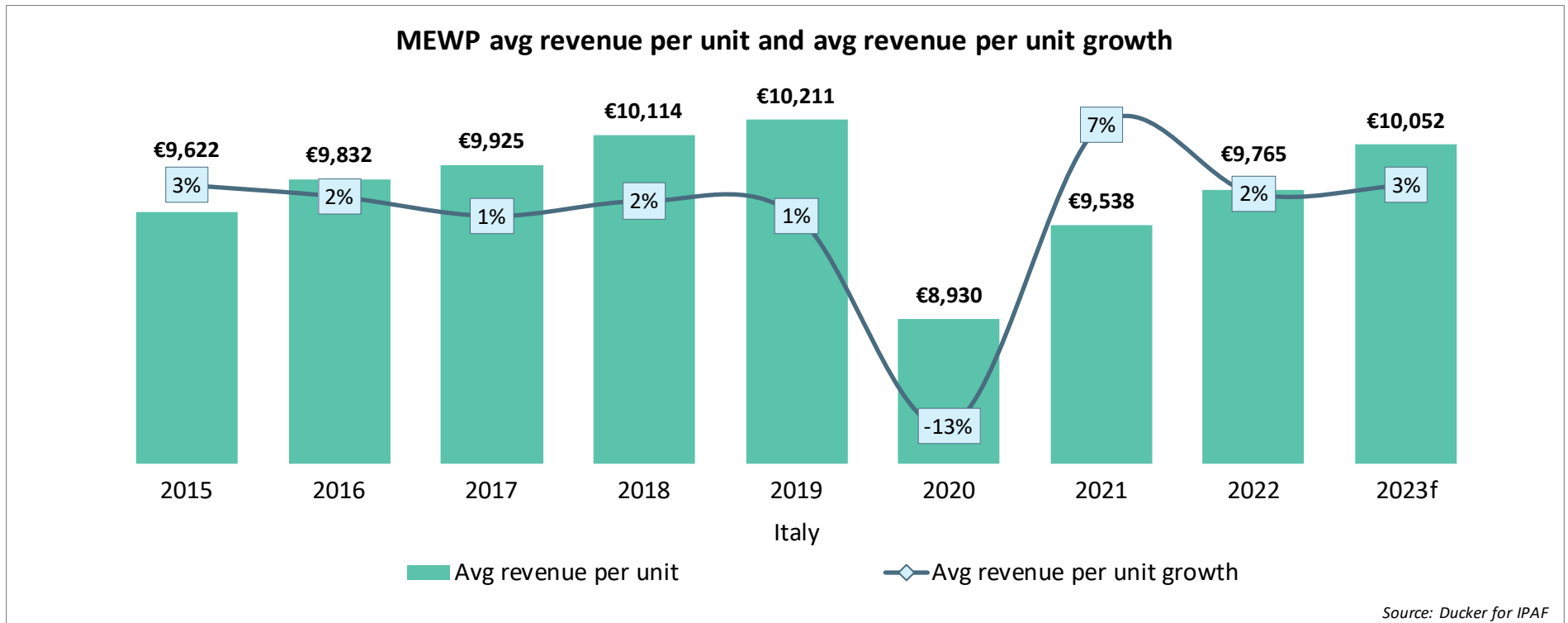
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“Last year, we developed much of our fleet towards truck-mounted and hybrid (increasingly bi-energy) equipment. This year, we remained consistent in directing investment into that same goal of greening our fleet.” – MEWP rental expert

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Italy – revenue per unit

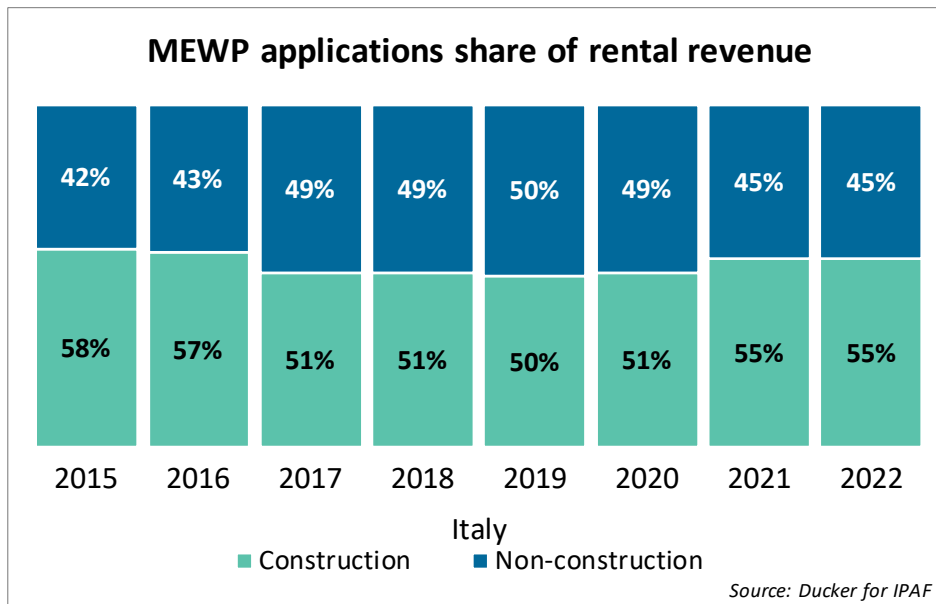
Average revenue per MEWP unit in Italy in 2022 stood at €9,765 per year, representing a two per cent increase on the 2021 figure, due to significant increases in average rental rates. Average revenue was expected to further increase during 2023, owing to increasing rental rates and steady demand across all end-use sectors.



Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

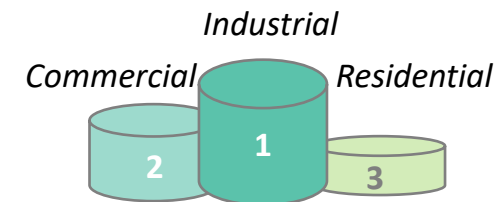
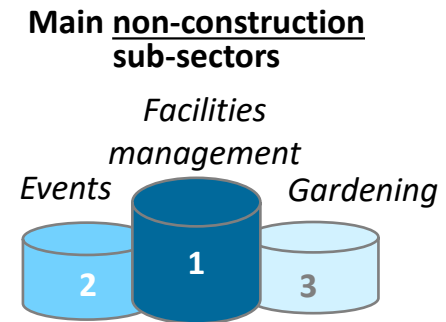
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Renovation activity in construction in Italy resumed in full during 2022, especially in the residential sector, helping maintain the overall sector's contribution to Italian MEWP rental revenue at around 55%. However, rental companies are exploring new opportunities in logistics and warehousing applications to win new business, stabilise utilisation and negotiate better rental rates over the next few years, so we could expect to see the share of non-construction end-uses increase as a whole.

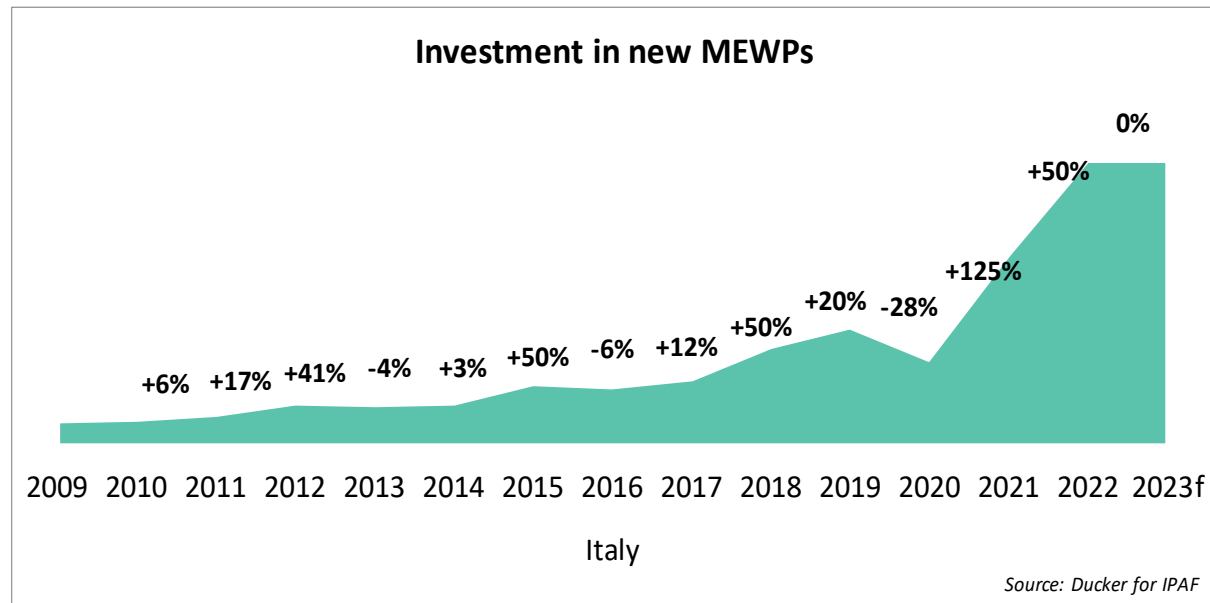


Non-construction activities include industry, maintenance, cleaning, utilities and events.

Construction includes new-build and renovation; including residential, commercial, retail and industrial.



In 2022, the share of used MEWP purchases continued increasing after the market bounced back from the pandemic during 2021. Investment in new MEWPs increased by around 50 per cent in 2022, with rental companies eager to invest in fleet expansion capitalising on the increasing availability of new inventory from MEWP OEMs. Investment volume is expected to grow further in 2023, as rental companies continue their transition towards cleaner energy sources through fleet renewal.



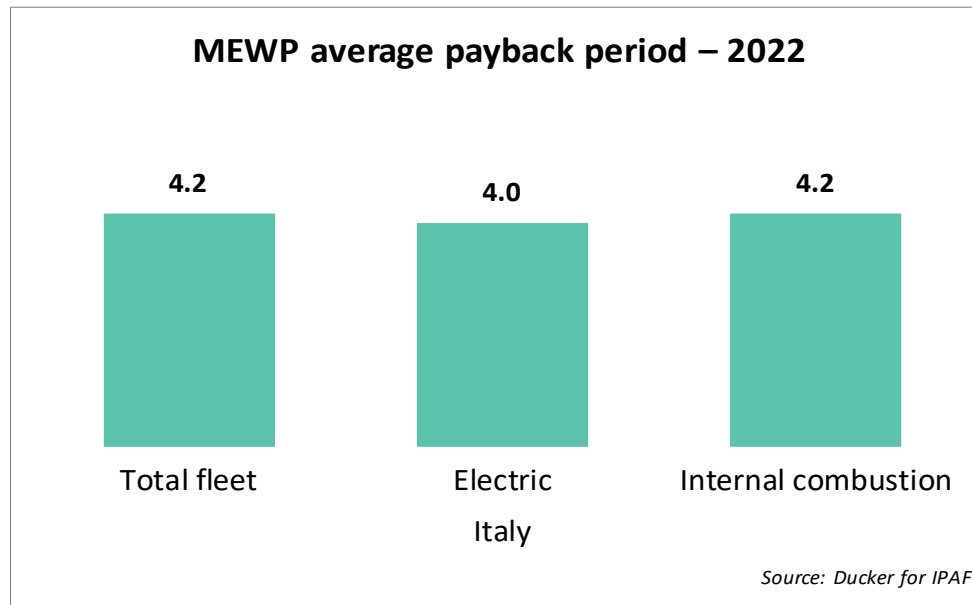
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“We are diversifying our fleet to be able to advance in new sectors, while at the same time we don’t want to lose market share. Hence, a focus of our business is to expand the fleet where we can.” – MEWP rental company purchasing manager

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Italy – typical payback period

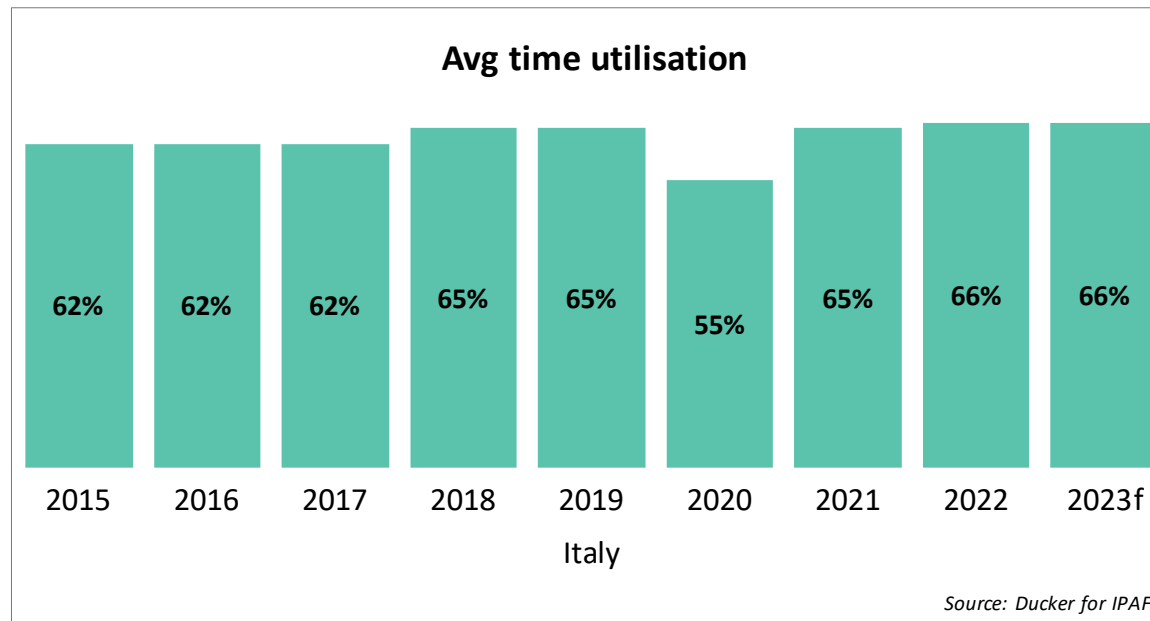
The average MEWP payback period for total fleet as well as each power source individually remained broadly stable across 2022 when compared to previous years. Electric MEWPs on average offer a shorter payback period, owing to better average rental and utilisation rates as well as increasing end-user demand. Increased MEWP purchase prices are expected to marginally affect the average payback period across 2023.



4.2 = 4 years and 2 months

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In 2022, utilisation rates rose slightly, by around one per cent on average, owing to healthy levels of activity in construction – especially in domestic renovation – and expanding activity in non-construction sectors. In 2023, rental companies expect utilisation rates to remain steady, as fleets have grown by 10% over the past two years and demand remains constant.



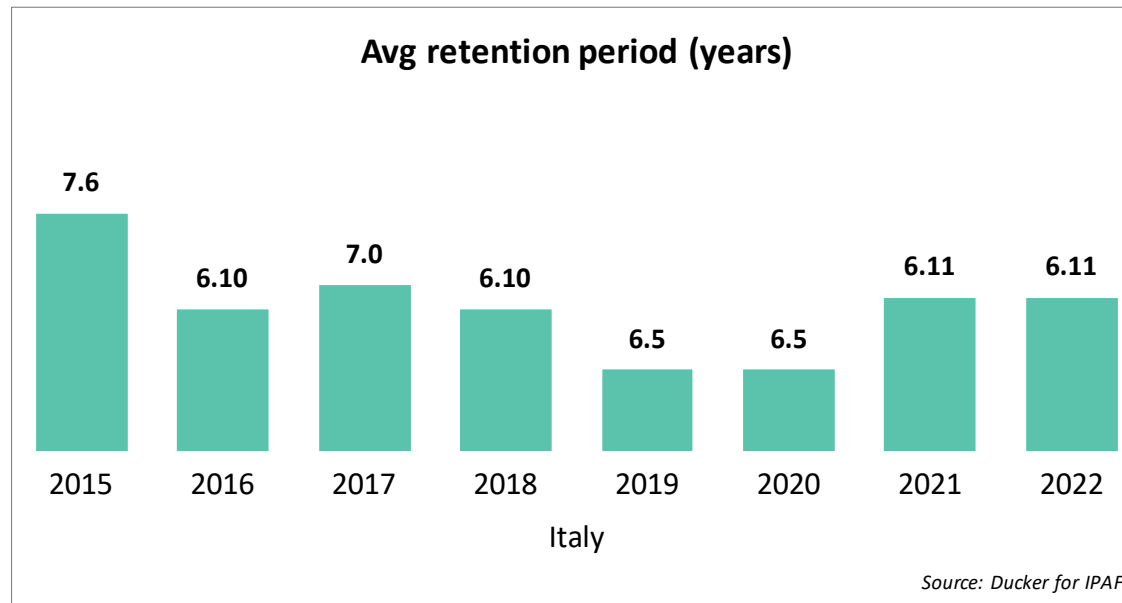
Utilisation of largest MEWP groups in 2022: scissors: 67%, booms: 65%.

Average utilisation is defined as a physical number of machines out on hire as % of total number in fleet at any given time.

“The trend is to work with the existing machines in the fleet and money is spent to keep them functional and safe, which is why utilisation rates are increasing. It naturally follows that if a fleet does not increase as much as demand for machines, then each MEWP will be used more, driving up utilisation rates.” – MEWP rental company manager

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Average retention period held steady in 2022, after an increase of four months in 2021. This means that MEWPs spend on average six years and 11 months in Italian fleets. Lead times on new OEM MEWPs have recovered slightly, but rental companies only partly focused on fleet renewal and, owing to high levels of demand, fleet expansion was prioritised.



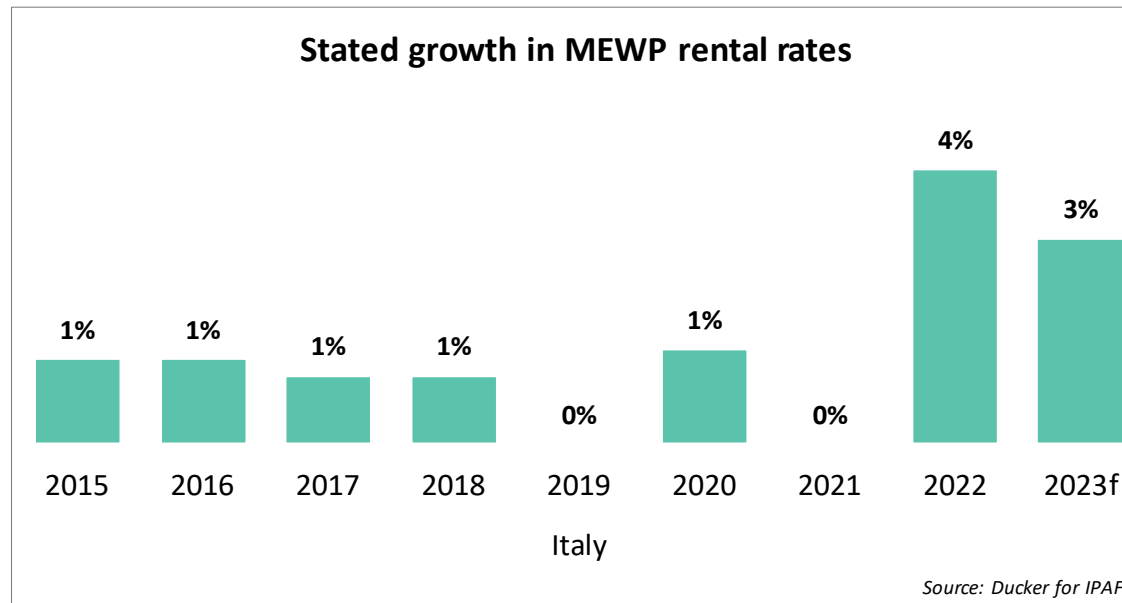
6.11 = 6 years and 11 months

Average retention is a period of time that a machine is kept in fleet = selling age if acquired new.

“We have partly expanded our fleet, but have been also investing in substituting expensive equipment, rather than in buying new equipment. This is why we have fewer machines than we forecast we would have back in 2021.”
– MEWP rental company fleet manager

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Rental rates rose by around four per cent in 2022, owing to growing demand and increasing prices, with further increases expected across 2023. In 2022, the market saw average rental rate increases, owing to high levels of demand and overall lower availability of equipment. Most rental companies have been able to revise their prices upwards, counterbalancing increased prices of new equipment. In 2023-24, rental rate increases are expected to remain, owing mainly to inflation.



“

“There’s been a rapid increase in the past year owing to high levels of demand; 2023 is set to be lower as rental rates have certainly consolidated – there will also be more equipment and less market demand.” – MEWP rental company manager

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A PERSPECTIVE FROM THE EDITOR OF
ACCESS INTERNATIONAL MAGAZINE
IPAF Powered Access Rental Market Report 2023
Italy

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According to Off-Highway Research's Global Market Review the strongest growth in global construction equipment sales of 2022 was in the larger markets of Southern Europe – most notably Italy, which saw sales rise by an impressive 18%. To put that in context, construction equipment sales across Europe rose by just 4% in 2022 to 216,861 units.

The Committee for European Construction Equipment's (CECE) 2023 annual report says Italy was the strongest market in Europe in 2021, with growth in output at 12.1%, followed by another exceptional year in 2022, with activity levels reaching close to the peak levels achieved in 2007. Substantial public resources, including tax incentives such as the Superbonus and Industry 4.0 as well as funds from the national recovery plan, supported activity.

However, CECE forecasts that in addition to soaring prices within the sector, 2022 construction will cost 15% to 20% more than in 2019 according to official sources, while inflation has also begun to affect house prices and demand levels.

Nevertheless, overall growth in equipment output in Italy is expected to remain positive at 0.9%. This reflects a mixed performances across the sectors ranging from -9% for residential repair and maintenance to +41.7% for new public works.

From 2024, the market is forecast to slow significantly. Total investment is forecast to decline by 7.1%, and residential repair and maintenance to decline by 22.6%. Incentive schemes have been the main driver for construction work, but these are set to be reduced.

The current strength in the Italian market is reflected by the ambitions of one of Europe's largest generalist rental companies. Kiloutou acquired Aerotecnica, adding three locations in Calenzano, Pistoia and Lucca and strengthening Kiloutou's business in Tuscany. It is the company's fourth acquisition in Italy and brings its presence in the country to 25 branches and 250 staff. It also reflects the gradual expansion of large generalist renters around Europe in markets that have traditionally had more of a domestic rental model. Italy-based spider lift manufacturers have also experienced growth this year as their influence increases globally. For a number of them, the US market is now their largest as the country realises the benefits of the tracked platform.

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For example, Italian spider-lift manufacturer Easy Lift closed 2022 with a 20% increase in turnover and has reported a healthy order book throughout 2023, which includes sold-out production until June this year. Nevertheless, Easy Lift's home country of Italy has become its second largest market after the US, followed by Germany and the UK.

The volume in the Italian market has grown thanks to two trends in the country: Government incentives, related to Industry 4.0, and the growing rental market. The company commented, "Rental is a growing trend also internationally but while in Europe it is a consolidated operating practice, in Italy it has taken hold in the last decade."

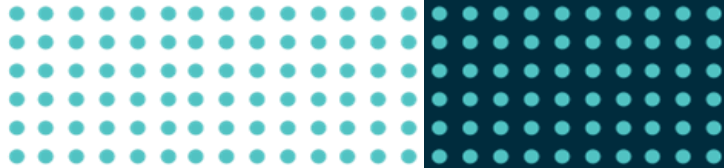
Fellow spider-lift producer Palazzani Industrie is to expand its production capabilities by adding a new factory to its operations, following a steady rise in spider-lift sales over the past few years. The increase in Palazzani's manufacturing capabilities is also thought to reflect the growth of the spider market in North America.

The focus on alternative energy is well understood, but not so simple for truck-mounted platforms. As for spider lifts, Italy is a hub for vehicle-mounted platform manufacturers that increasingly need to provide low-emission models for use in town and city centres.

An example of the approach comes from Italy-based Multitel Pagliero, which will launch a new gas-powered 16.8m working height MXE 170 at APEX this year. It is mounted on a Piaggio Porter NP6 long-range chassis and designed for use in city centres and in work sites with limited space.

In December Comer Industries announced the acquisition of Benevelli Electric Powertrain Solutions and Sitem Motori Elettrici. Both companies are located in the same Emilia Romagna region as Comer – in the heart of Italy's Motor Valley – and are specialists in motors and transmissions for electric vehicles. The consolidation is expected to accelerate the electric-powered vehicle market in Italy.

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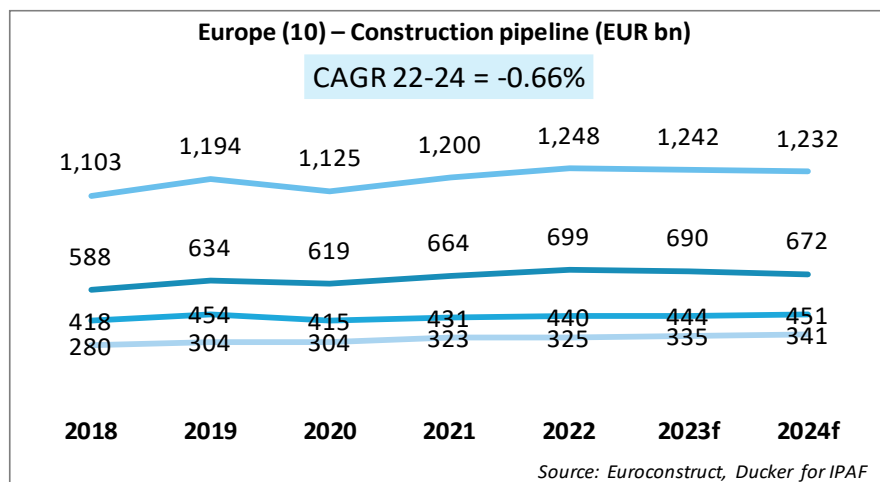


APPENDIX
IPAF Powered Access Rental Market Report 2023
Italy

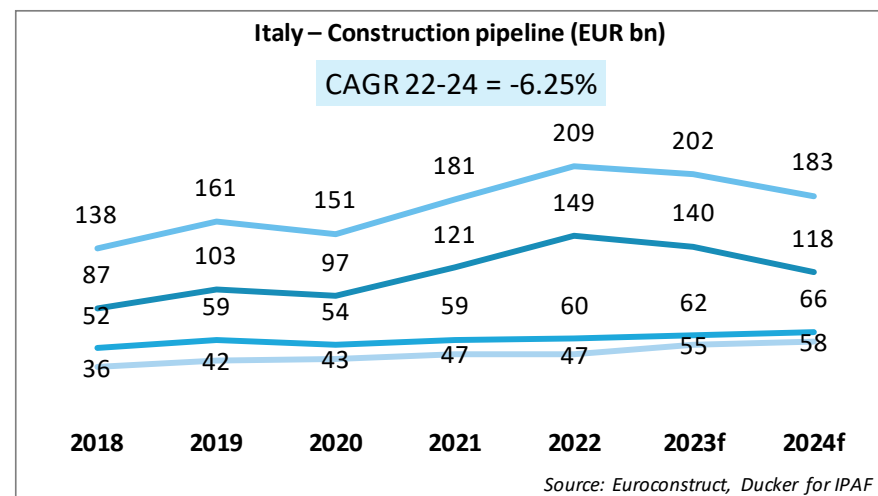
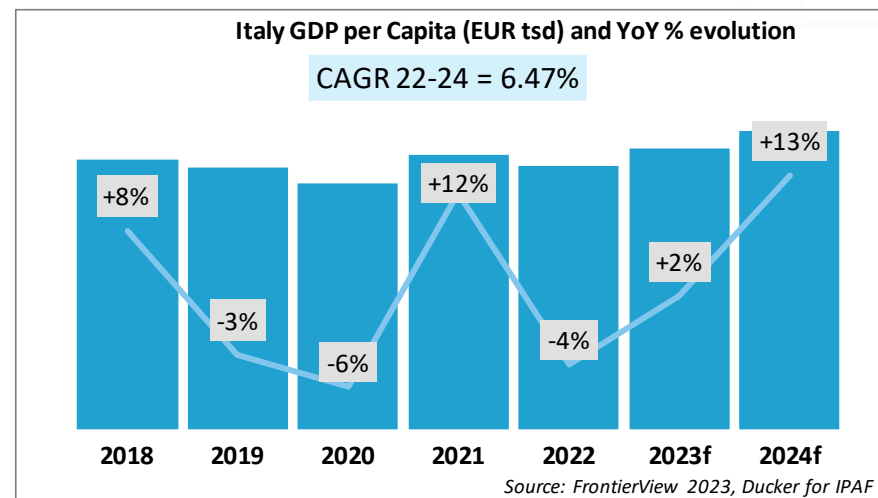
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Italy – construction statistics

The Italian construction sector significantly increased after 2020's drop in activity. Though these rises are expected to slow, activity remains high. After a modest GDP rise in 2021, it levelled off across 2022, with expectations for a return to growth in 2023-24.



- Residential construction
- Non-residential construction
- Total construction
- Civil engineering / Major infrastructure



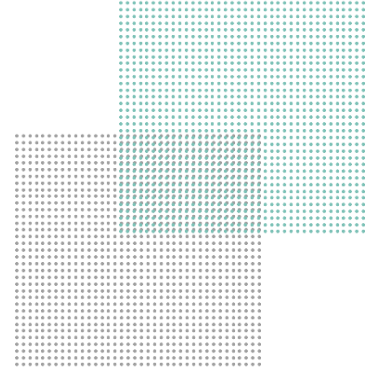
CAGR: Compound annual growth rate

Europe (10) includes Germany, France, UK, Italy, Spain, The Netherlands and the Nordics: Finland, Sweden, Norway and Denmark.

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RESEARCH & CONSULTING



June 2023

IPAF Rental Market Report 2023

COUNTRY REPORT – The Netherlands

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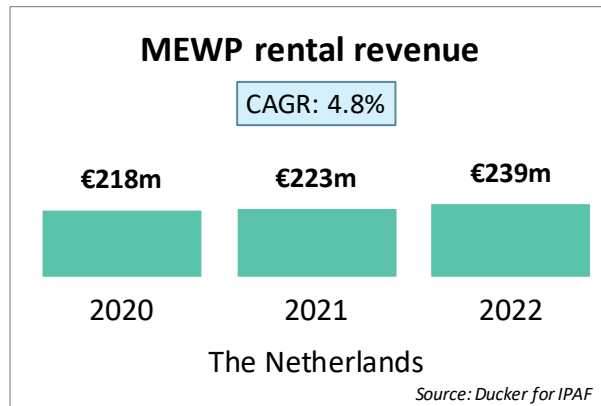
BRONZE
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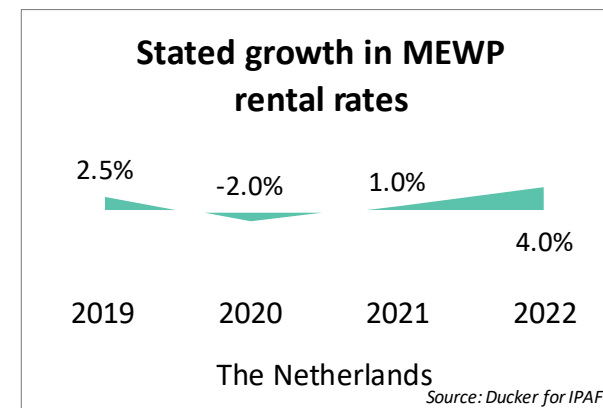
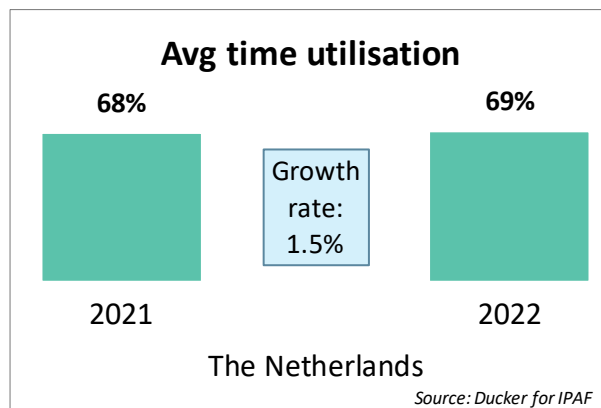
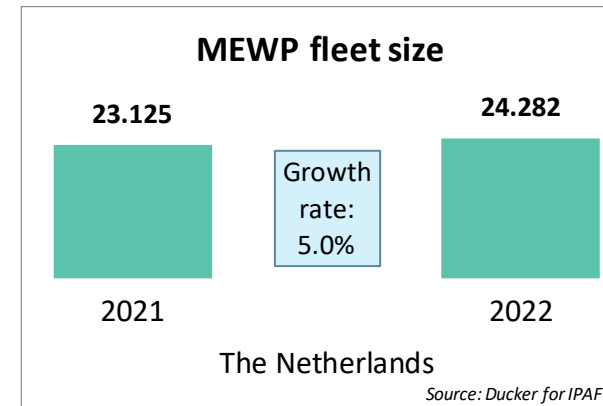
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The Netherlands – key findings

In 2022, the MEWP rental market in the Netherlands seemed to have fully recovered from the pandemic with signs of significant growth. All indicators increased during 2022, revenue growth being driven by expansion of fleet size, along with increases in rental rate and utilisation rate. All indicators reached or surpassed pre-pandemic levels in 2022 and are expected to continue increasing in 2023.



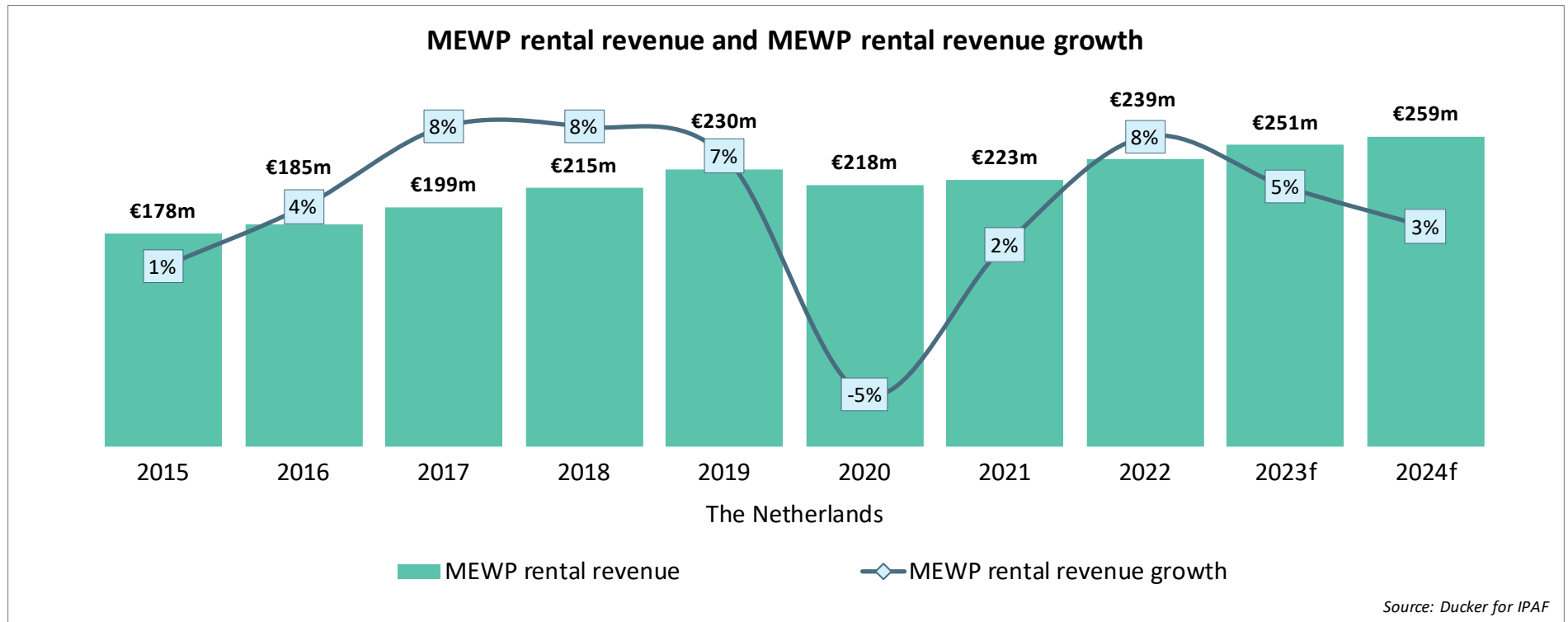
CAGR: Compound annual growth rate



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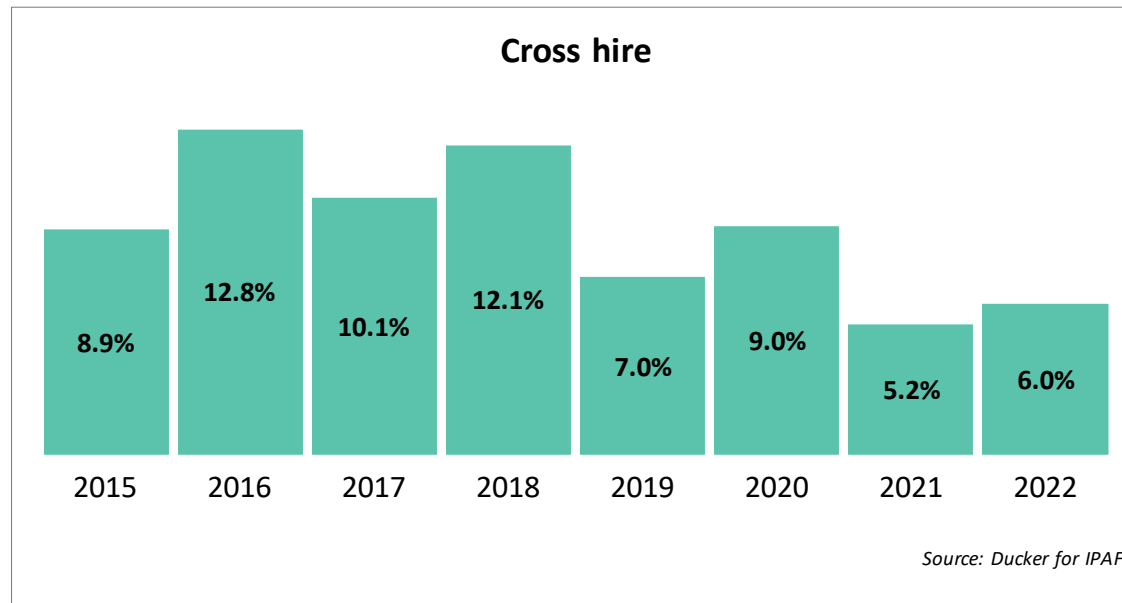
The Netherlands – rental market value and growth

Average MEWP rental revenue in the Netherlands rose by eight per cent in 2022, to exceed pre-pandemic levels. Further growth is expected in 2023 and 2024, owing both to increasing rental rates and high levels of demand. Service charges underwent an increase in 2022 owing to incidental costs increasing.



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Cross hire increased slightly in 2022, owing to growing demand and delays in deliveries of new MEWPs from some OEMs. In 2023, cross hire is expected to increase further, owing to a number of major projects commencing projects in the construction sector.



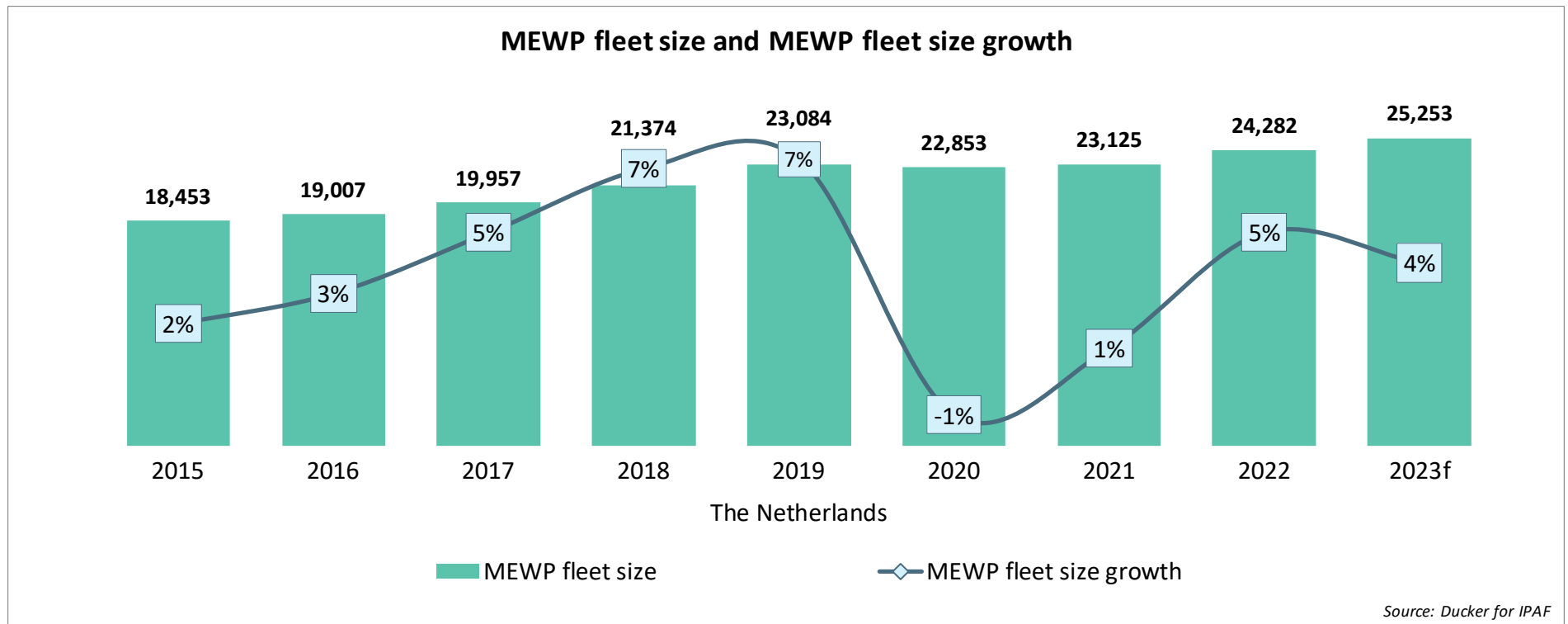
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“Overall cross hiring is at low levels in the Dutch market but might further increase due to the large-scale projects that have started in 2022, which usually increase the need to cross-hire.” – MEWP rental company fleet manager

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The Netherlands – market size in units

Overall fleet size increased by around five per cent in 2022 and is expected to further grow in 2023, as manufacturer lead times are slowly decreasing. The availability of new equipment from some Chinese manufacturers lead to continuous growth, although overall fleet size growth is still being restricted by a lack of available equipment and longer than usual manufacturer lead times on new machines.



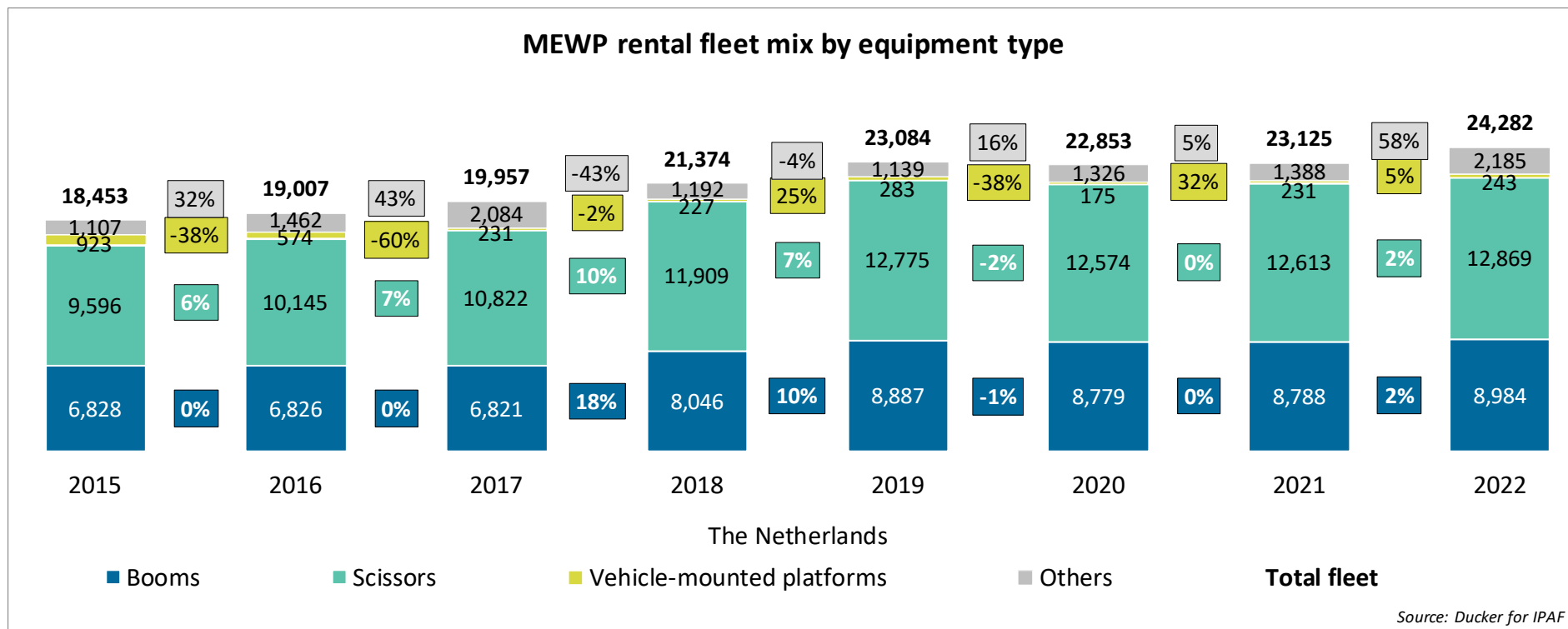
Included: All booms, scissor lifts and vertical masts

Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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The Netherlands – market size in units

All MEWP categories saw an increase in 2022, albeit at varying rates of growth. Medium to long-term, the trend is towards electric-powered equipment, as far as fleet renewal cycle and fleet expansion rates allow. Strong growth rates were reported for vertical masts. The trend to replace older equipment with electric machines continued, though the rate at which the transition is happening is restricted by longer than usual lead times from certain MEWP manufacturers.



+X% % unit growth, eg booms fleet increased by 2% from 2021 to 2022.

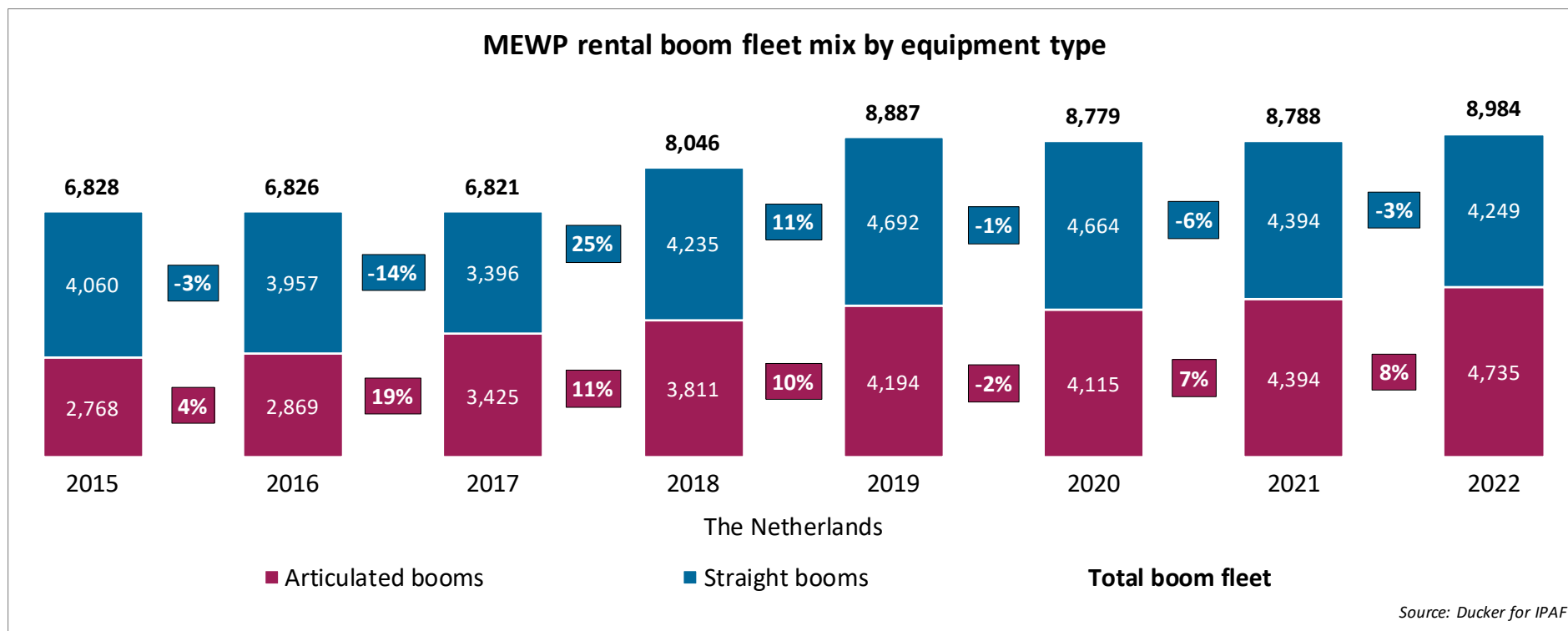
Others include: Vertical lifts, vertical masts, push-around verticals, trailer mounted/towable.

Included powered access lifts: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

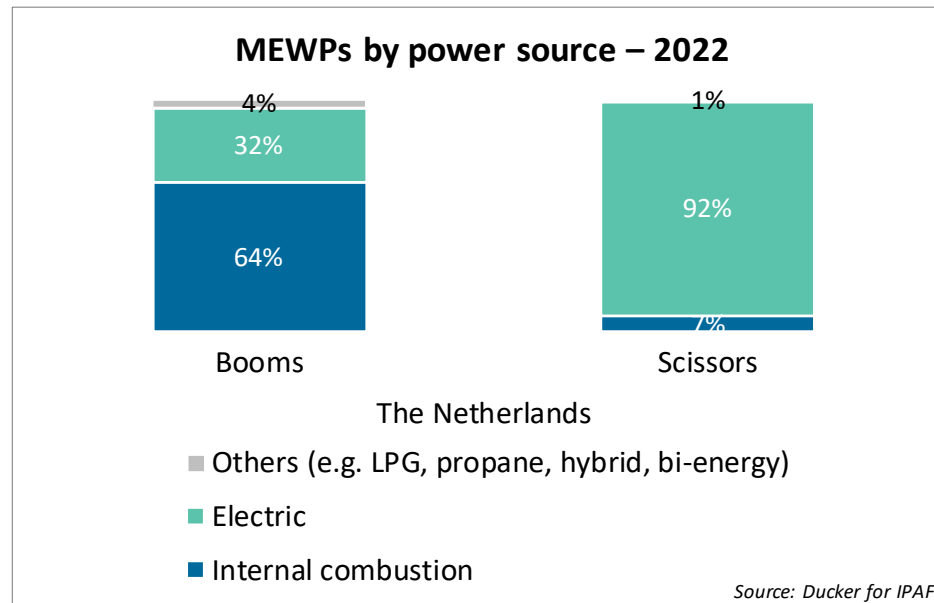
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The Netherlands – market size in units

Total boom fleet increased to almost 9,000 units; while the relative share of straight booms decreased slightly, the share of articulated booms increased by 8 per cent. The current ratio between articulated and straight booms in the Dutch fleet stands at 53:47. Demand for articulated booms, owing to wider usability, in the Netherlands is expected to grow further, exacerbating this shift. Rental companies expect straight booms slowly shifting towards only very large heights.



Transition to electric power sources continued for both main equipment categories in 2022, as MEWP rental companies started to resume their pre-pandemic investment strategies. An increasingly rapid transition was reported in terms of booms. Currently withholding a further increase of electric booms is the lack of technology to power very large booms. Electric MEWPs represent 32% of all booms, increasing by three per cent over 2021. Electric MEWPs represent 32% of all booms, increasing by three per cent over 2021.

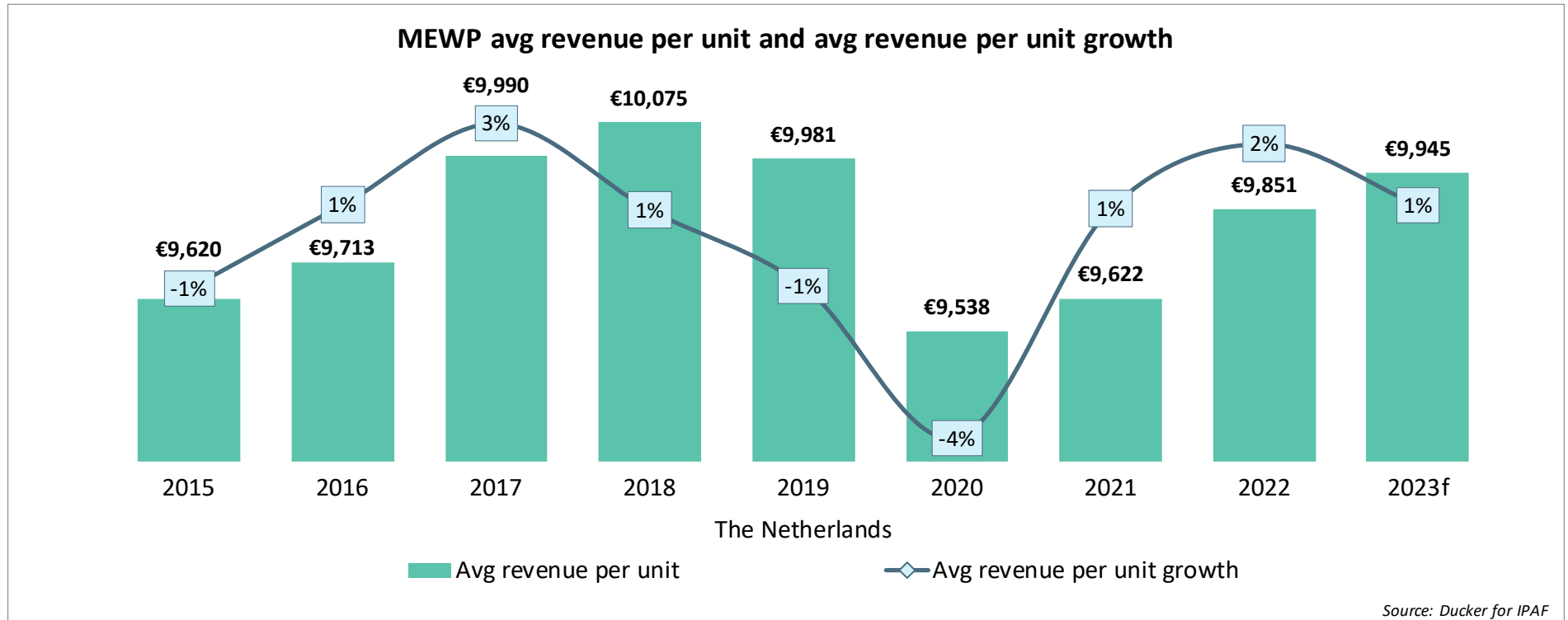


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“Increasing numbers of electric booms are expected in the next five years, developments are showing great potential for larger battery packs.” – MEWP rental company fleet manager

The Netherlands – revenue per unit

Average revenue per unit recovered in 2022 but remains below pre-pandemic levels. It is not expected to exceed €10,000 before 2023 at the earliest. After a drop in 2019 and 2020, average rental revenue has been increasing year on year. With increasing demand and rental rates rising, rental companies expect to reach pre-pandemic levels in 2023, or by 2024 at the latest.

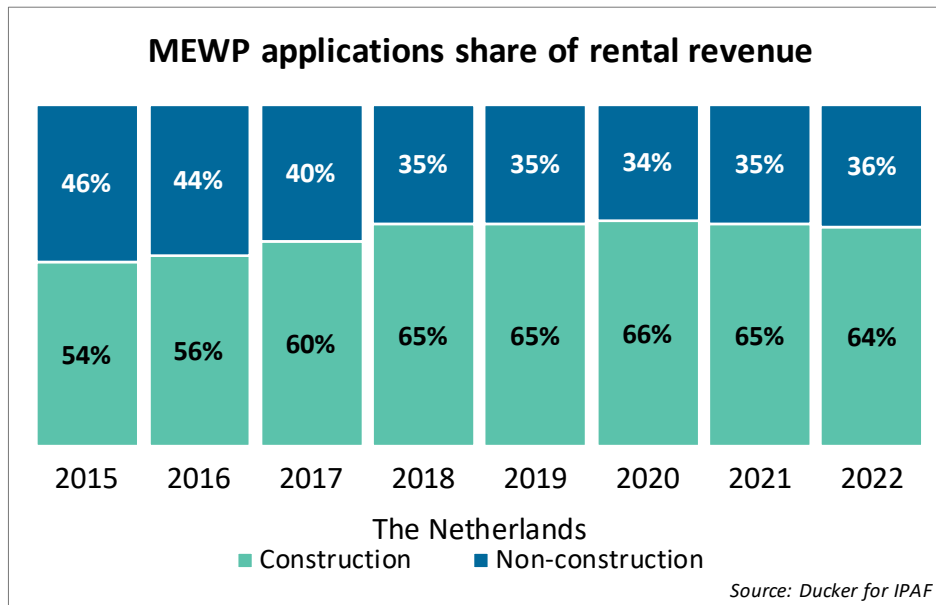


Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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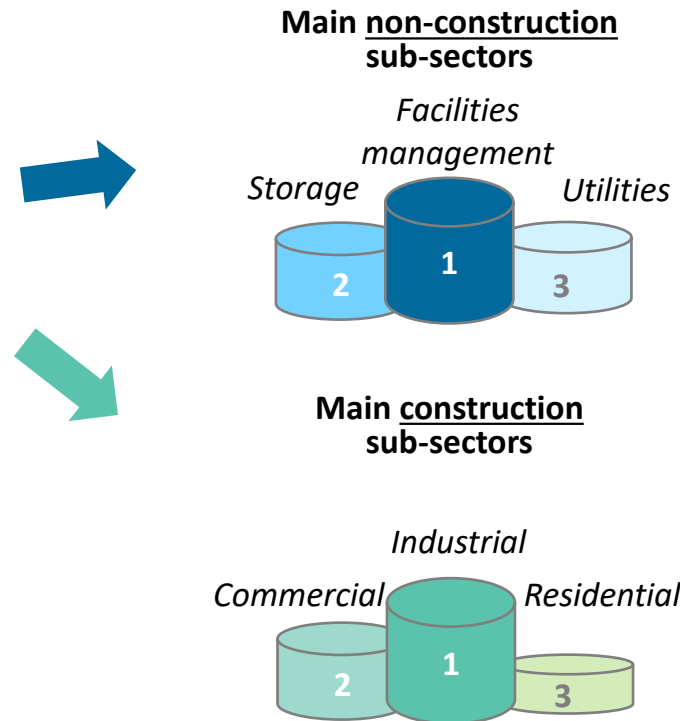
The Netherlands – applications

In 2022, non-construction end uses further recovered, with a peak in demand owing to sub-sectors such as utilities and events increasing activity in 2022, increasing one per cent on 2021 levels. Several long-term multinational construction projects commenced in 2022, causing a positive outlook for several years to come.

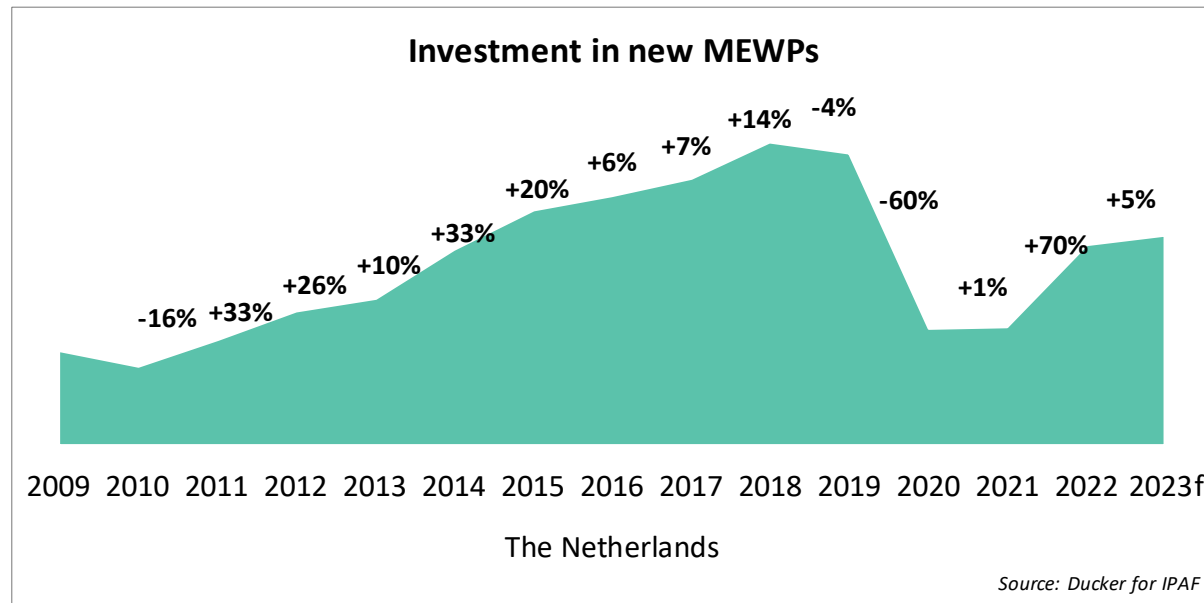


Non-construction activities include industry, maintenance, cleaning, utilities and events.

Construction includes new-build and renovation; including residential, commercial, retail and industrial.



Investment in new MEWPs increased by around 70 per cent in 2022, with rental companies eager to invest in fleet expansion capitalising on the improved availability of new MEWPs. Rental companies invested in fleet renewal and expansion, owing to the generally positive market outlook. Some rental companies held off de-fleeting, while demand is rising there is also a need for MEWPs to be replaced in the coming years.



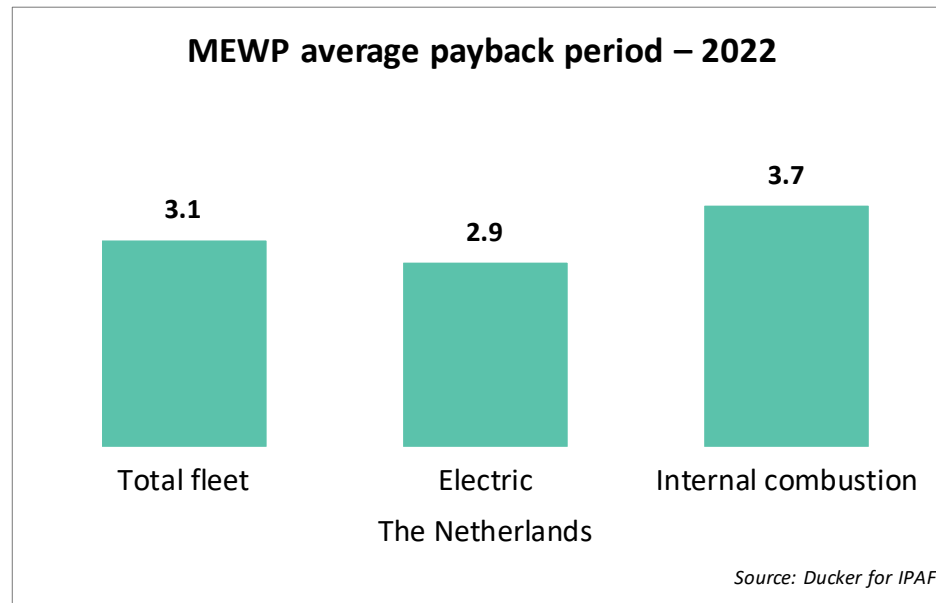
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“Both back order and new purchases were delivered in 2022. Rental companies in return increased their investment or brought forward future investments to capitalize on this influx of available MEWPs. Some backorder remains, and investments will continue to be made in 2023.” – MEWP rental company purchasing manager

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The Netherlands – typical payback period

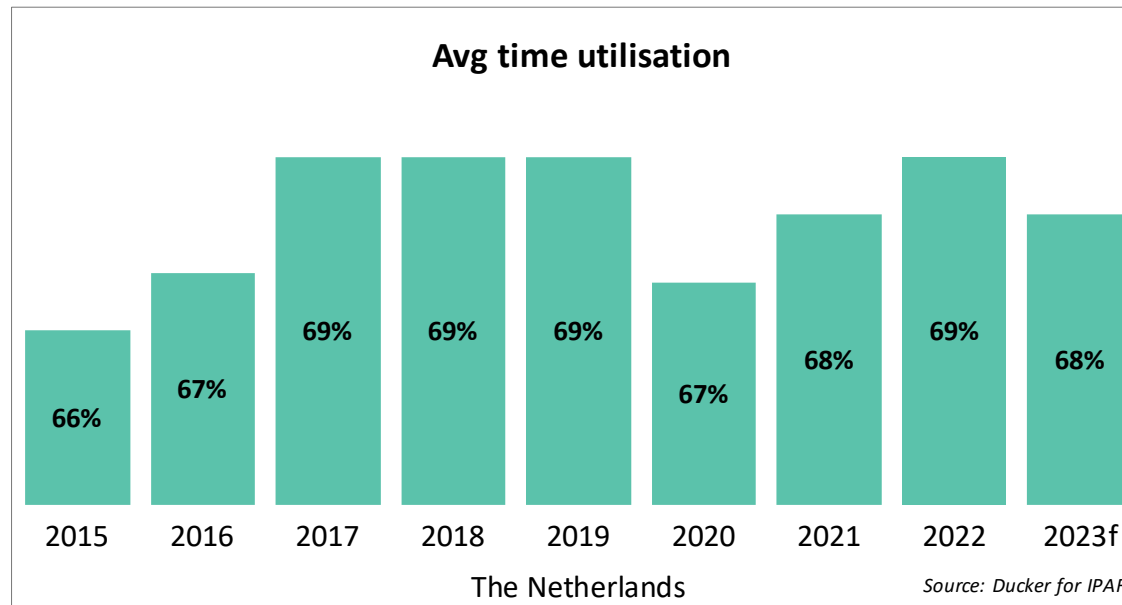
Average payback period for total fleet as well as each power source individually remained stable compared to previous years. Electric MEWPs on average offer a shorter payback period, owing to better average rental and utilisation rates as well as increasing end-user demand. Increased MEWP prices are expected to marginally affect the average payback period in 2023.



3.1 = 3 years and 1 months

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In 2022, utilisation rates rose slightly by around one per cent on average, owing to healthy levels of activity and long-term projects in essential construction, maintenance and a recovering market for events. In 2023, rental companies expect utilisation rate to marginally decrease, as a result of the increase in fleet size.



Utilisation of largest MEWP groups in 2022: Scissors: 70%, booms: 68%.

Average utilisation is defined as a physical number of machines out on hire as % of total number in fleet at any given time.

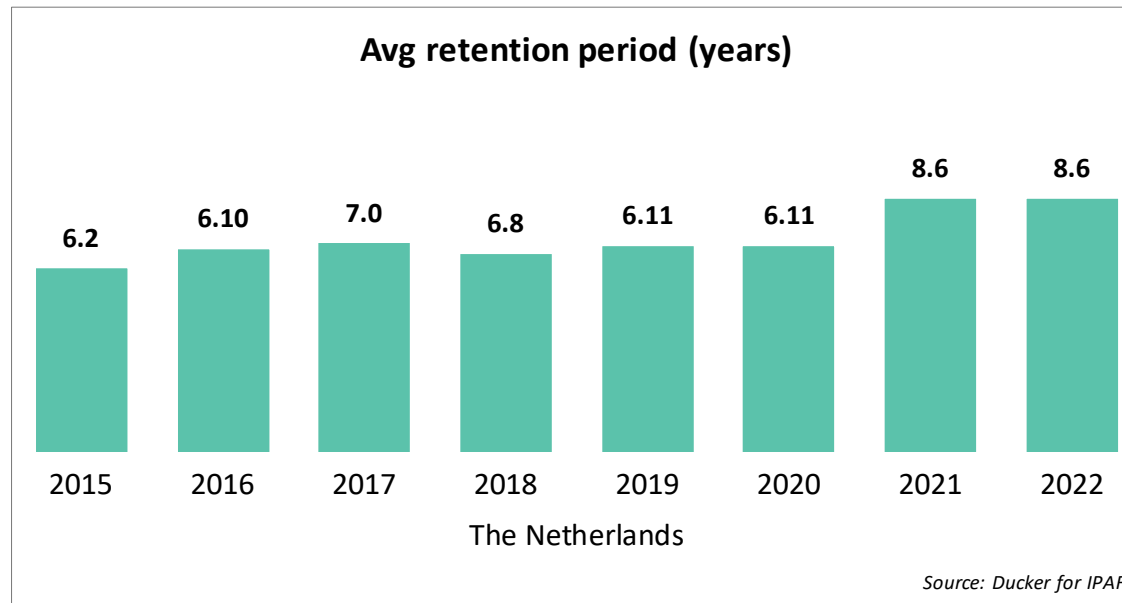
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“With the fleet expansion we had last year I do foresee a slight dip in the utilisation rate, but it shouldn't be too much as we also foresee a lot of projects and opportunities.” – MEWP rental company manager

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The Netherlands – retention period

Average retention period held steady in 2022, after increasing by one year and seven months in 2021. This means MEWPs spend on average eight years and six months in Dutch rental fleets. Lead times recovered slightly, but rental firms remain cautious, meaning retention period is likely to stay at similar levels until OEM lead times return to pre-pandemic levels.



8.6 = 8 years and 6 months

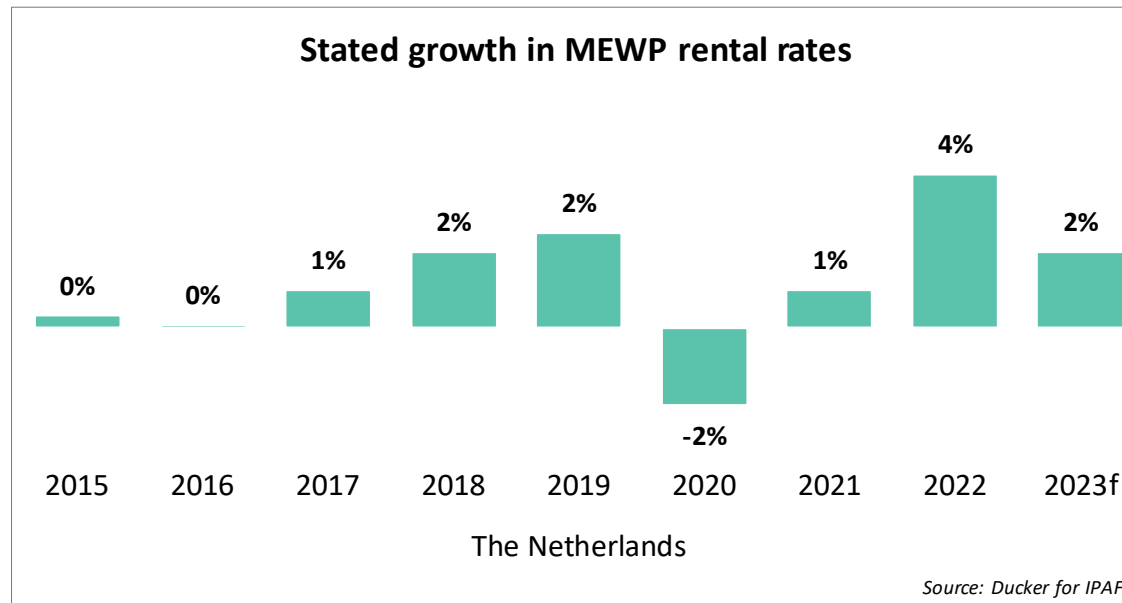
Average retention is a period of time that a machine is kept in fleet = selling age if acquired new.

“Rental companies are reluctant to jettison older MEWPs at the risk of not receiving their new machines in time. MEWP deliveries have increased compared to 2021, but rental companies will most likely keep a higher retention period for several years to come.” – MEWP rental company fleet manager

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The Netherlands – rental rates

Rental rates rose by around four per cent in 2022, owing to rising demand and increasing prices, mostly down to inflationary pressures and increasing MEWP purchase prices. Rental rate growth is expected to continue to rise modestly, to further counterbalance the ingoing impact of inflation.



“

“The level of rental rate increase due to inflation and machines price increases was high this year, the coming years will also slightly catch up with increases, estimating roughly 2-3% in 2023, but hard to know as the market has been fluctuating a lot in the past years.” – MEWP rental company manager

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A PERSPECTIVE FROM THE EDITOR OF ACCESS
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The Netherlands

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The Netherlands association for construction equipment suppliers (FMIB) indicate in its latest report that the construction sector experienced a slowdown in 2022, following a significant increase of market demand over the past four or five years.

Mid-sized rental equipment remains one of the strongest drivers, according to the FMIB, with compact rental equipment showing relatively weak growth in comparison. Although, it added, there is strong demand for zero-emissions machines in the country. For 2023, FMIB's forecast is for a 2% growth across the Netherlands economy, and on the equipment front indicators show there is an appetite to purchase machines.

Demand for raw materials for the construction sector is set to remain stable throughout the year, while the shortage in residential housing will potentially lead to growth in this sector too, says the FMIB.

The Netherlands is a hub for production and parts facilities, thanks to its convenient sea transport links, and notably China-based manufacturers seeking to grow their presence in Europe have chosen the country as a base. One feeling is that due to the tariffs introduced by the US Government on Chinese-produced access equipment, there has been a greater concentration by those companies on selling into Europe.

In April this year, LGMG Europe officially opened its new production facility in the Netherlands, which it says is 10 times larger than its previous site in Spijkenisse. LGMG will introduce 10 new equipment models to its product portfolio later this year and a new enterprise resources planning (ERP) system has been implemented at the plant, allowing it to increase the availability of products, spare parts and service.

While starting production at its major new factory in Poland during the second quarter last year, Sinoboom BV retained its headquarters in the Netherlands. New equipment produced at the manufacturing site is being put through the customary PDI at the Netherlands HQ.

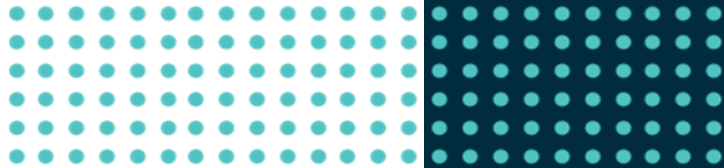
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Thanks to its international sea links, the Netherlands remains an important base for longer-standing companies in the European market too. Kubota, alongside its partner Broekman Logistics, opened a new 62,000 square-metre distribution centre in Weert in April. The warehouse features an optimised layout of logistics and assembly operations, which the company says will shorten lead times and facilitate future growth for Kubota.

Peter Schrader, Zeppelin Rental's Germany-based COO, recognises the Netherlands as a leading light for environmentally friendly initiatives. Schrader says: "Outside Germany, in 'progressive' markets such as the Netherlands and Scandinavia, governments are enshrining low emissions in regulations, in some cases supporting those strictures with subsidies to encourage uptake."

Indeed, the Netherlands was the first country to have introduced limits on embodied carbon in new construction via building regulations. Since 1 January 2021, permits for all new types of construction, both residential and non-residential, have to meet requirements for Nearly Energy-Neutral Buildings (BENG).

Low-emission products will be a major focus at APEX, the international exhibition for access equipment, taking place in Maastricht in June 2023. Because of the Covid-pandemic, it is the first time since 2017 that the usually three-yearly show will take place. The show is collocated with the International Rental exhibition (IRE). Green energy and digitisation will be two focuses of the world's largest dedicated exhibition for access equipment, as well as at IRE.

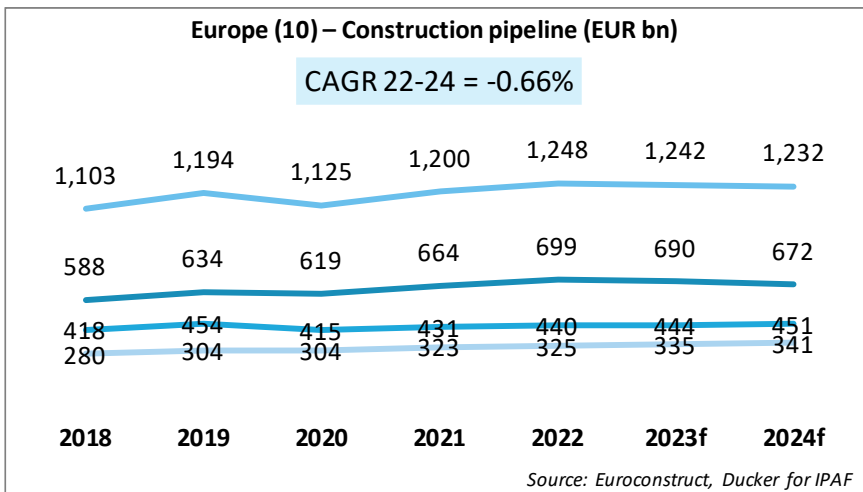


APPENDIX
IPAF Powered Access Rental Market Report 2023
The Netherlands

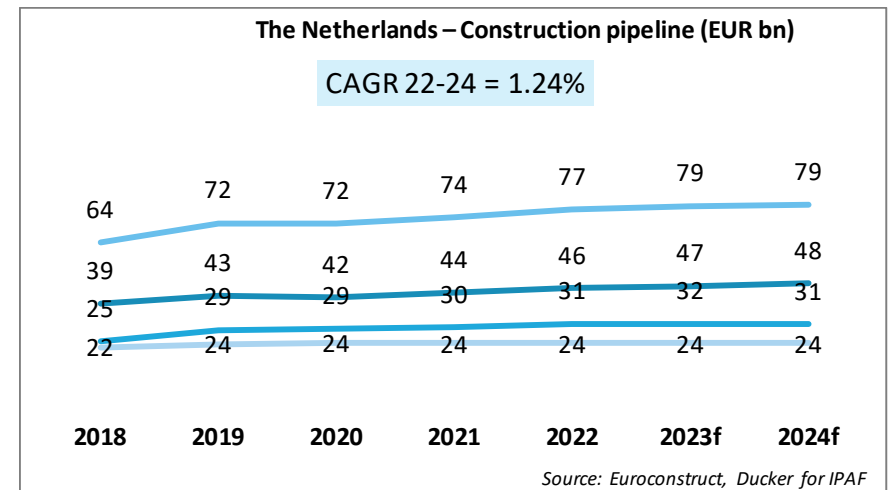
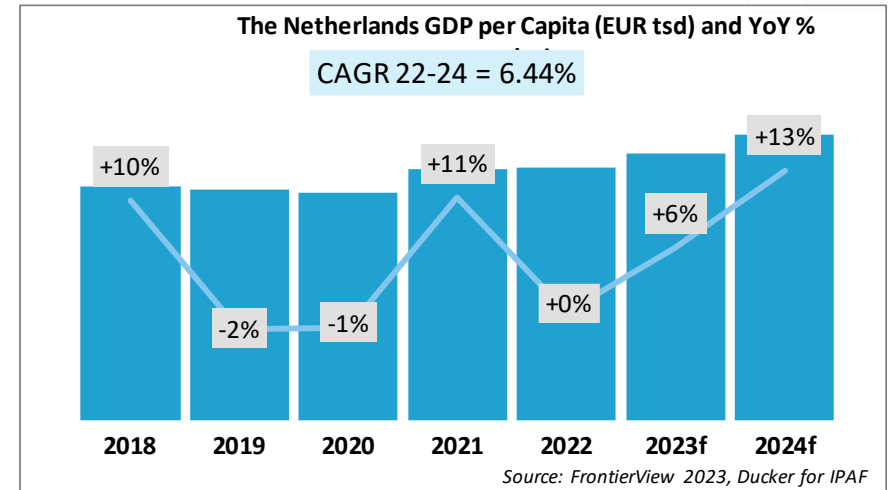
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The Netherlands – construction statistics

The Dutch construction sector stagnated during 2020, but started its recovery in 2021 and continued increasing in 2022. Overall GDP slightly decreased in 2020, with a strong recovery in 2021, remaining stable in 2022, and with strong growth expectations reported for both 2023 and 2024.



- Residential construction
- Non-residential construction
- Total construction
- Civil engineering / Major infrastructure



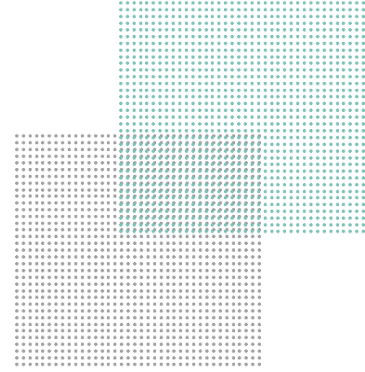
CAGR: Compound annual growth rate

Europe (10) includes Germany, France, UK, Italy, Spain, The Netherlands and the Nordics: Finland, Sweden, Norway and Denmark.

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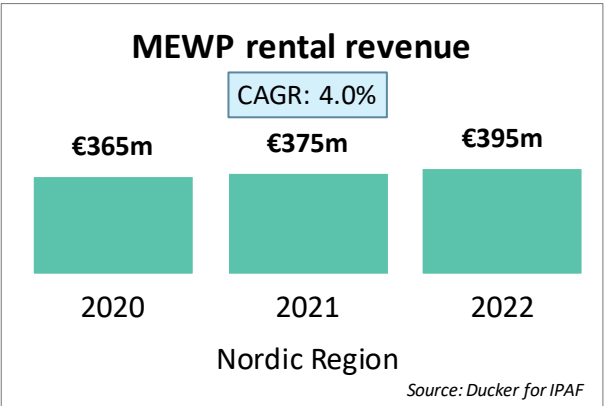
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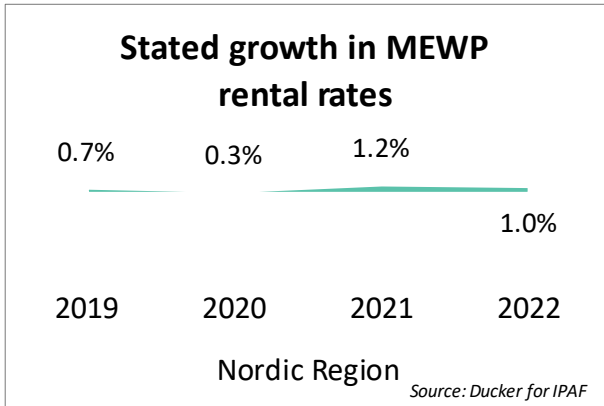
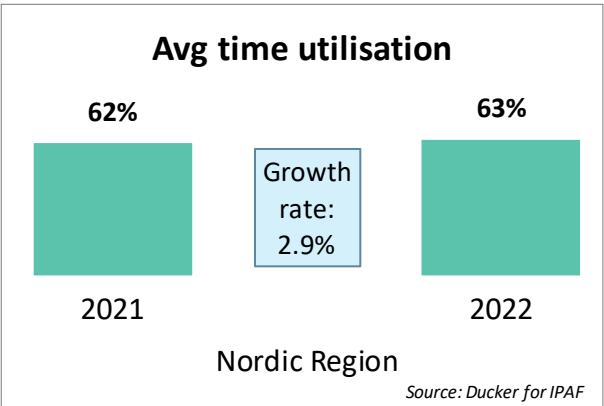
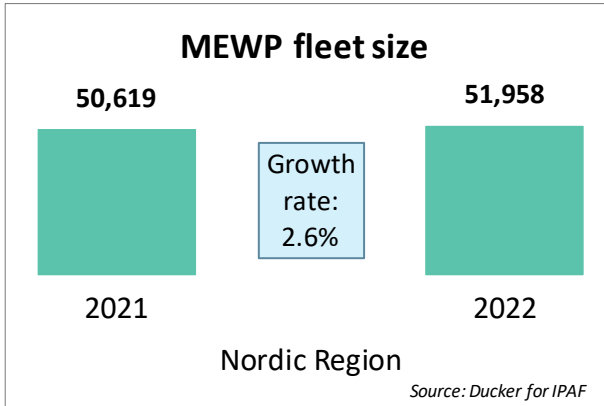
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Nordic region – key findings

In 2022, the MEWP rental market in the Nordic region experienced growth across all main indicators and with healthy levels of activity overall. All indicators increased during 2022, revenue growth being driven primarily by an expansion of average fleet size, along with increases in both utilisation rate and rental rate. All indicators reached or surpassed pre-pandemic levels in 2022, and are expected to further increase in 2023.



CAGR: Compound annual growth rate

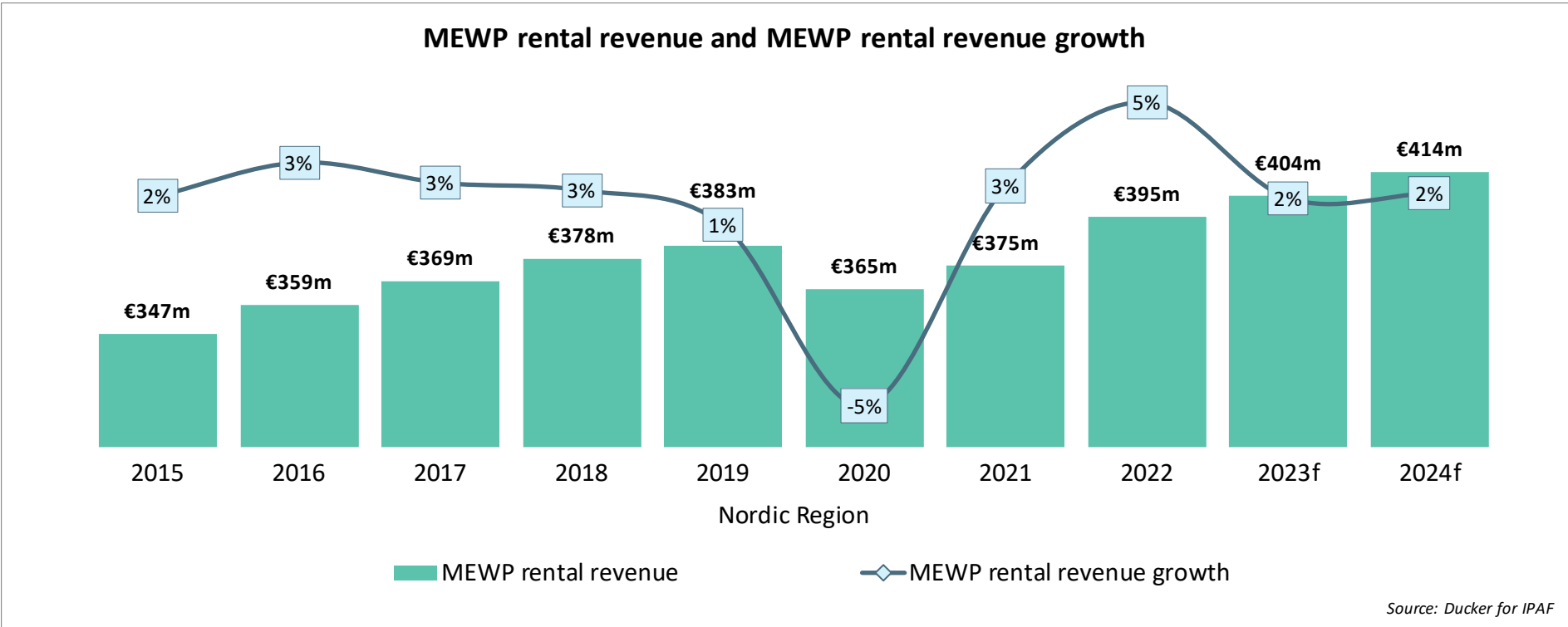


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Nordic region – rental market value and growth

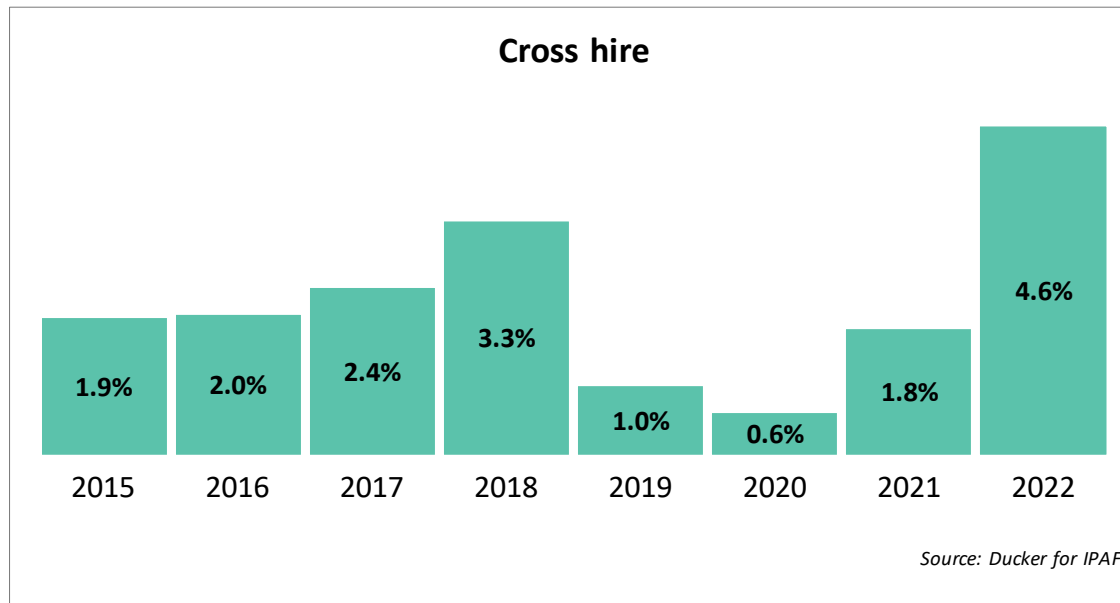
In 2022, the region recovered further with an overall growth of five per cent. Norwegian and Finnish MEWP rental markets grew at eight and six per cent respectively, increasing by four per cent over 2021. While Sweden, Norway and Finland have surpassed pre-pandemic revenue levels, Denmark is expected to reach pre-pandemic levels by the end of 2023. Rental revenue and overall market has been impacted by a high level of consolidation, which is driving market dynamics.



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The level of cross hire further increased by almost three per cent in 2022, as rental companies expanded activity to reach new customers and in so doing needed access to a broader range of machines than they would normally hold in their own fleet. Additionally, demand has been high and lead times from new equipment manufacturers have been longer than usual.



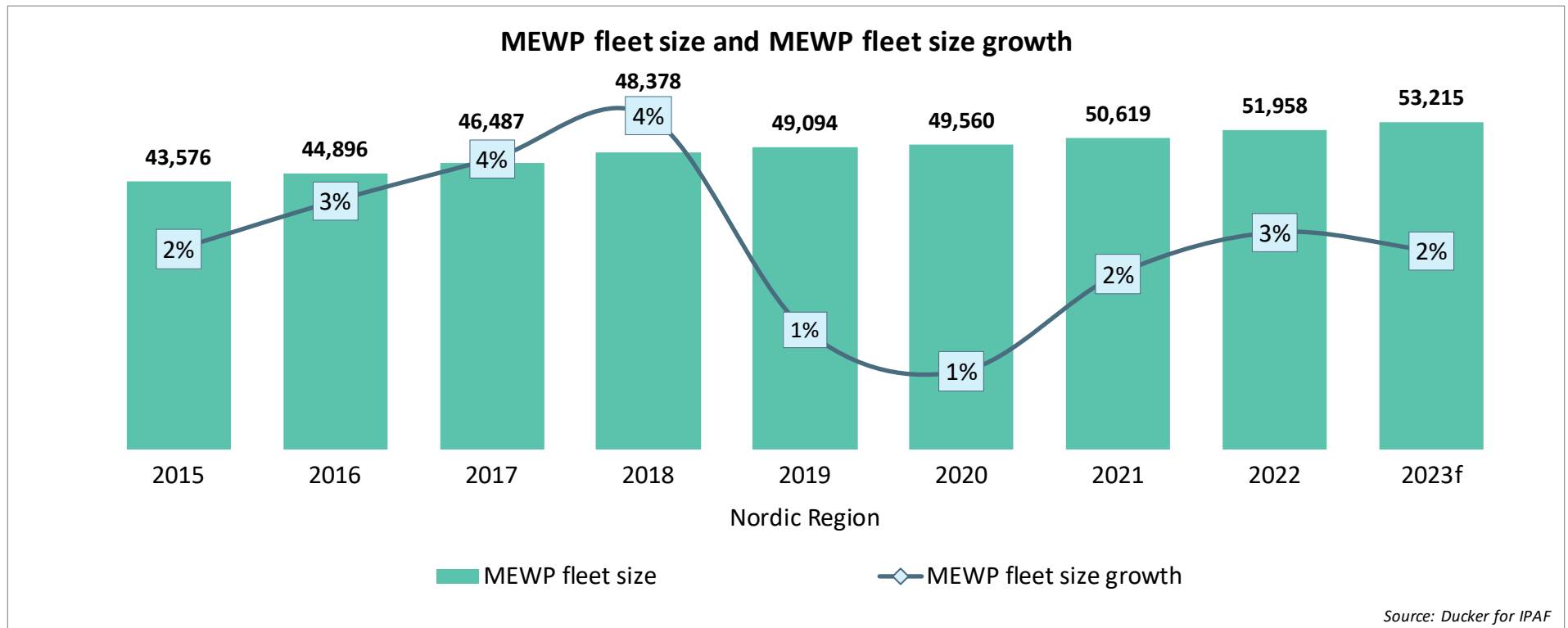
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“We expect our revenue to increase because we’re doing a bit more cross rental, which should bring us new customers. We’re going to keep our prices the same or even lower them a bit, while most competitors are increasing their prices at the moment.” – MEWP rental company fleet manager

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Nordic region – market size in units

The Nordic MEWP total fleet size almost reached 52,000 units in 2022, and is forecast to grow by additional 1,300 units in 2023. Companies intend to keep expanding their fleet in 2023-24. However, many report concerns about the actual impact of increasing prices and changing market dynamics owing to the consolidation movements over the past years.



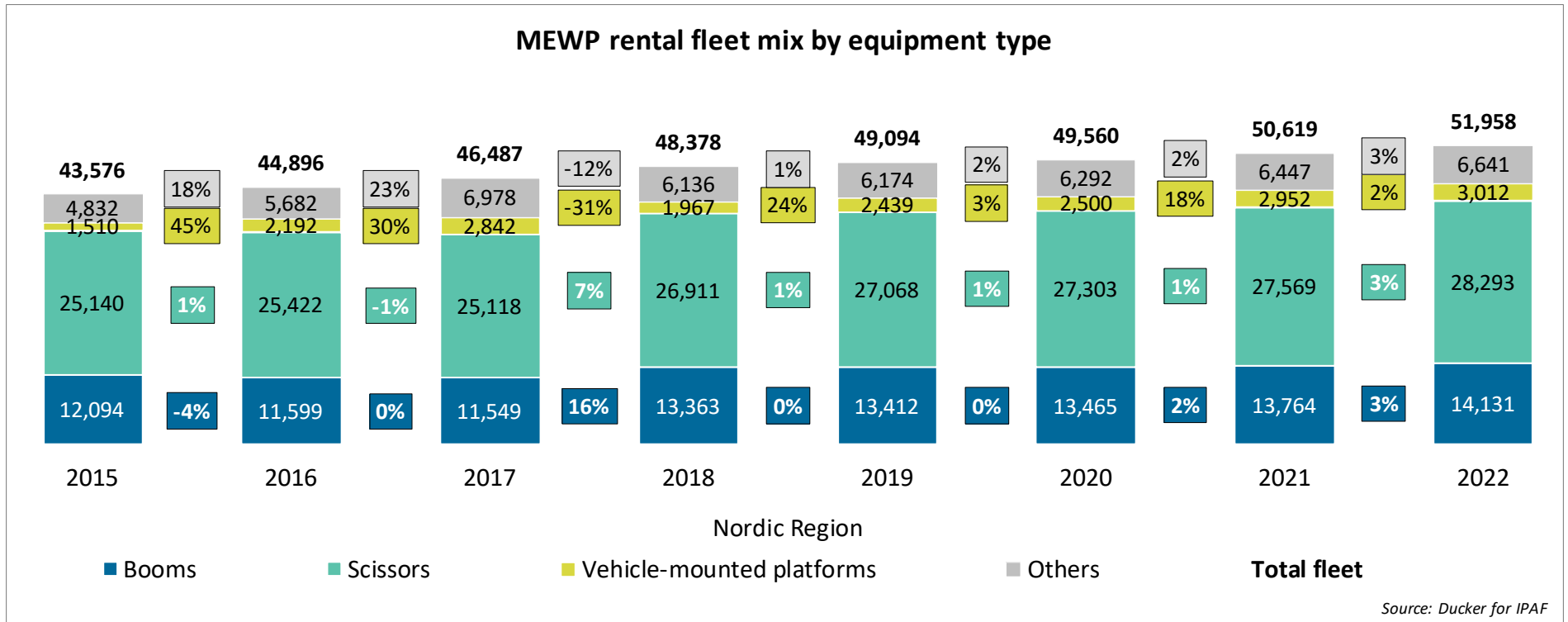
Included: All booms, scissor lifts and vertical masts

Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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Nordic region – market size in units

The market saw a similar increase in all MEWP categories in 2022. After several years of strong growth for vehicle-mounted platforms, fleet expansion has slowed due to increased up-front costs, including OEM prices and increased vehicle taxes. While the Nordic market remains dominated by scissor-type MEWPs, with high shares in all countries, Finland has by far the highest at around 60 per cent of the total fleet.



+X% % unit growth, eg booms fleet increased by 3% from 2021 to 2022.

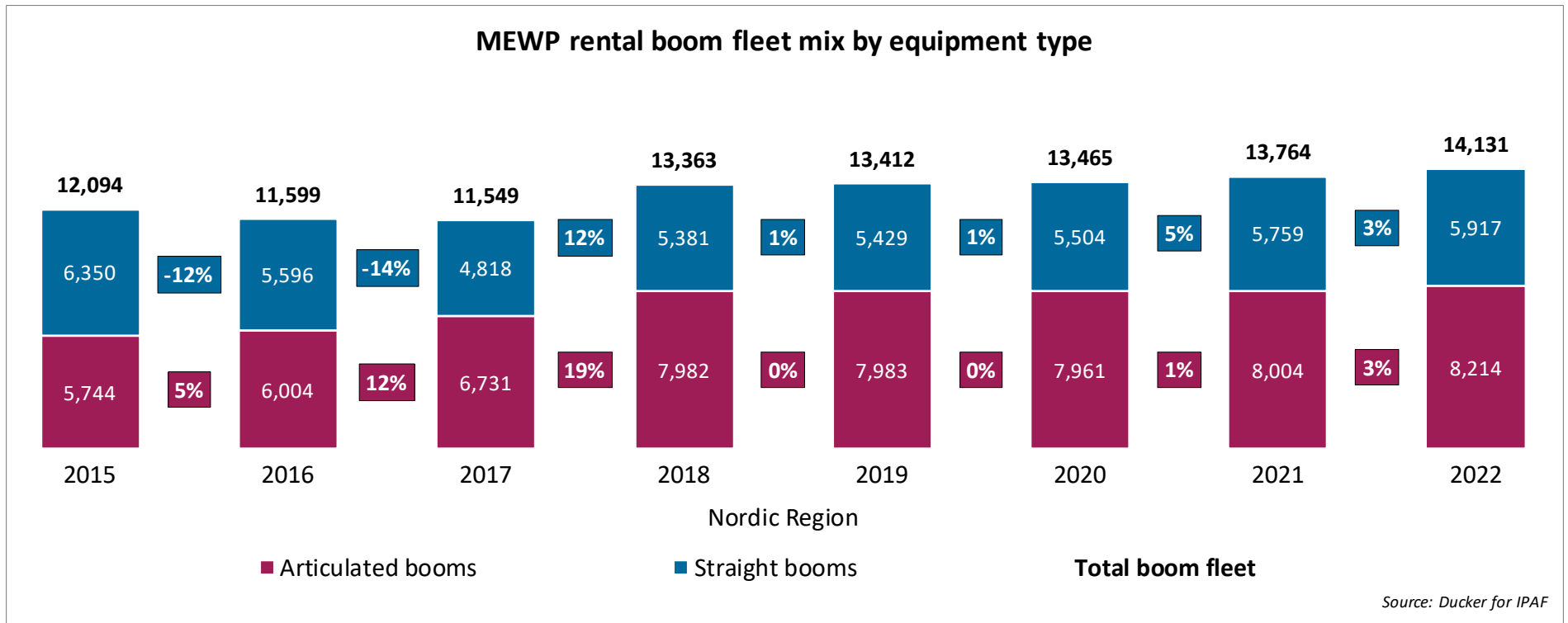
Others include: Vertical lifts, vertical masts, push-around verticals, trailer mounted/towable.

Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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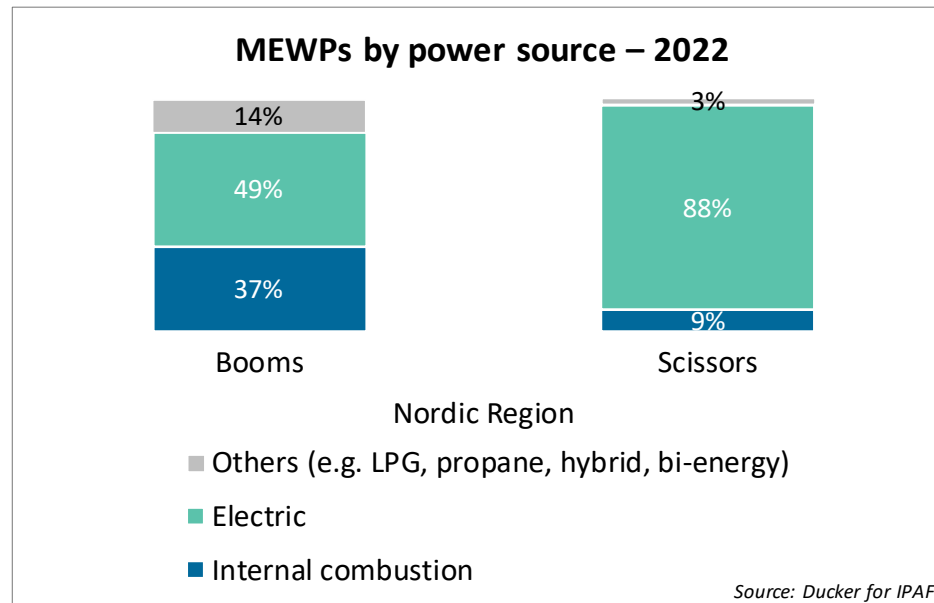
Nordic region – market size in units

Total boom fleet exceeded 14,000 units, with equal growth for articulated and straight booms – both increasing three per cent over 2021's year-end totals. The current ratio between articulated and straight booms in the Nordic region stands at 58:42, which is likely to remain largely unchanged over the next few years.



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Electric power sources account for almost half (49 per cent) of all booms, increasing by two per cent, and hybrid booms also increased by one per cent on the 2021 figure. The transition to green power sources continued steadily among the scissors segment, gaining around one per cent compared to 2021. Rental companies prioritised creating sustainable fleets, which are in demand from clients and zero-emission urban work sites, supporting decarbonisation of the construction industry.



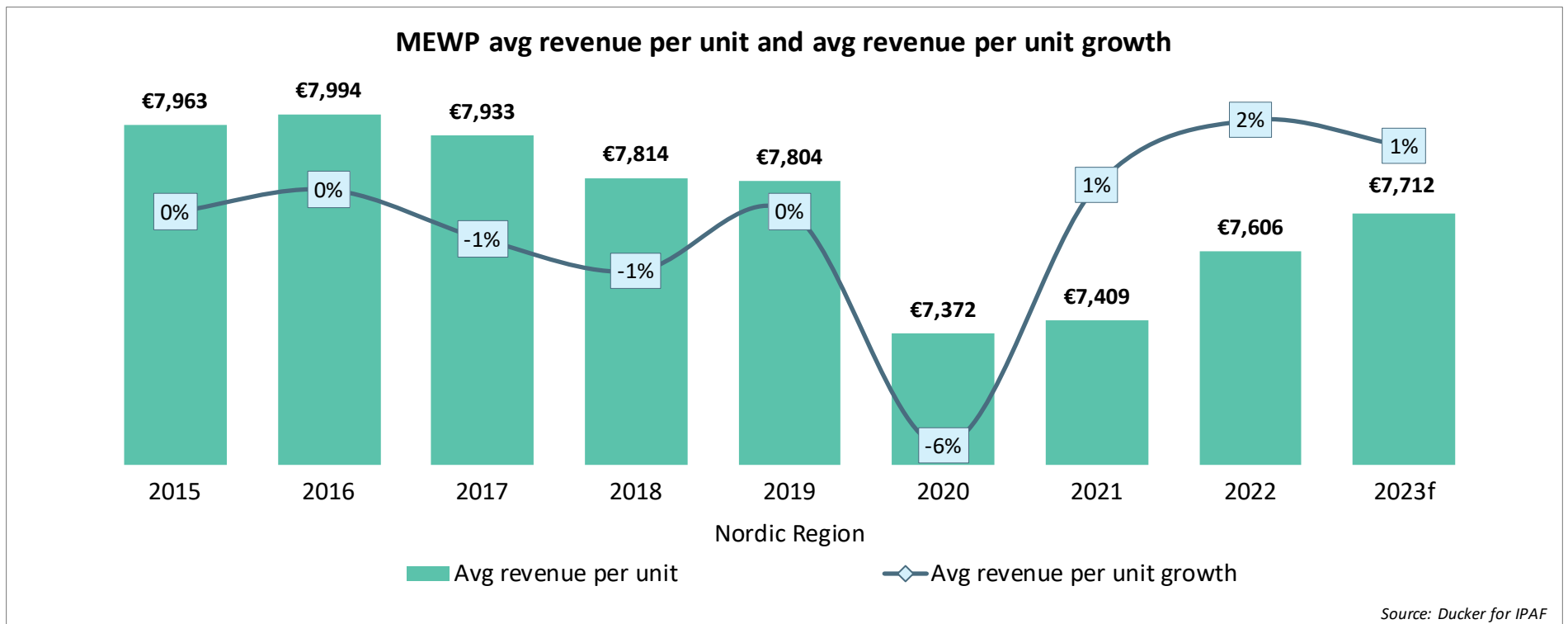
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“We’ve increased our electric fleet of booms by about 20% in the past year. Sustainability is a very important factor here, as you have to comply in order to be eligible for a wide range of projects. It’s good for the environment and good for business.” – MEWP rental company fleet manager

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Nordic region – revenue per unit

Average revenue per unit increased by around two per cent in 2022. Owing to marginal increases in utilisation and rental rates, average revenue per unit in the Nordics saw only a minimal increase, remaining below pre-pandemic peaks. Rental companies are expecting continued growth from 2023 onwards, though it is unlikely to exceed €8,000 in the next few years.

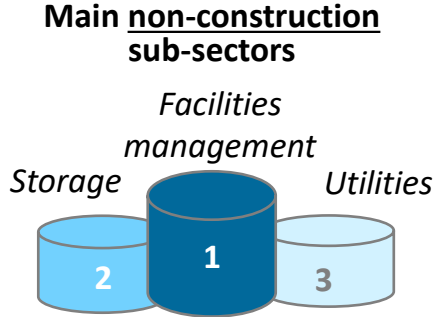
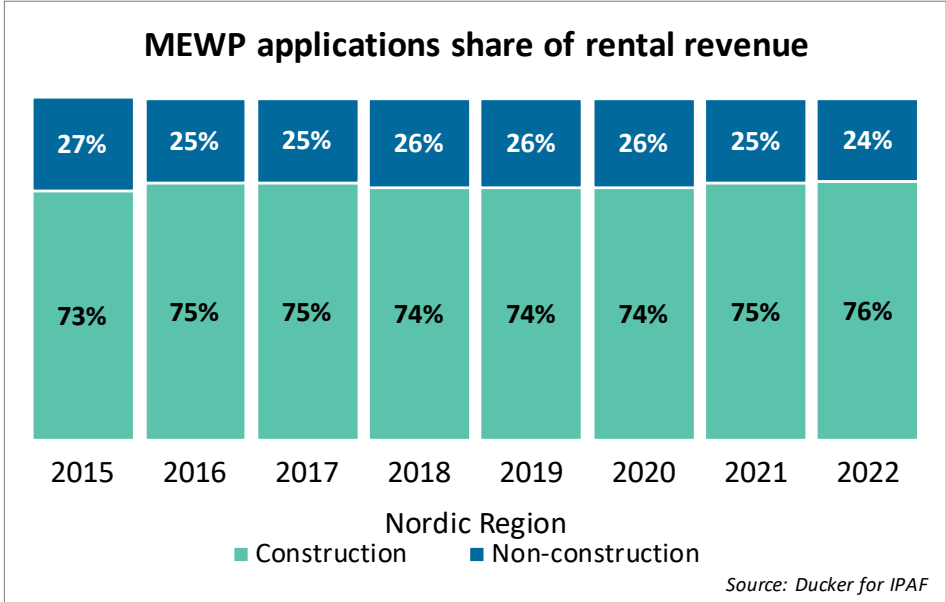


Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

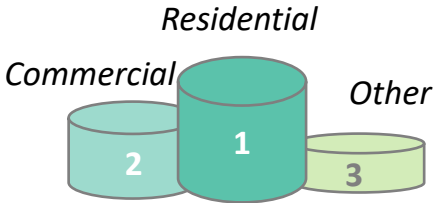
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Nordic region – applications

In 2022, the continuing rebound in activity in residential renovation and refurbishment helped to increase the construction-related end-use slightly to 76 per cent. In the region there is ongoing commitment to transform existing building stock to be zero-emissions by 2030. In terms of non-construction applications, events and media saw an increase in activity, to exceed pre-pandemic levels, while activity in maintaining data centres is also growing.



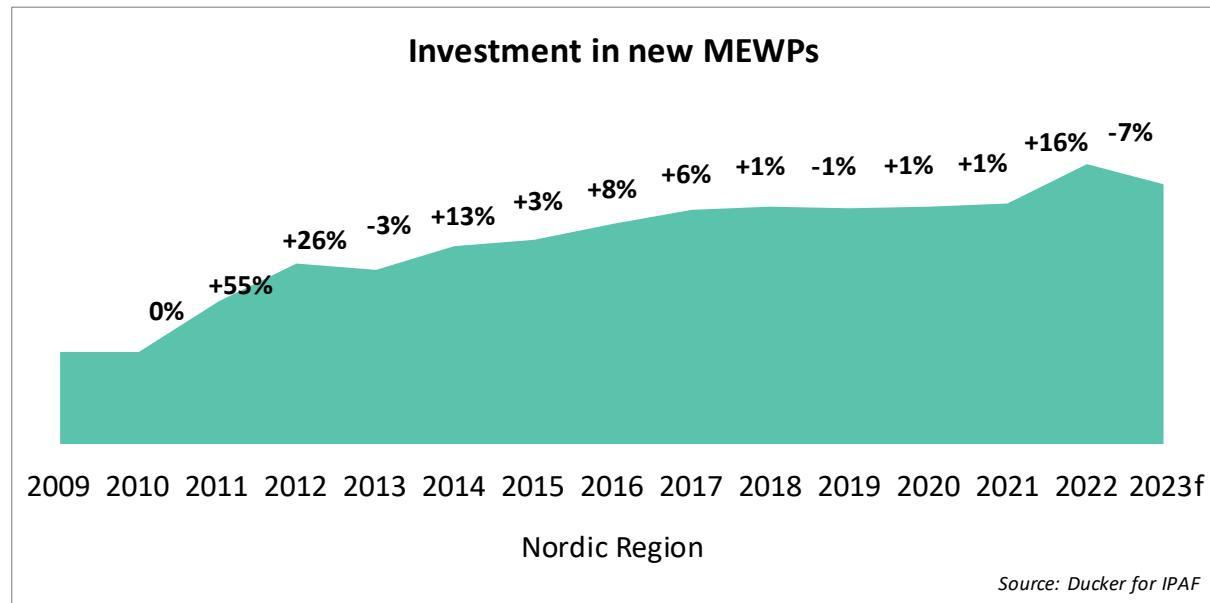
Main construction sub-sectors



Non-construction activities include industry, maintenance, cleaning, utilities and events.

Construction includes new-build and renovation; including residential, commercial, retail and industrial.

Rental companies in the Nordic region prefer to buy primarily new equipment because of its higher performance, improved safety and in order to aid in the transition towards a sustainable fleet. Though lead times from OEMs have improved, and rental companies placed their procurement orders for the year 2022 well in advance, some deliveries were still delayed, placing a restriction on overall fleet size expansion in 2022, even though investment levels were up by 16 per cent.

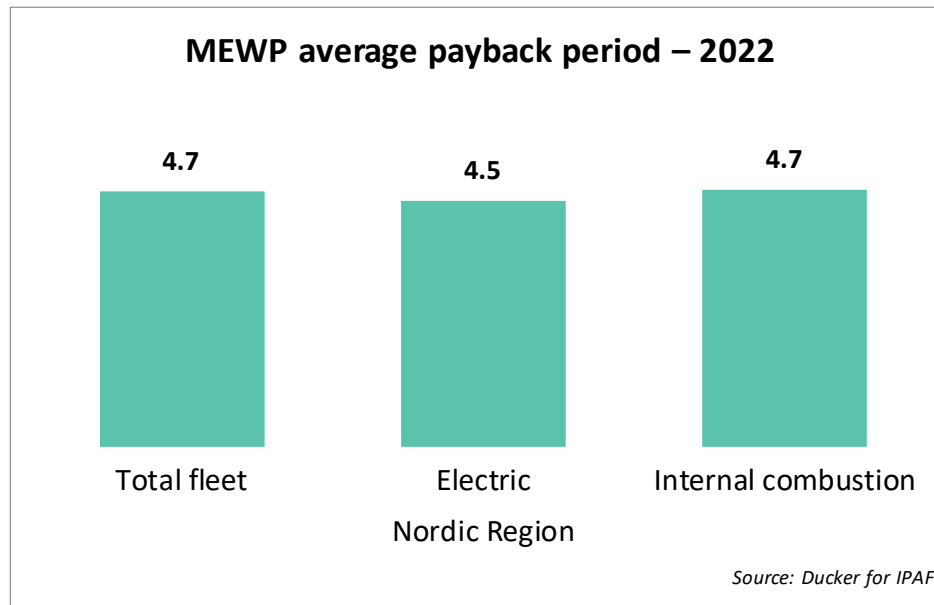


“We will only invest in roughly 100 new machines in 2023, the remaining units were already purchased in 2022, but the delivery was delayed.” – MEWP rental company purchasing manager

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Nordic region – typical payback period

Average MEWP payback period for total fleet as well as each power source individually increased by around one month across 2022, when compared to previous years. As rental companies struggled with increasing purchase prices for new equipment and rental rates have not kept up with inflation, average payback period is expected to further increase in 2023.



4.7 = 4 years and 7 months

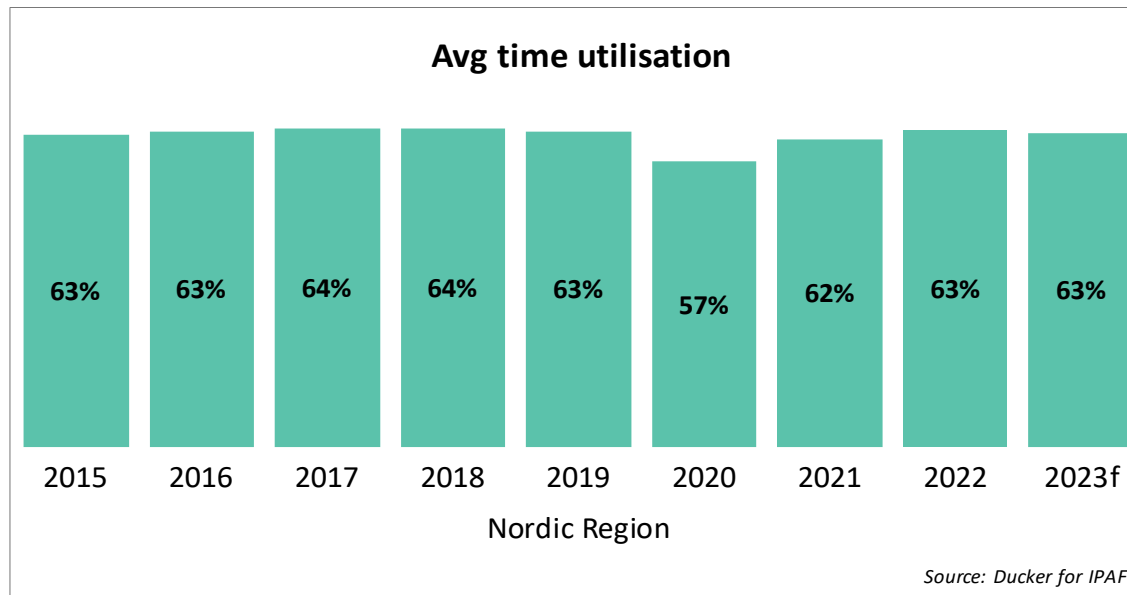
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“Return on investment has gotten a bit longer for the overall fleet because of all the increases in costs lately. That is why we’re also keeping the machines in fleet for slightly longer these days.” – MEWP rental company manager

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Nordic region – utilisation rates

Utilisation rates picked up in 2022, reaching 63 per cent on average. The level of activity across the Nordic Region varied a lot because of differing levels of activity in the construction market across the regions, but overall the trend was positive. Demand for scissors was greater than for booms, in part down to increased activity in the events and media sectors, as well as facilities management in data centres, which is expected to continue in 2023.



Utilisation of largest MEWP groups in 2022: scissors: 65%, booms: 62%.

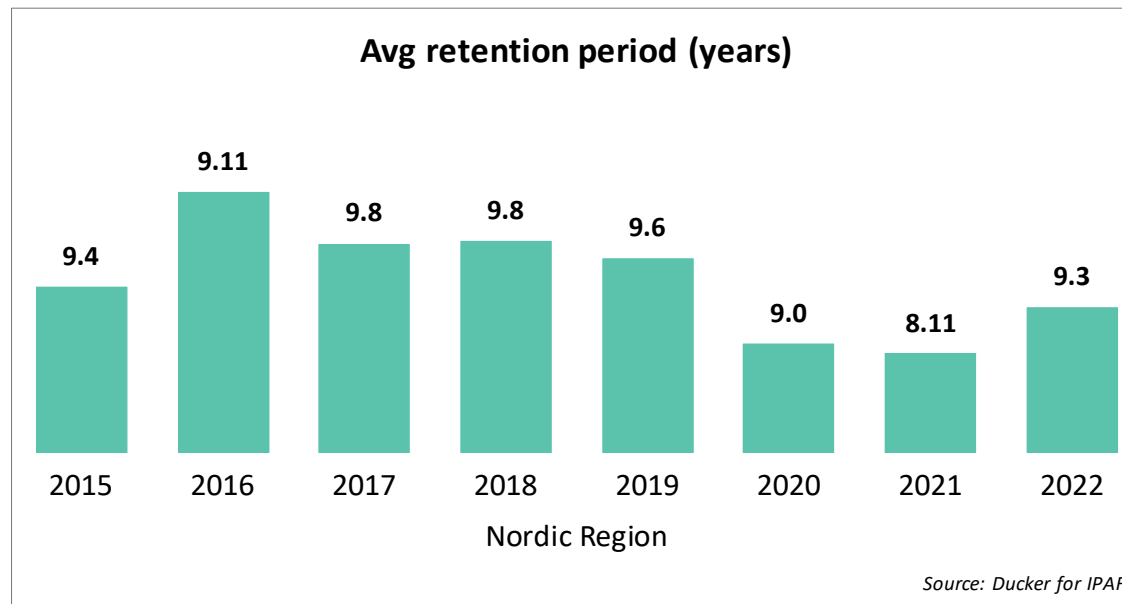
Average utilisation is defined as a physical number of machines out on hire as % of total number in fleet at any given time.

“

“Growth and utilisation were good in 2022. Post-pandemic demand continues, especially in data centers in all the Nordic countries. Outlook wise 2023 seems more hesitant, especially as Norway and Finland are sensitive to economic volatility, overall we expect growth, which could turn out to surprise again with higher revenues.” – MEWP rental company manager

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Average retention period increased by four months in 2022, to stand at around nine years and three months, as compared to eight years and 11 months in 2021. Average retention period increased under the influence of two factors: Longer lead times for and higher prices of new equipment from manufacturers of new MEWPs. In 2023, average retention period is expected to remain largely unchanged, as companies develop new fleet strategies to maximise machine lifespan.



9.3 = 9 years and 3 months

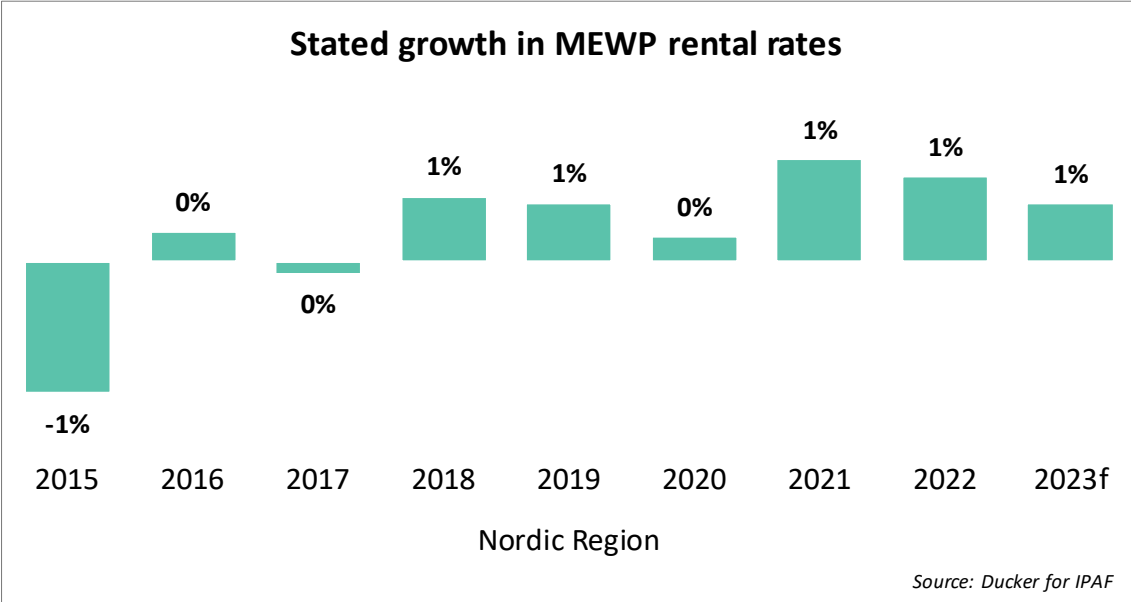
Average retention is a period of time that a machine is kept in fleet = selling age if acquired new.

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“Because of longer delivery times on new machines and higher purchase prices, we are now keeping machines in the fleet for up to 10 years.” – MEWP rental company purchasing manager

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Rental companies have not been able to adjust their rental rates significantly in order to compensate for increasing equipment prices and rising inflation, driving concern about further erosion of their operating margins. Despite activity increasing in 2022, rental companies – especially those in Norway and Finland – have not felt able to increase their rental rates owing to particularly fierce competition in the market, and some even decreased rental rates to remain competitive.



“Tight competition and higher costs: I think all the big companies are all facing the same challenge; tough competition and higher costs and how to manage this with prices. Many rental companies were forced to reduce their prices a bit, but it’s not a general rule for every depot all over the country.” – MEWP rental company purchasing manager

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A PERSPECTIVE FROM THE EDITOR OF
ACCESS INTERNATIONAL MAGAZINE
IPAF Powered Access Rental Market Report 2023
Nordic Region

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Nordic countries continue to be leaders in sustainability and efficiency, and it is therefore hardly surprising that rental companies based in the region have been early adopters in initiatives that support these values. In last year's report, there was major uncertainty surrounding the Nordic countries owing to the war in Ukraine, with the International Monetary Fund (IMF) stating that neighbouring economies in particular would need to grapple with disrupted trade and supply chains.

Despite the challenges Nordic countries have been home to some of the strongest markets in recent years, amply demonstrated by Loxam's most recent financial results, in which the rental group reported a 10% increase in revenues in 2022 to €2.4 billion, driven by sales in the Nordic region.

Nordic revenues, through Loxam's Ramirent subsidiary, were up 10% in the year, by comparison to sales in France, still its largest market, which were 6% up on 2021. Fredrik Brandal, executive vice president at Ramirent Norway, confirms the rental market saw steady growth during 2022, delivering a revenue of NOK11 billion (€948 million). The beginning of 2023, however, has seen a slight decline in new project startups, which may affect revenues in the second quarter of this year, said Brandal: "The factors are predominantly macro-economic, such as increased interest rates, higher inflation and material shortages which results in a reduction in building activity."

The region has also seen a great deal of consolidation activity over the past year. Ramirent continued its investment in the region, acquiring Sweden-based rental company Jiab Hyrcenter from Jiab Fastighets in March. That followed Loxam's acquisition of Finnish electrical and reserve power equipment business and events rental supplier Festivaalisähkö in February last year. In March, French rental company Kiloutou made its first entry into Denmark with the acquisition of rental company GSV. Terms of the transaction have not been disclosed; however, it is understood the deal is valued at around €300 million, making it Kiloutou's largest acquisition to date.

As Joel Särkkä, CIO at Renta, explained: “We’ve continued our profitable growth regardless of market trends, even through the covid-19 pandemic and all the negative impacts caused by the war in Ukraine.” Särkkä points out that success is down to the company’s decentralised business model, combined with a broad generalist offering, which sees it through varying market cycles. Nordic countries are also leaders in the push towards sustainability and ‘green’ equipment. Särkkä says governments in the region are very active in this area, while municipalities are pioneering initiatives to incentivise use of low-emission equipment. Developers are also passing down requirements for such equipment, especially in urban areas.

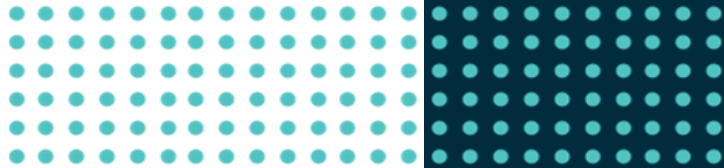
Another challenge is the labour market. Brandal, at Ramirent Norway, says unemployment in the country is currently at 1.9%. “This makes it harder to recruit skilled workers and there is tough competition. Ramirent’s most valuable machines are our employees, and in this market it is key to retain our employees.”

At Ramirent Norway, more than 90% of its fleet investment is targeted at emissions-free equipment and solutions. “The energy transition plays a huge role in the Norwegian market, especially towards the large construction companies and government-driven projects,” explained Brandal.

While Ramirent reports business growth over the past three years, there are further challenges. “We are now experiencing a rapid cost increase within energy, transportation, property and salaries,” said Brandal. “These factors force us to further strive towards cost efficiencies and innovations.”

These market conditions are similar across the region. In Sweden, the market is also fairly stable, according to Rikard Jönsson, purchasing manager from Kranpunkten, following several years of growth. But there is an expected slowdown given the heavy decline in the housing market. This isn’t helped by the well-documented challenges of inflation, the costs of raw materials, interest rates, and exchange rates heading the wrong direction. As Jönsson pointed out: “Increased rental rates are required due to these factors.”

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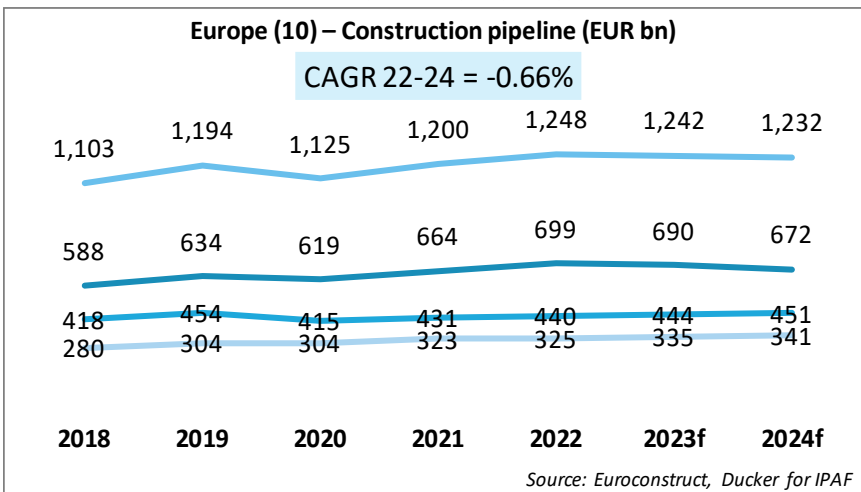


APPENDIX
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Nordic Region

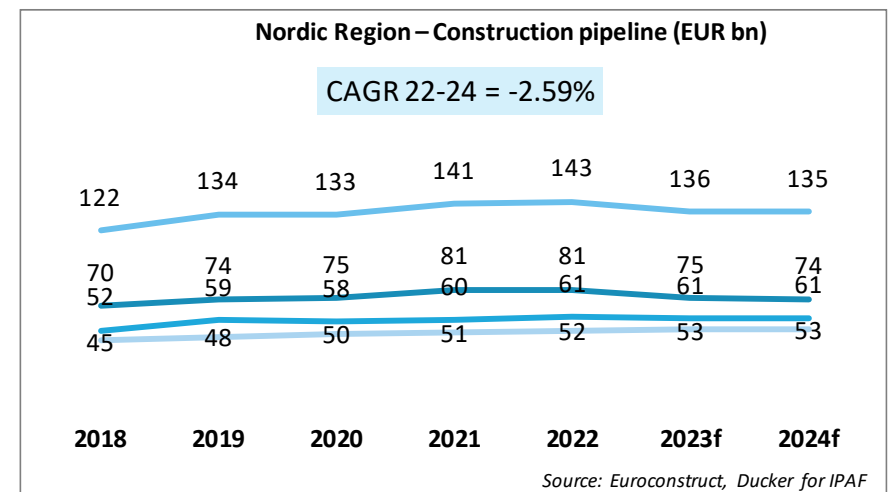
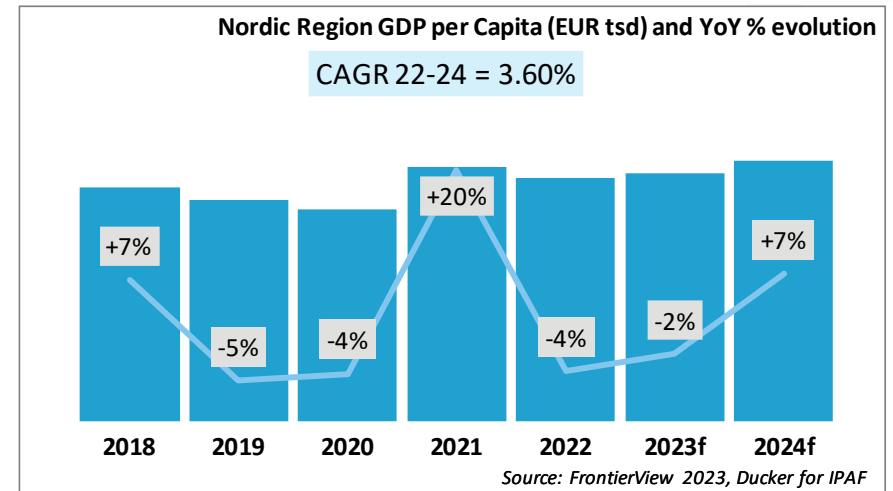
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Nordic region – construction statistics

The construction industry across the Nordic region further accelerated during 2022, with a flattening off or even falls expected in 2023-2024, owing to fewer large construction projects in the pipeline. GDP decreased in 2022 by up to four per cent and is forecast to decrease further in 2023, before picking up significantly in 2024.



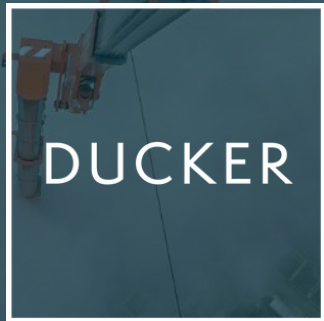
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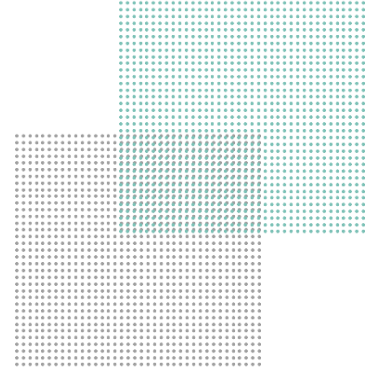
CAGR: Compound annual growth rate

Europe (10) includes Germany, France, UK, Italy, Spain, The Netherlands and the Nordics: Finland, Sweden, Norway and Denmark.

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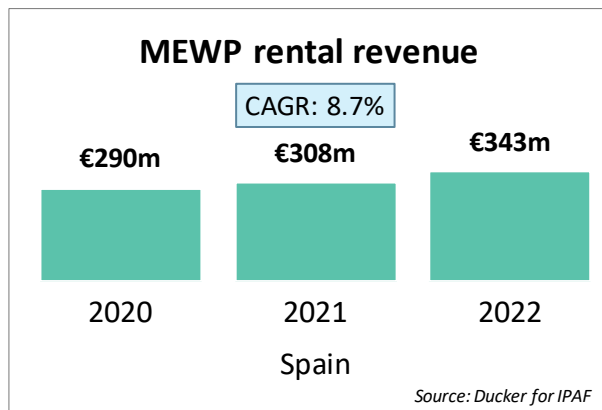
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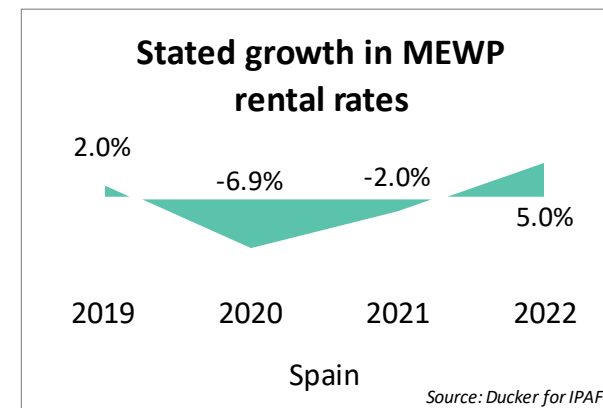
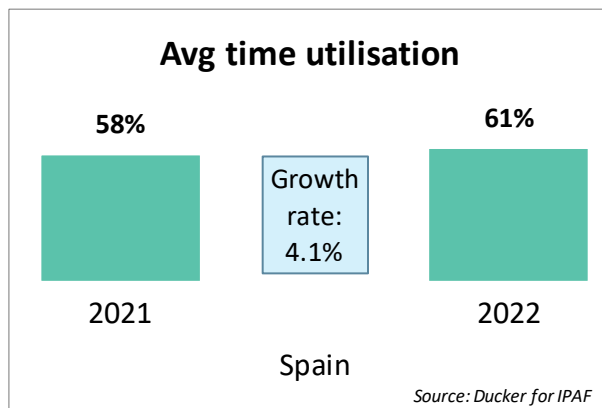
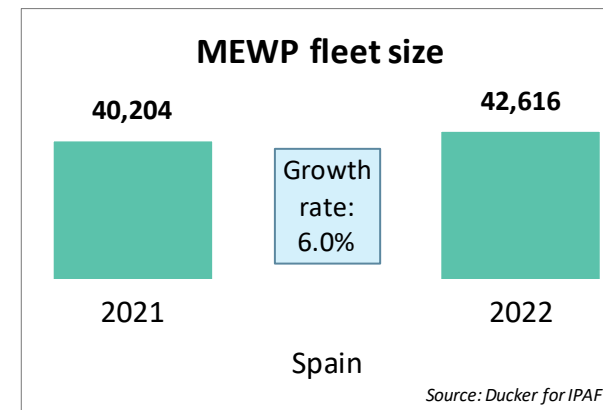
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Spain – key findings

Overall, 2022 was a year of strong growth in Spain; activity largely returned to normal and most main indicators returned to pre-pandemic levels or even exceeded them. MEWP rental revenue reached a record high, a direct consequence of the country's rapid market bounce back. Total fleet size expanded, while utilisation rate returned to pre-pandemic levels. After falling for two years, rental companies were able to increase rental rates by an average of five per cent in 2022.



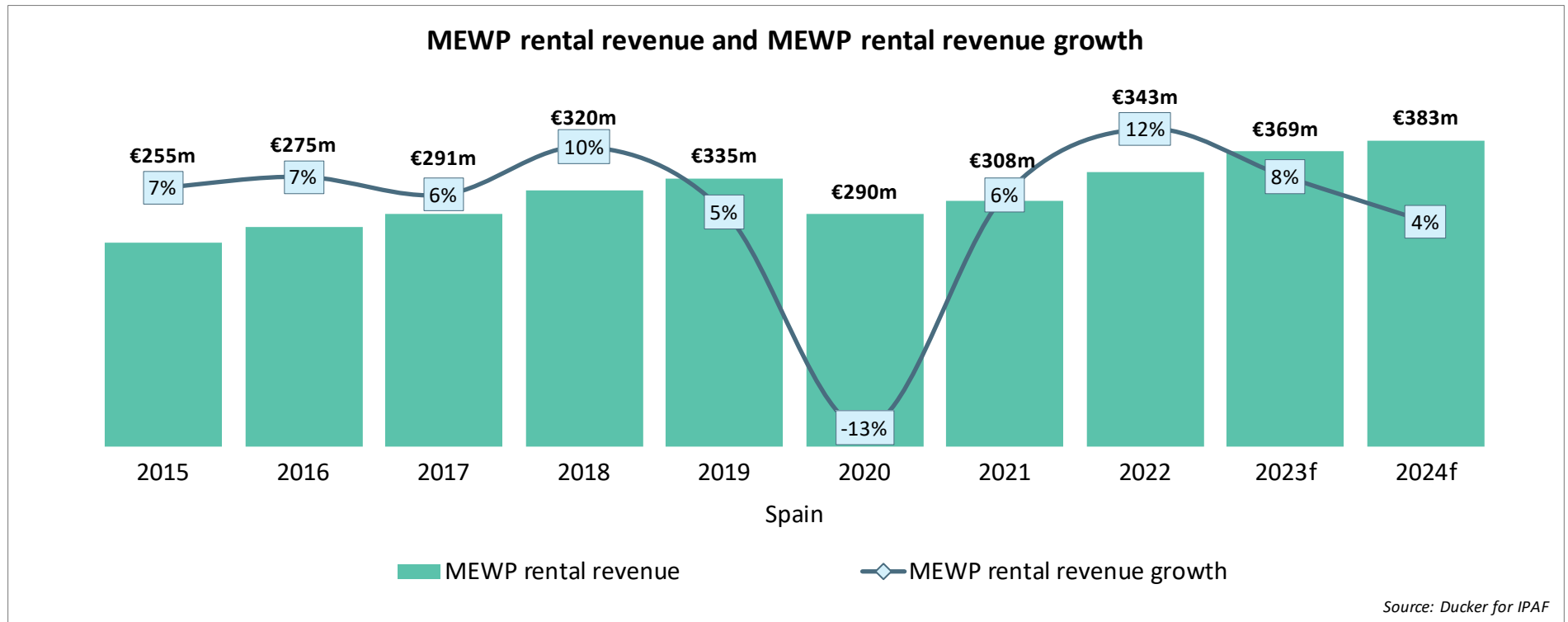
CAGR: Compound annual growth rate



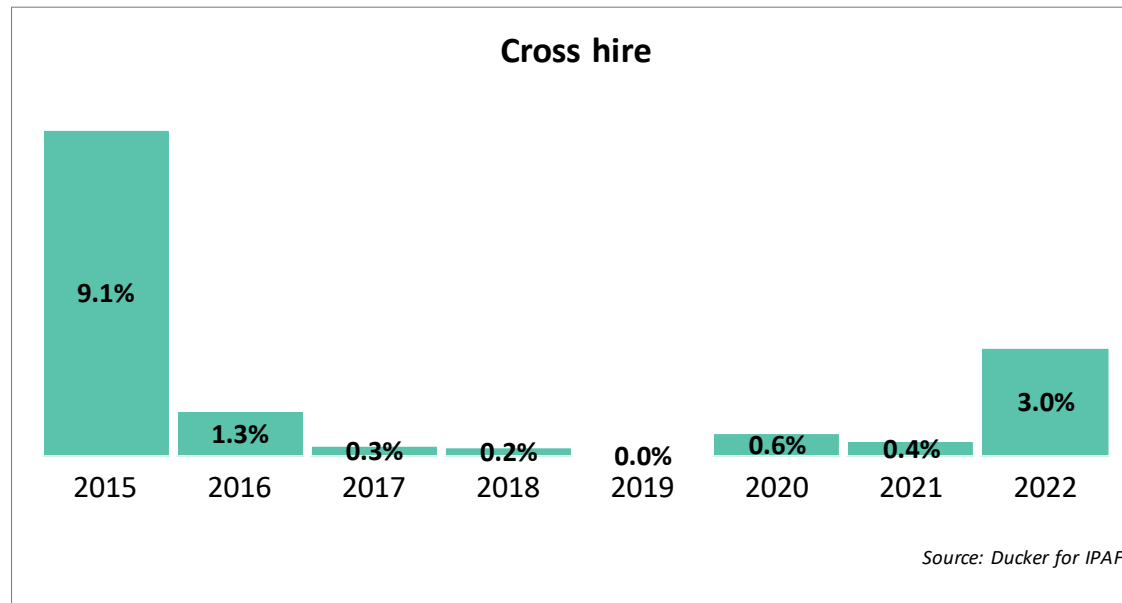
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Spain – rental market value and growth

Rental market value grew 12 per cent year on year and is expected to remain high over the next two years, despite facing inflation and multiple crisis affecting the market. Rental revenue increased as a result of rental companies increasing rental rates and expanding fleet size in line with increasing demand in the market. Demand is expected to remain high, owing to government plans to support construction, including residential and infrastructure, over the next few years.

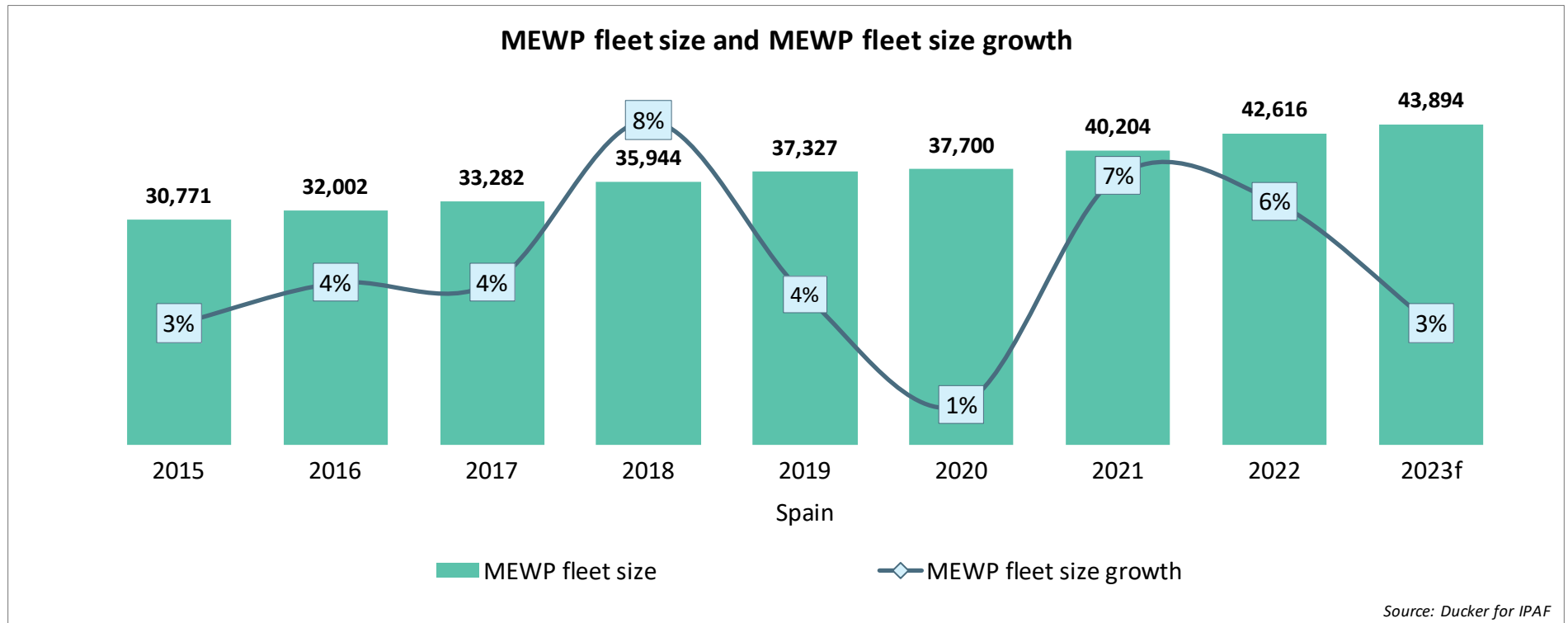


Cross hire grew slightly in 2022, owing to growing demand and ongoing delays in lead times on delivery of new MEWPs. Cross hire is expected to decrease and fall back to nearer the levels of 0-0.6% more typically seen across the five years 2017-21 once these OEM lead time and associated supply chain issues are fully resolved.



Spain – market size in units

Overall fleet size increased by around six per cent across 2022, adding more than 2,000 units to the country's estimated total MEWP fleet. The Spanish fleet is forecast to continue growing in 2023, although at a more moderate pace. Spain has the highest share of used equipment purchases (12 per cent) out of those European countries under study, with rental companies regularly turning to neighboring countries to bring in used equipment.



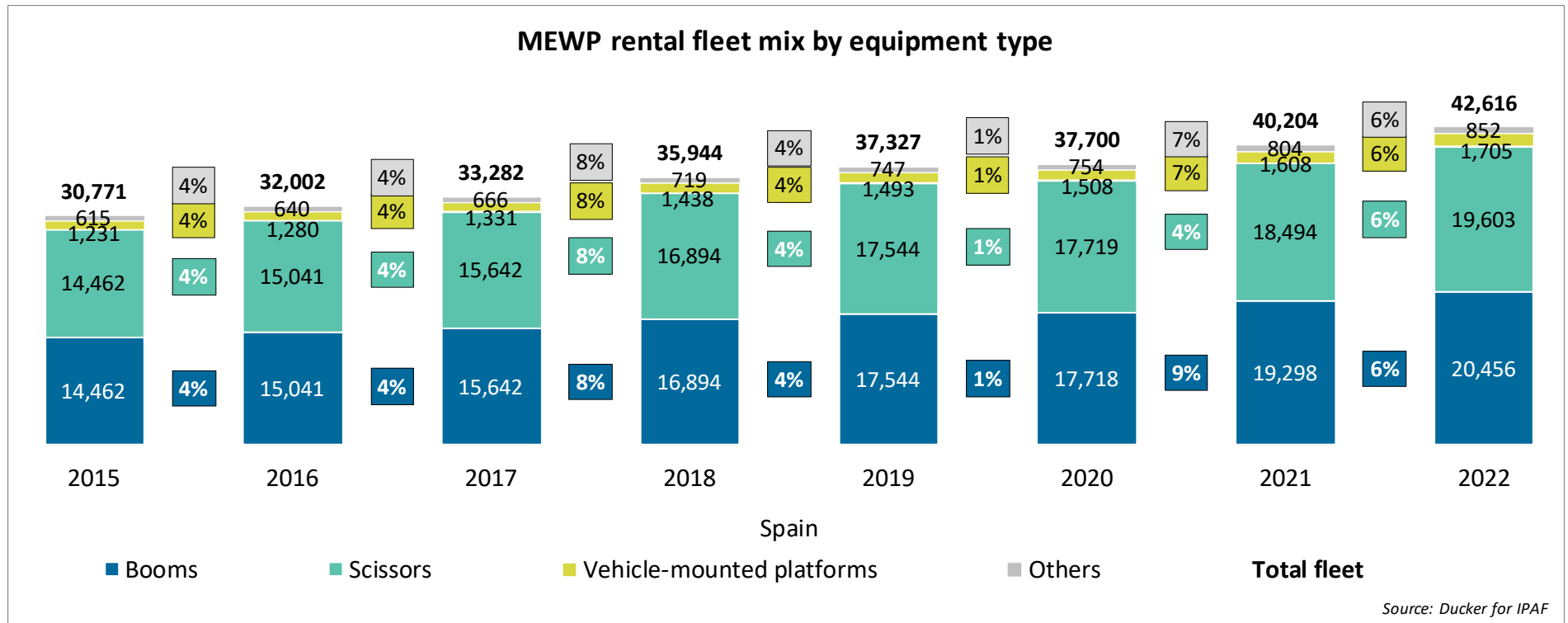
Included: All booms, scissor lifts and vertical masts

Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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Spain – market size in units

In 2022, all equipment categories grew by six per cent, leaving the overall mix of machine types in the Spanish fleet pretty much unchanged from previous years. In 2022, fleet mix remained similar to 2021, with booms and scissor lifts respectively accounting for around 48% and 46% of the overall fleet.



+X% % unit growth, eg booms fleet increased by 6% from 2021 to 2022.

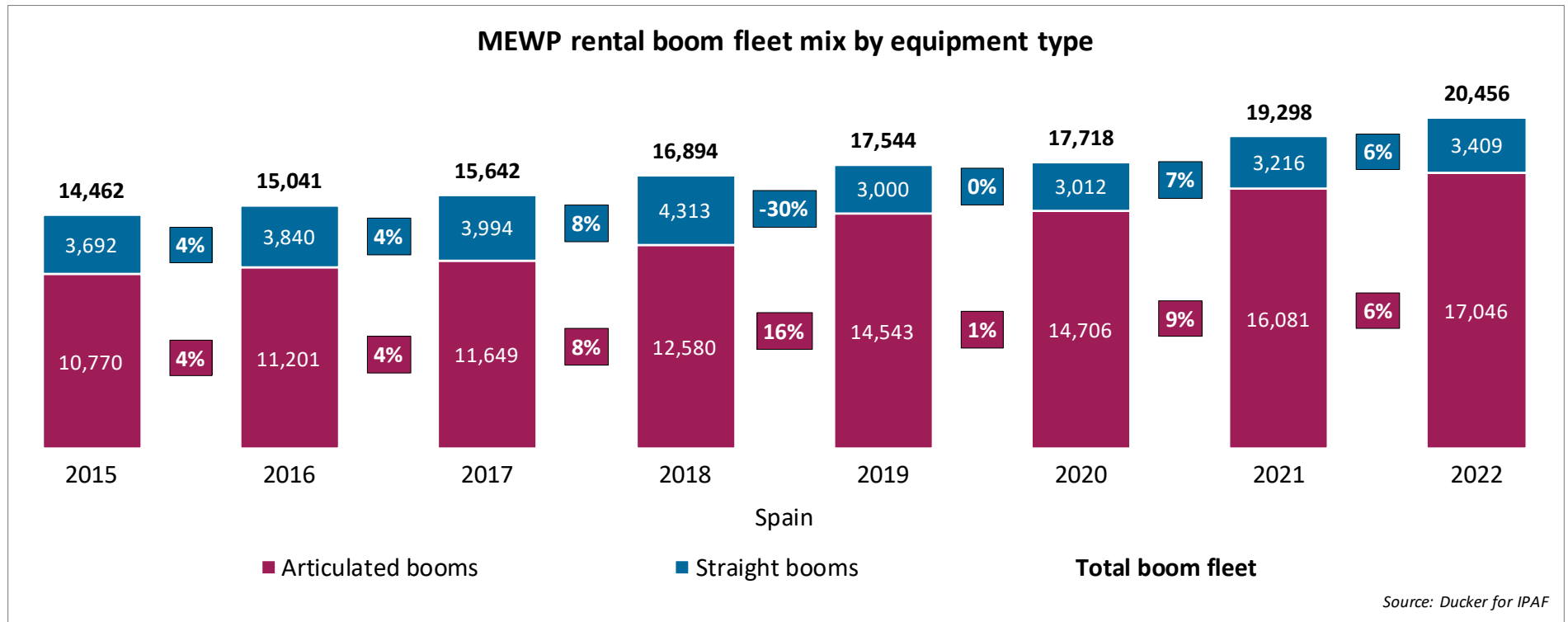
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Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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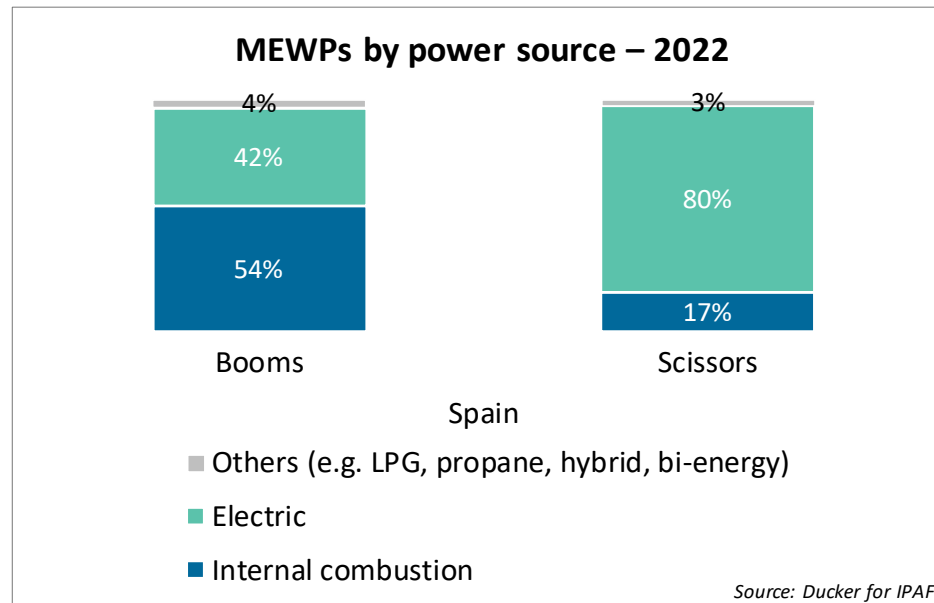
Spain – market size in units

Total boom fleet increased to exceed 20,000 units in Spain, with articulated and straight booms both increasing at a rate of six per cent during 2022. In 2022, as in 2021, articulated booms represented around 83% of the overall boom fleet, amounting to 16,886 units. Some rental companies expect continuous healthy levels of construction activity in the Spanish market, which in turn is anticipated to continue driving the demand for large-outreach self-propelled booms.



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In 2022, the share of internal combustion engines fell by two per cent, for both booms and scissors. The industry's reliance on internal-combustion engines continues to decrease, and the share of clean power-source engines for booms and scissors reached 42% and 80% respectively. Given the high electrification rate of scissors, changes in this category are now likely to be minimal, with the majority of the remaining internal-combustion powered machines being larger rough-terrain models.



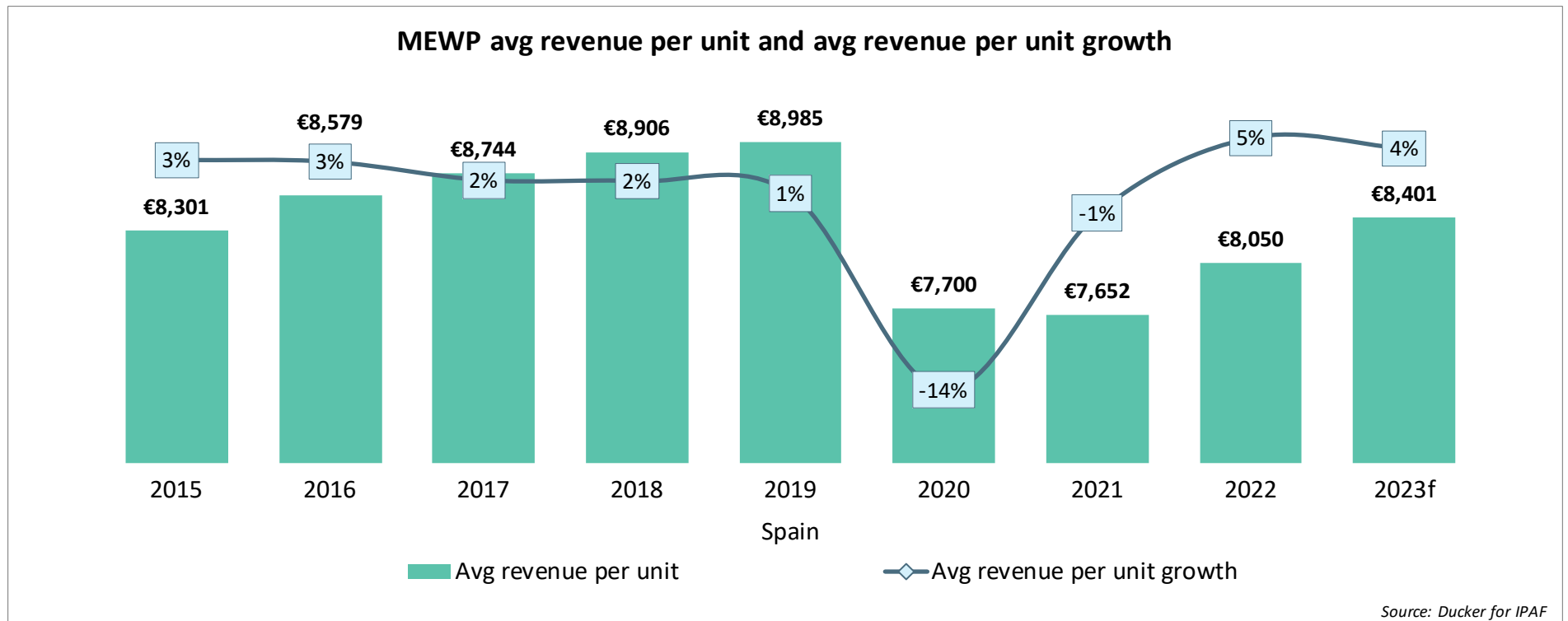
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“The aim is to reach 100% electrification; we are trying to add as many electric booms as possible. Key drivers are the regulations aimed at incentivising zero-emissions fleets, but manufacturers don't always have electric versions of booms above about 20m outreach, so we can't really advance on this until they do.” – MEWP rental company fleet manager

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Spain – revenue per unit

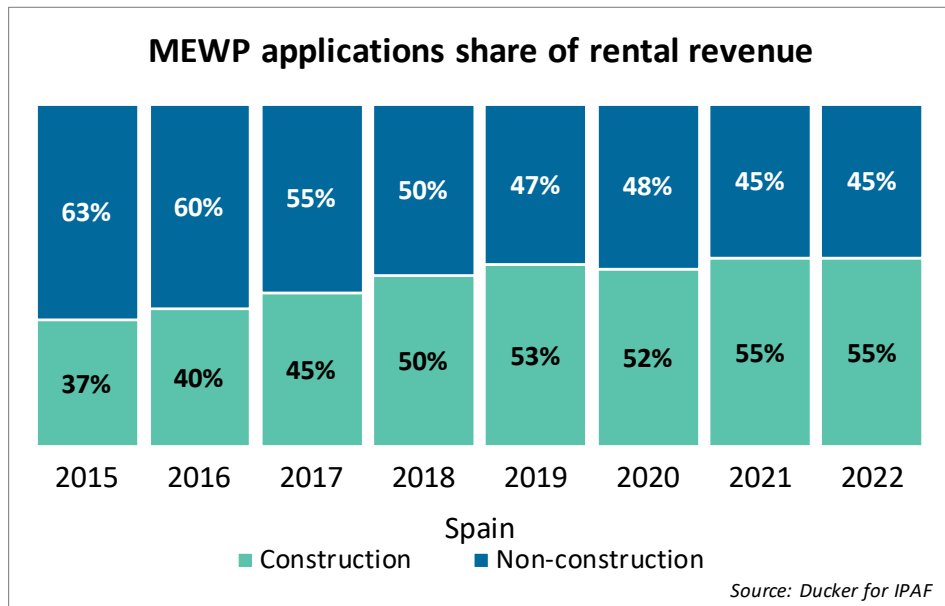
Average revenue per unit saw a significant recovery, with companies able to increase rental rates by around five per cent on average. After the sudden drop in 2020 at the height of the pandemic, average rental revenue further decreased slightly in 2021 owing to competition in the market. Though companies expect to be able to increase their rental rates in 2023 and 2024, they consider the increases will not be enough to reach or exceed pre-pandemic levels before 2024 at the earliest.



Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

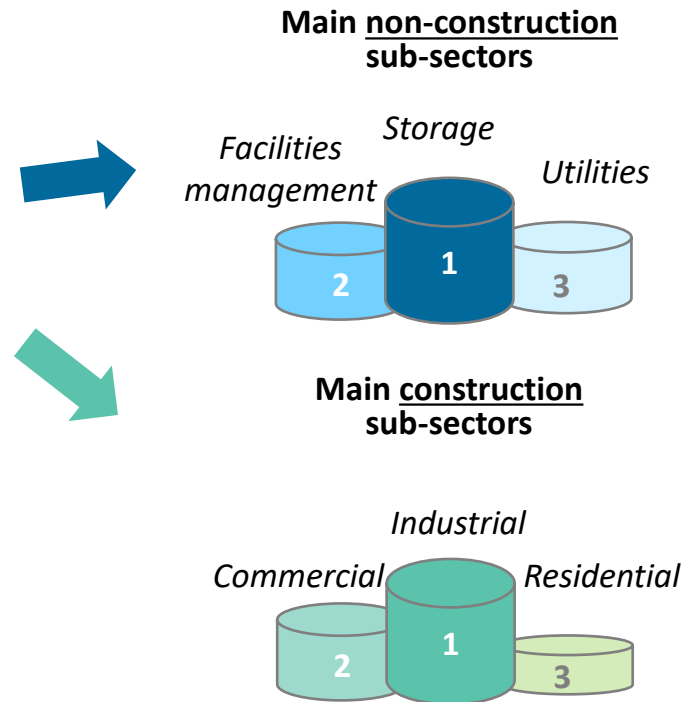
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Construction was one of the main drivers of economic recovery in Spain during 2021-22, and ultimately accounted for 55% of total revenue in the MEWP rental market. With Spanish MEWP end use historically being oriented more towards non-construction sectors, rental companies are increasingly looking to diversify activity in other sectors, such as warehousing, logistics and facilities management, which largely maintained activity during the pandemic. Activity in the wind energy sector is also expected to increase significantly over the next few years.

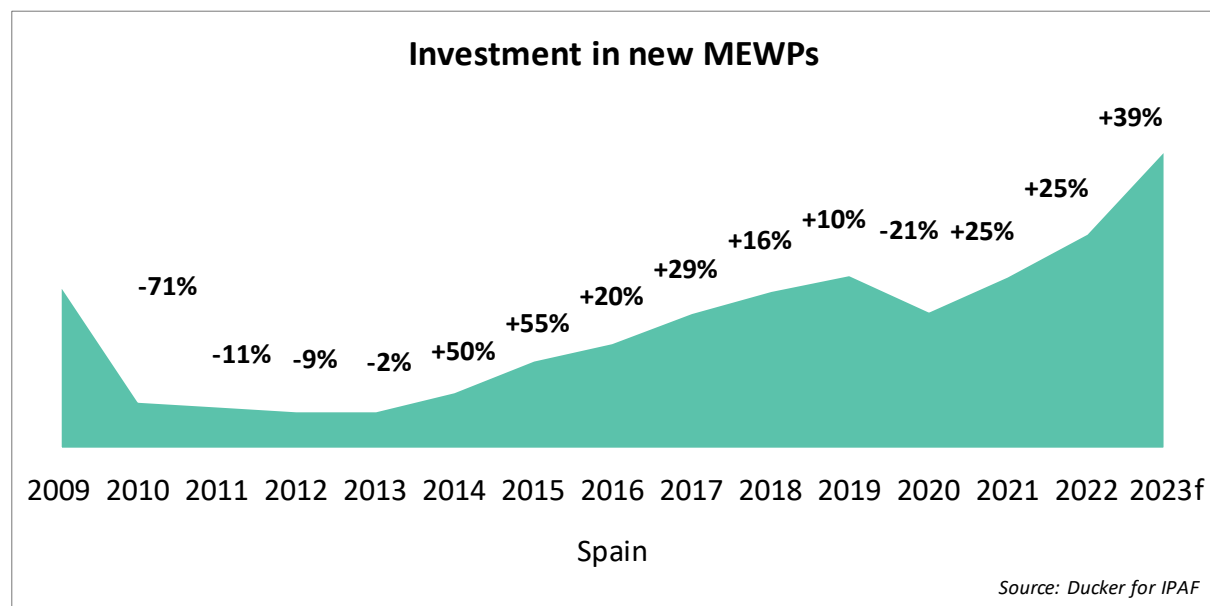


Non-construction activities include industry, maintenance, cleaning, utilities and events.

Construction includes new-build and renovation; including residential, commercial, retail and industrial.



In 2022, the share of used MEWP purchases fell by around five per cent. Investment in new MEWPs increased by around 25 per cent in 2022, with rental companies eager to invest in fleet expansion capitalising on a considerable increase in the availability of new MEWPs, owing in part to more inventory being made available in Europe by Chinese manufacturers. Rental companies invested in fleet renewal and expansion on the back of improved OEM lead times and a positive outlook.

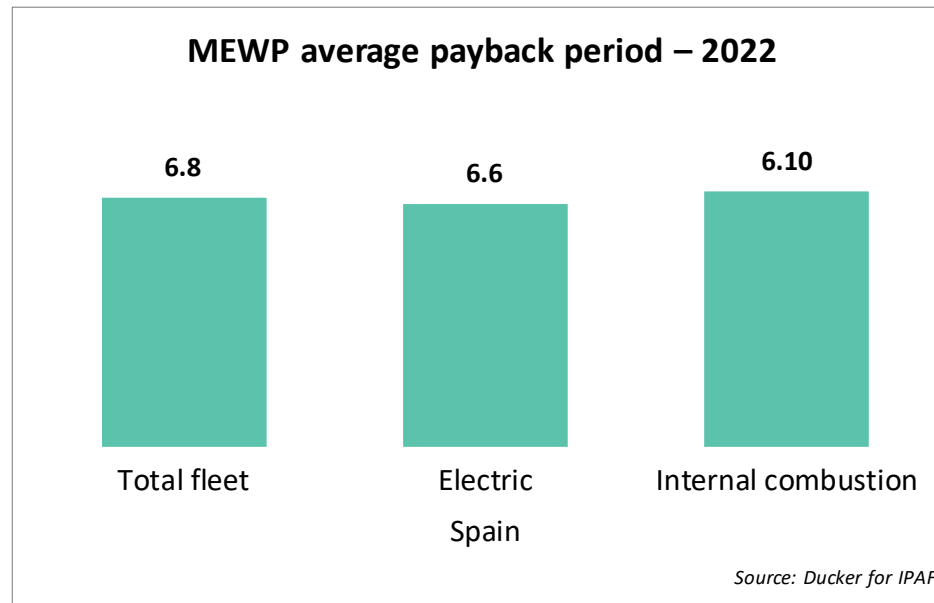


“Owing to a lack of new equipment in Europe, Chinese manufacturers have moved to fill the shortfall; some already have plants in Europe and stock, so are taking a fair chunk of the market.” – MEWP rental company purchasing manager

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Spain – typical payback period

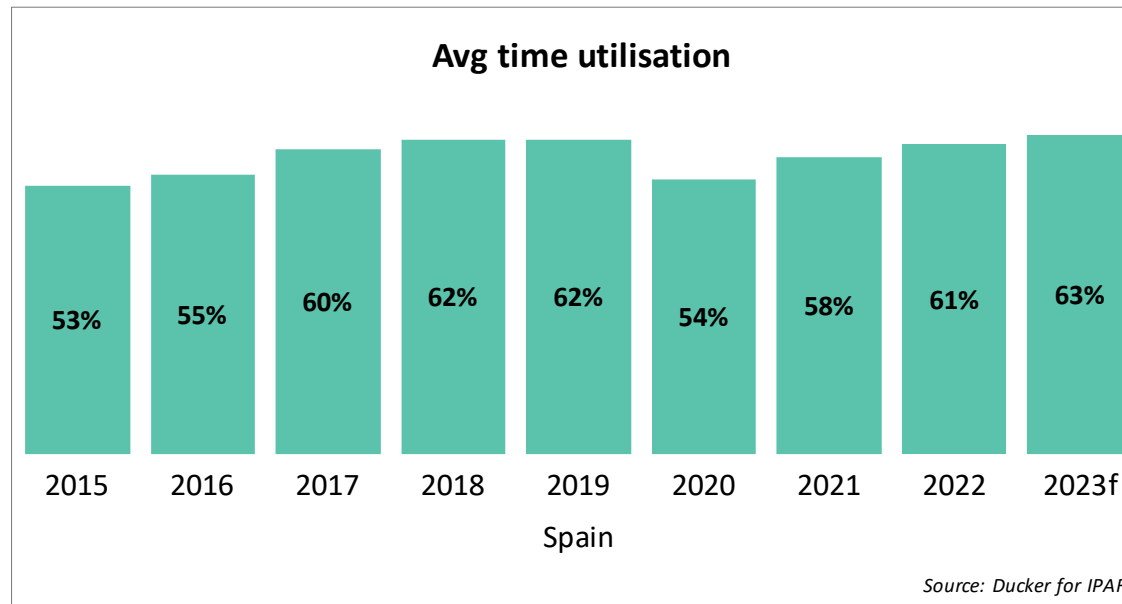
The average MEWP payback period for total fleet as well as each power source individually remained stable across 2022 when compared to previous years. Electric MEWPs on average offer a slightly shorter payback period, owing to better average rental and utilisation rates, as well as increasing end-user demand. Increased MEWP prices are expected to marginally affect average payback period across 2023.



6.8 = 6 years and 8 months

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In 2022, utilisation rate recovered to increase by three per cent, largely down to healthy levels of activity. In 2023, utilisation rate is expected to increase marginally, to reach or even slightly exceed pre-pandemic levels. Some rental companies have expressed concerns over the unpredictability of the Spanish market having a strong influence on utilisation rate, hence the incentive for rental companies to expand their activities into fields that are typically less impacted by market fluctuations.



Utilisation of largest MEWP groups in 2022: scissors: 62%, booms: 60%

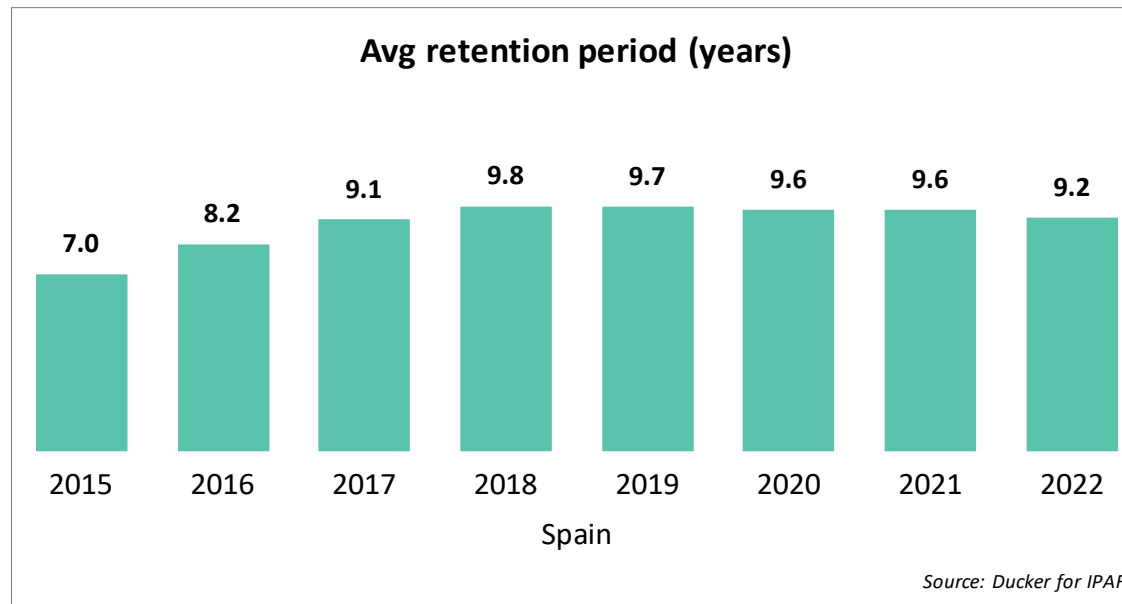
Average utilisation is defined as a physical number of machines out on hire as % of total number in fleet at any given time.



“Years like 2021 or 2022 are great, because demand never stopped and we had all our machines out, but we can’t be sure how long this demand will last, with global economic crisis looming and inflation rates going up. This is why we are diversifying our activity.” – MEWP rental company manager

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Average retention period decreased by four months in 2022, meaning MEWPs spend on average nine years and two months in Spanish rental fleets. The retention period is influenced by two opposing factors: Rental companies expanding rather than renewing fleets, due to longer than usual lead times from some MEWP manufacturers, and larger rental companies decreasing the average retention period by actively reducing the average age of their fleet.



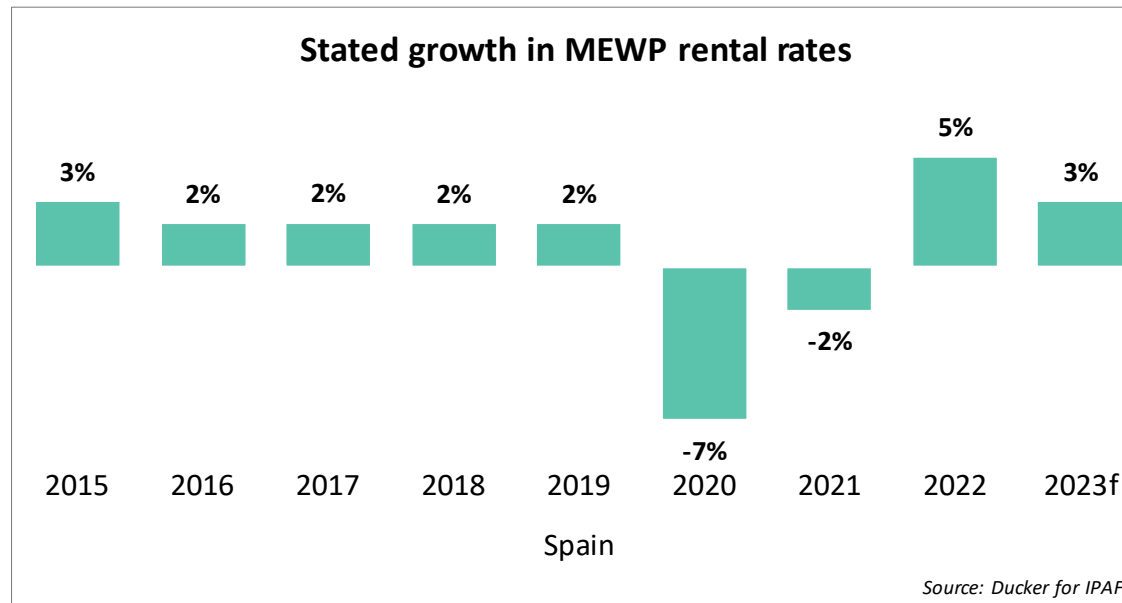
9.2 = 9 years and 2 months

Average retention is a period of time that a machine is kept in fleet = selling age if acquired new.

“Traditionally, Spain has had a much older fleet compared to other European countries. With larger rental companies changing the market by bringing in new fleet, the challenge now is to bridge growth across both used and new machines – rates are likely to have to go up to achieve this.” – MEWP rental company manager

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Rental rates rose by around five per cent in 2022, owing to growing demand and increasing input costs. Most rental companies were able to revise the rental rates to counterbalance the increased prices of new equipment. In both 2023 and 2024, further rental rate increases are expected, mainly to offset continued inflation.



“Rental rates have gone up because of general inflation in the market. Across the first six months of the year there was a clear price increase in the market of around five per cent on average.” – MEWP rental company fleet manager



A PERSPECTIVE FROM THE EDITOR OF
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According to Off-Highway Research's Global Market Review, while construction equipment sales in Europe rose by just 4% overall in 2022, the strongest growth was seen in the larger markets of southern Europe – most notably Italy and Spain, with the latter experiencing 17% growth. The Committee for European Construction Equipment (CECE) forecasts that the construction market in Spain will outperform the Eurozone average in 2023. Echoing this view is construction-market forecasting organisation Euroconstruct, which expects the construction sector to grow by almost 3% in 2023.

The implementation of the country's Recovery and Resilience Plan is set to boost growth in investment, especially in the construction sector. However, the residential sector in Spain is expected to show a decline in activity, owing to a higher interest rates and lower disposable household incomes having a negative impact on access to mortgages.

Anmopyc, the Spanish Manufacturers' Association of Construction and Mining Equipment, also sees growth ahead, with a sales volume of 4% in 2023 and a slight deceleration of the overall construction market, to 1.8% growth, in line with a slowdown in the economy, inflation and rises in interest rates. The country is seeing significant investments in areas such as railway, housing and development of sustainable cities that is set to continue to drive growth.

There is also transport-related investment in the Atlantic and Mediterranean corridors. However, S&P Global Market Insights, believes business investment intentions are under increasing pressure in the next few quarters amid rising cost pressures and diminishing business confidence owing to uncertain Spanish and global growth outlooks. However, S&P's analysts predict real GDP growth in Spain of 1% in 2023, 1.8% in 2024, and 2.4% in 2025. Construction spending in Spain is set to see a 3.6% compound annual growth rate (CAGR) between 2021 and 2026, led by the infrastructure segment. In the longer run, growth is forecasted to slow to a 2.3% compound annual rate between 2026 and 2031.

The infrastructure segment will again demonstrate the highest growth over the period. Spanish rental company GAM reported that sales were up 33% in 2022, on the previous year, with Spain 32% higher at €169.6 million, representing three quarters of its business. The company has a sustainability drive, with more than 75% of its equipment being zero-emissions.

This year GAM announced an agreement with Italian crane manufacturer Ormig to distribute its electric cranes in Spain, Portugal, Mexico, Chile and Morocco. On the subject of sustainability, Spain is one of the leading countries in the EU in terms of installed wind energy capacity, and the wind industry is an increasingly important sector of the country's economy. With falling costs, strong and consistent winds in many regions of the country and increasing demand for renewable energy, Spain has set a target of generating 74% of its electricity from renewables by 2030, and wind energy will play a major role.

For example, this growing market helped Madrid-headquartered Transportes y Grúas Aguado bounce back from the financial crash in 2008 to become an international player in the wind sector. “As for the state of the market, it looks like we will have a lot of work for the next two years, and then it should be steady up to 2030,” said Mario Aguado managing director of Aguado’s wind services business, with its fleet including large truck-mounts.

A recent sign of market confidence in Spain’s wind energy sector was the announcement at the end of last year of the Basque-Government-funded Megawind project, supported by some of Europe’s biggest wind energy and services companies, including Aguado. The three-year project will aim to the aim of adapting and improve monopiles to support bigger offshore wind turbines – that is, those that are 15MW and above in capacity.

Spanish equipment rental association ASEAMAC’s annual forum in Madrid, during January, saw digitalisation emerge as a key discussion point. Speaker Valero Serentill, sales director Spain, Portugal & Central and South America (LATAM) at Ritchie Bros, said digitalisation would help better management for improved revenues and utilisation data. This was critical in Spain he said, where fleet renewal was hampered by the current lack of available new equipment for purchase. Meanwhile the green transition was also being held back in Spain by the perception that investing in low-emission machines would prove too costly, he said. Also at the forum, Tomas Babicky, European affairs manager of the European Rental Association (ERA), commented: “Large construction companies expect rental companies to be digital.” Though he added: “When you look at medium-sized contractors, they are much less concerned with data and sustainability”.

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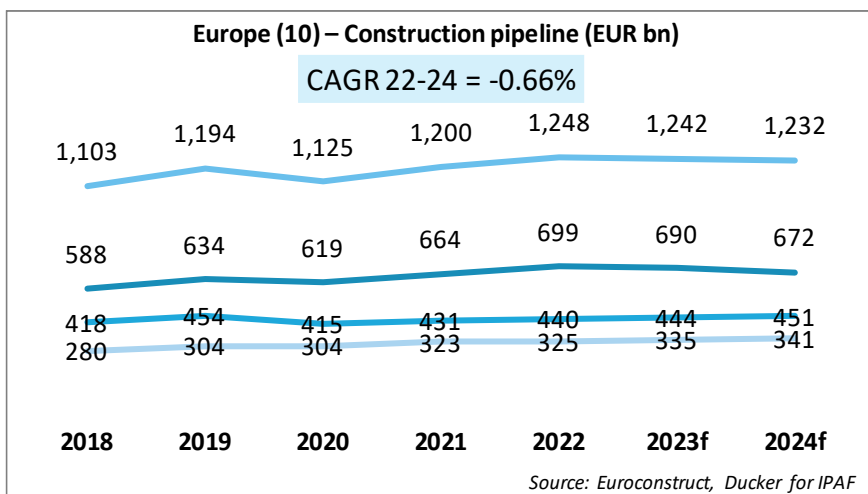


APPENDIX
IPAF Powered Access Rental Market Report 2023
Spain

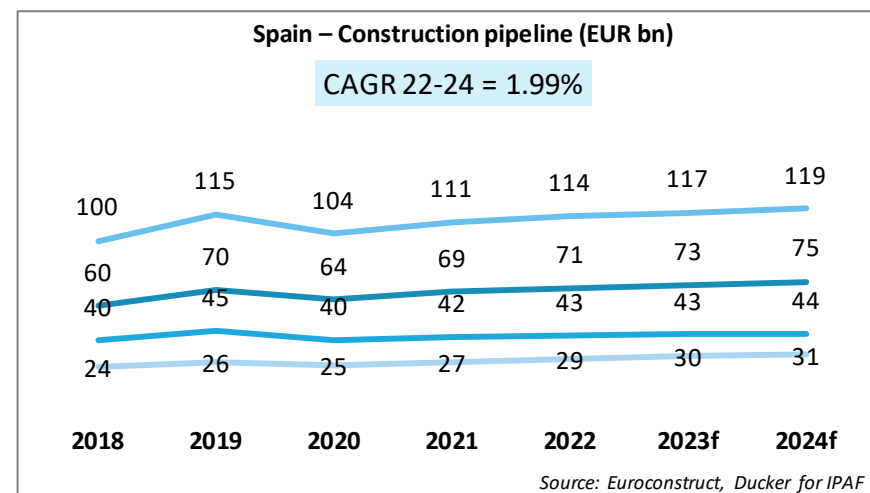
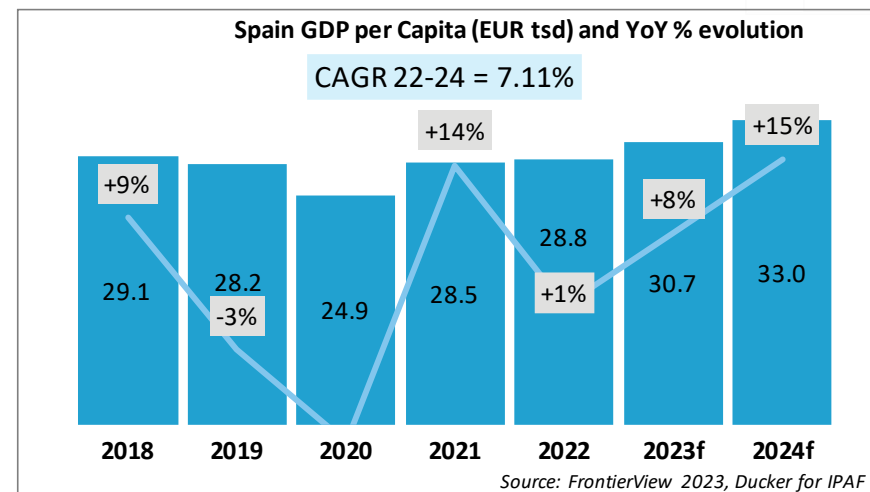
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Spain – construction statistics

After strong recovery of GDP as whole in 2021, there was a further slight increase in 2022. Spanish construction pipeline was not as badly affected by the pandemic than other European countries and is expected to continue to grow, albeit at a more moderate pace year-on-year.



- Residential construction
- Non-residential construction
- Total construction
- Civil engineering / Major infrastructure



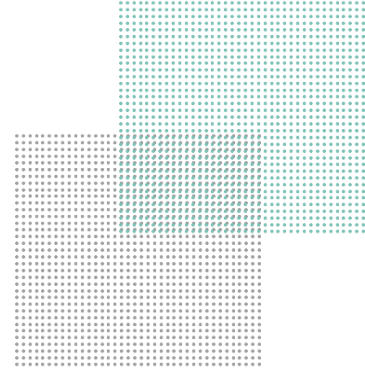
CAGR: Compound annual growth rate

Europe (10) includes Germany, France, UK, Italy, Spain, the Netherlands and the Nordics: Finland, Sweden, Norway and Denmark.

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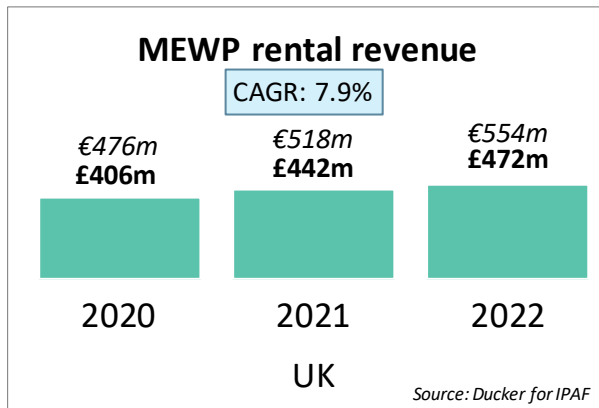
**THE EUROPEAN
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BRONZE
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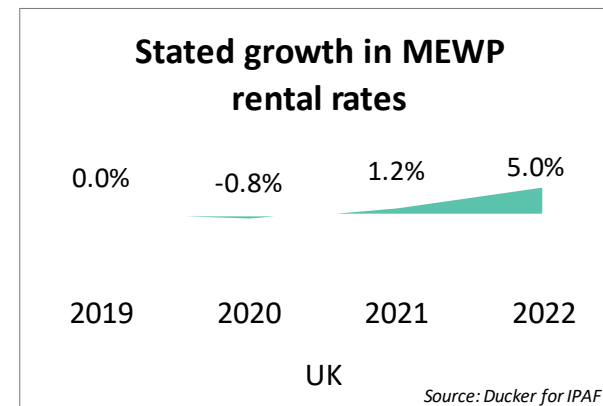
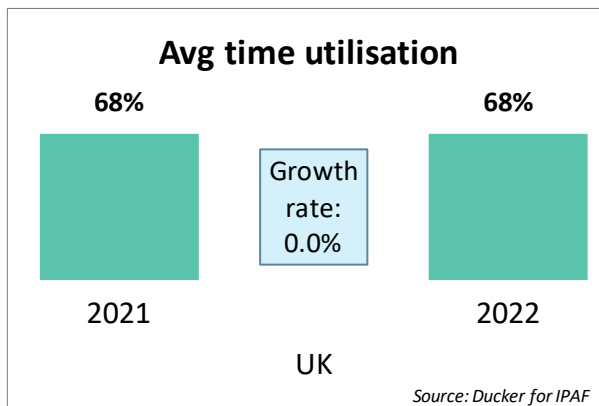
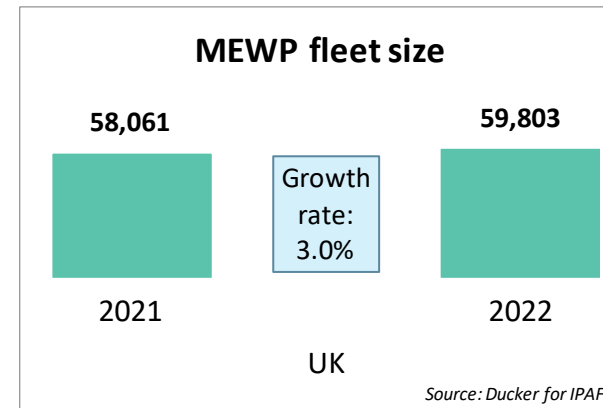
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All UK market indicators improved or remained steady in 2022, owing mainly to increased rental rates and fleet size. After a fairly rapid recovery in utilisation rates across 2021, owing to a post-pandemic bounce-back in economic activity, utilisation rates remained steady in 2022 owing to a positive year in the UK construction market, which exceeded expectations. Some rental companies increased services, while adding additional fees for battery charging on electric machines.



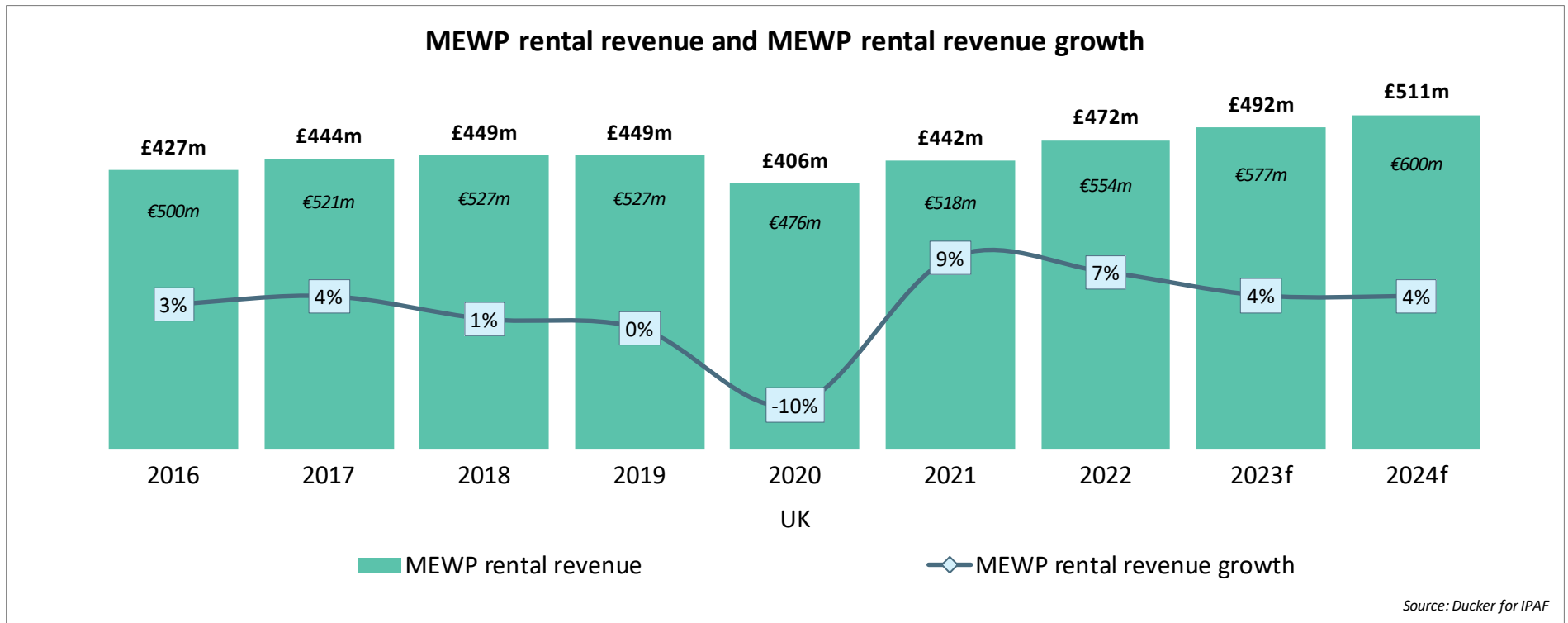
CAGR: Compound annual growth rate



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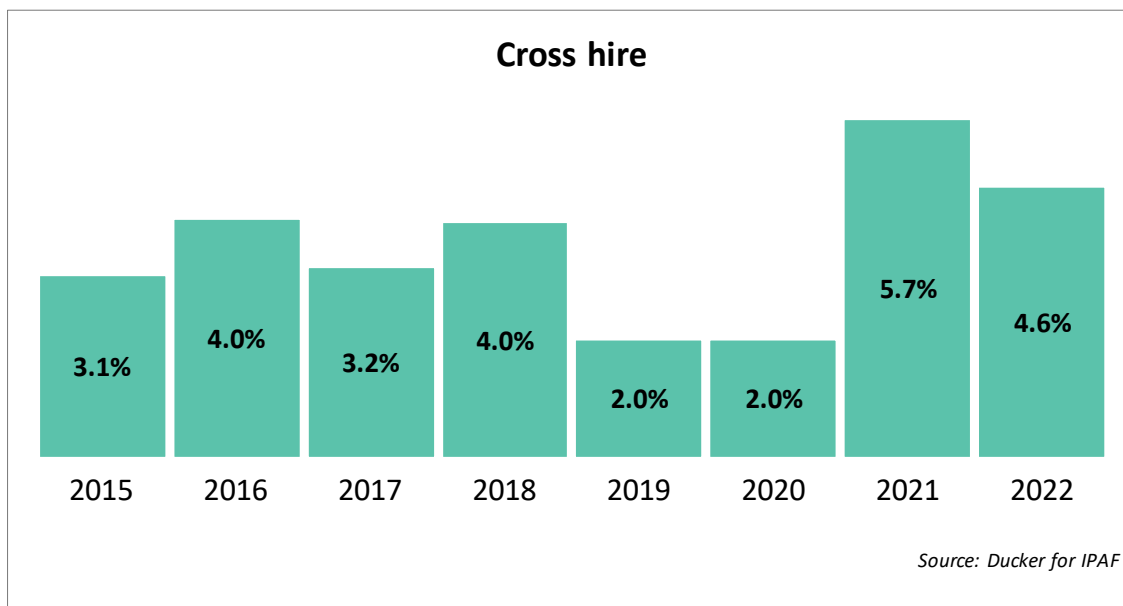
UK – rental market value and growth

The MEWP rental market in the UK grew by around seven per cent overall in 2022 and is expected to grow further throughout 2023. In 2022, revenue recovered to £472million, exceeding pre-pandemic levels, driven mainly by a resumption of business activity. Looking at next two years, rental companies are optimistic in their expectations, and total rental market revenue was forecast to reach more than half a billion pounds by the end of 2024.



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Cross hire decreased in 2022, after having risen markedly to around six per cent in 2021, to compensate for the absence of certain machine types. The reason cross-hire decreased again in 2022 was mainly down to fleet expansion. Some UK MEWP rental companies define cross-hire as part of their core business activity, but most companies try to limit cross-hire activity.



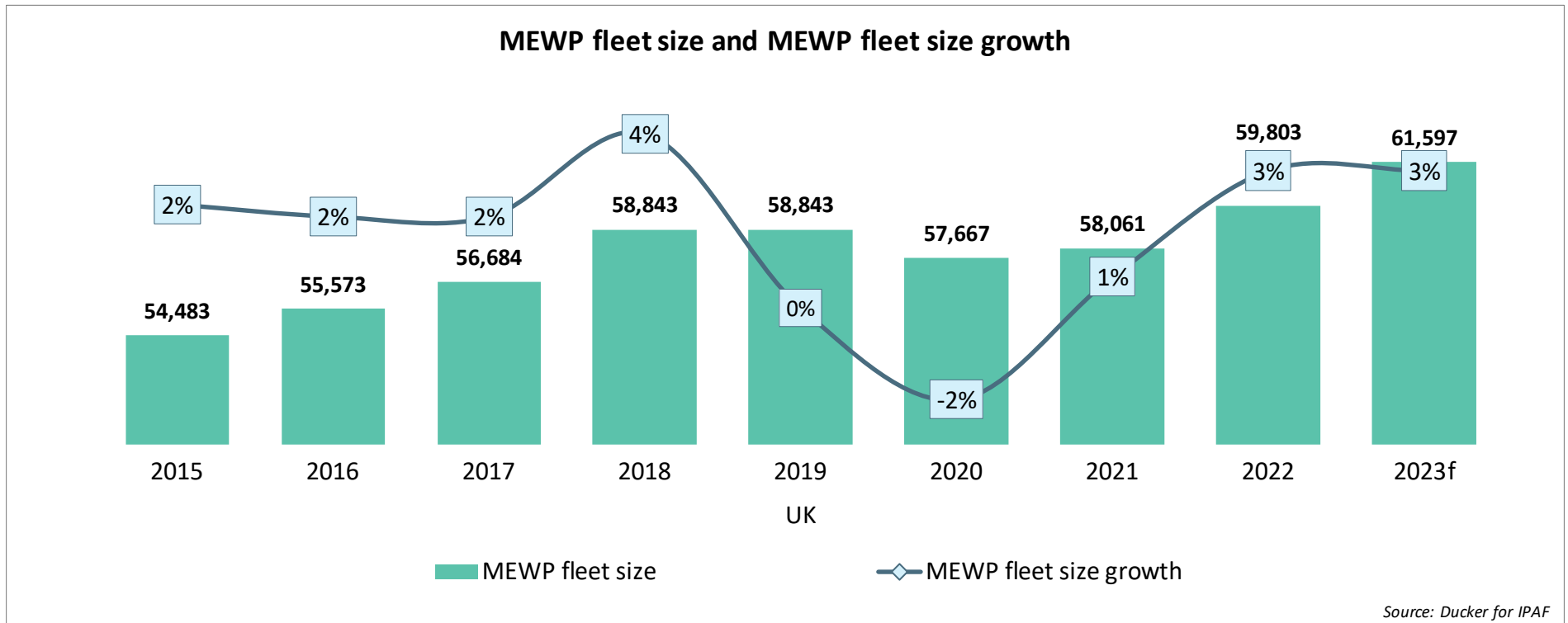
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“That’s the strategy we’re taking – we’re growing our business using partners. We’ve been adopting cross-hire for several years, but we are more focused on it this year and last year; we deliver what we believe to be unrivalled customer service, that we deliver through this network.” – MEWP rental company fleet manager

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UK – market size in units

The market size in units grew by three per cent in 2022, to reach a total estimated fleet size of almost 60,000 MEWPs by the end of the year. Rental companies continued to restructure and renew their fleets and are increasingly focused on adding electric powered machines as part of this strategy. The resale market for used equipment was unusually strong during 2022, owing mostly to global supply-chain issues that forced up both the price and lead times on certain OEM MEWPs worldwide.



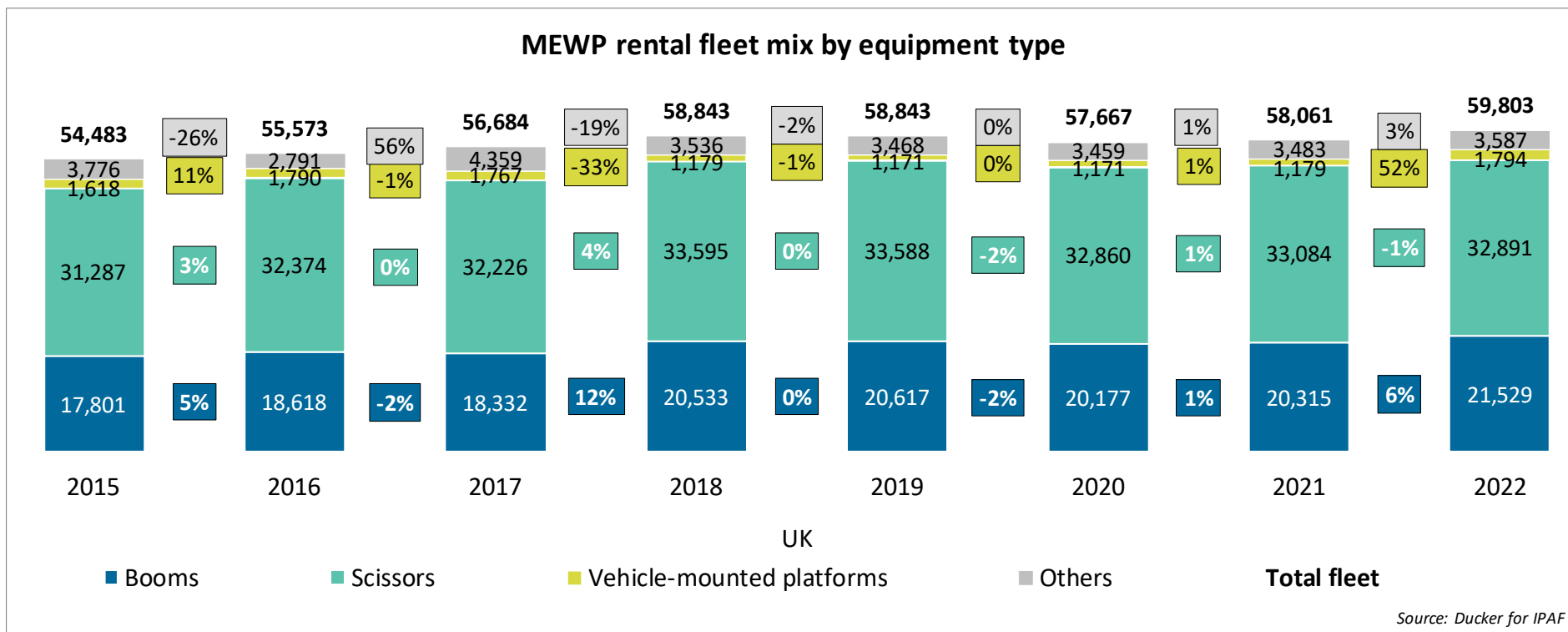
Included: All booms, scissor lifts and vertical masts

Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

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UK – market size in units

All MEWP categories saw growth in 2022, albeit at varying rates of increase. Medium to long-term, the trend is towards electric-powered equipment, as the fleet renewal cycle and fleet expansion allow. While booms and other machine types have seen a slight increase, particularly strong growth rates were reported for vehicle-mounted platforms, due to their versatile end-use applications and ease of transport without requiring separate road-going delivery vehicles.



+X% % unit growth, eg booms fleet increased by 6% from 2021 to 2022.

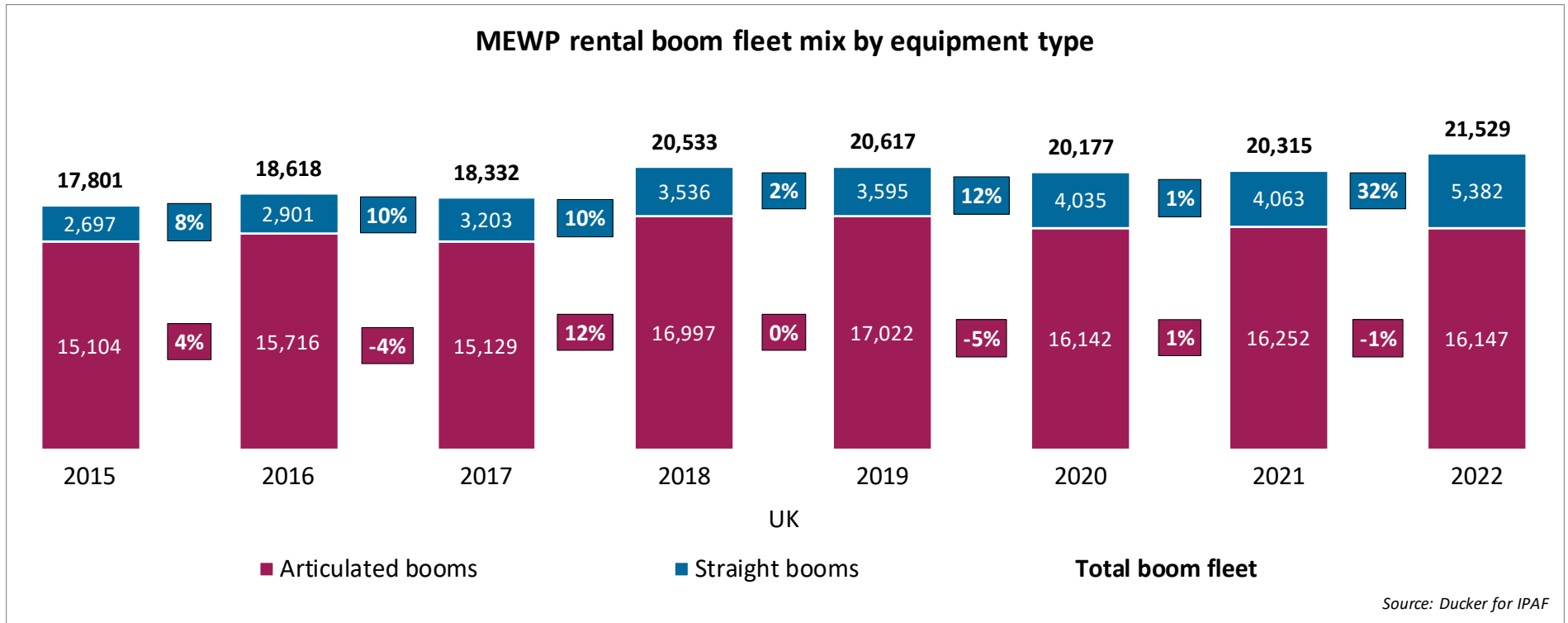
Others include: Vertical lifts, vertical masts, push-around verticals, trailer mounted/towable.

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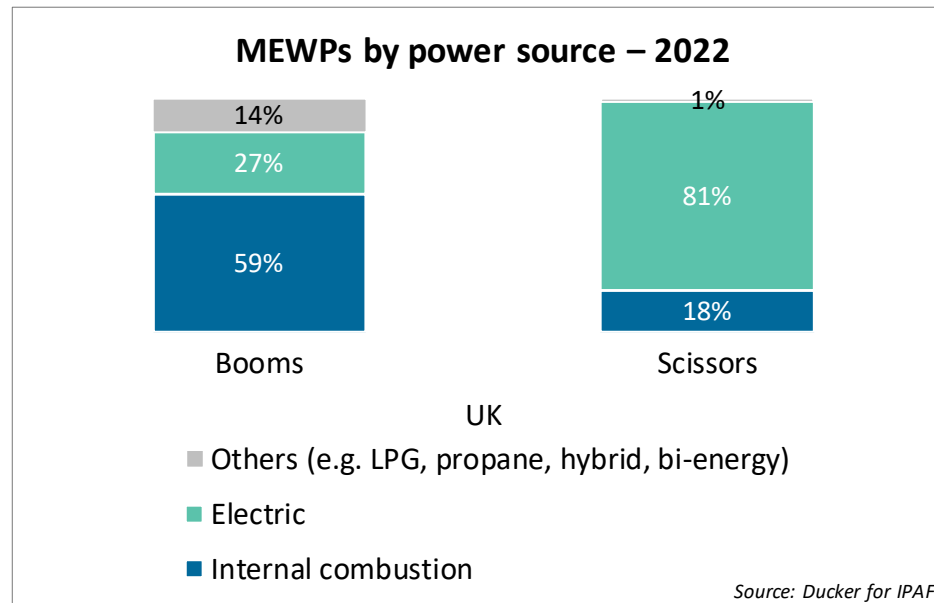
UK – market size in units

Total boom fleet exceeded 21,000 units, while articulated booms decreased in share slightly, straight booms increased by around a third (32%). The current ratio between articulated and straight booms in the UK fleet stands at 75:25. Though customer demand for both articulated booms and straight booms increased, general availability of new articulated booms from the OEMs has been problematical during the past few years, so the proportion of straight booms increased slightly.



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Transition to electric power sources continued for both main equipment categories in 2022, as MEWP rental companies continued renewing fleet. The more rapid transition was evident in terms of booms – clean powered MEWPs now represent 41% of all booms, significantly higher than the levels seen in 2021 (38%). Issues with infrastructure, off-grid charging, rough-terrain and outreach capabilities are all issues that are restricting the wholesale adoption of electric booms in construction.



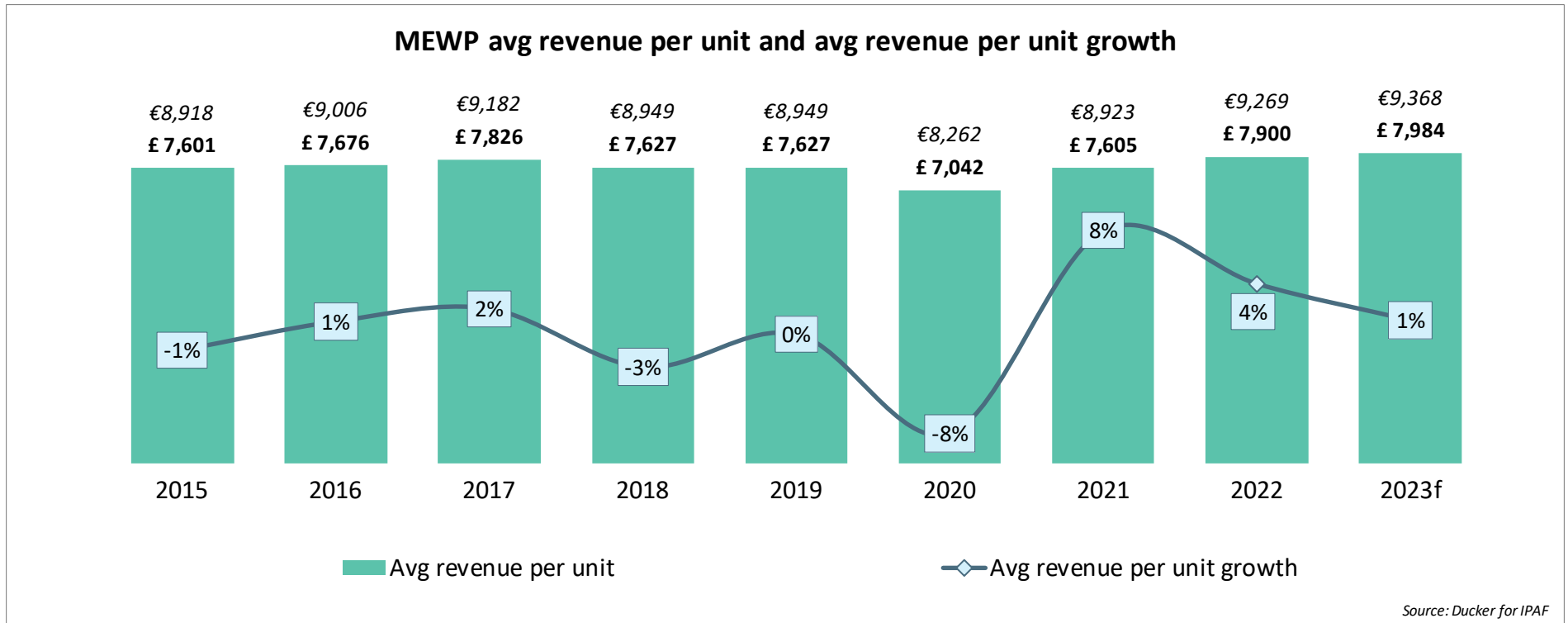
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“The infrastructure on building sites and the general infrastructure in the UK doesn’t really support the wholesale use of electric booms. Therefore, I think there’s still a lag between the opportunity for more electric machines versus the infrastructure that is available in the market to support that.” – MEWP rental company fleet manager

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UK – revenue per unit

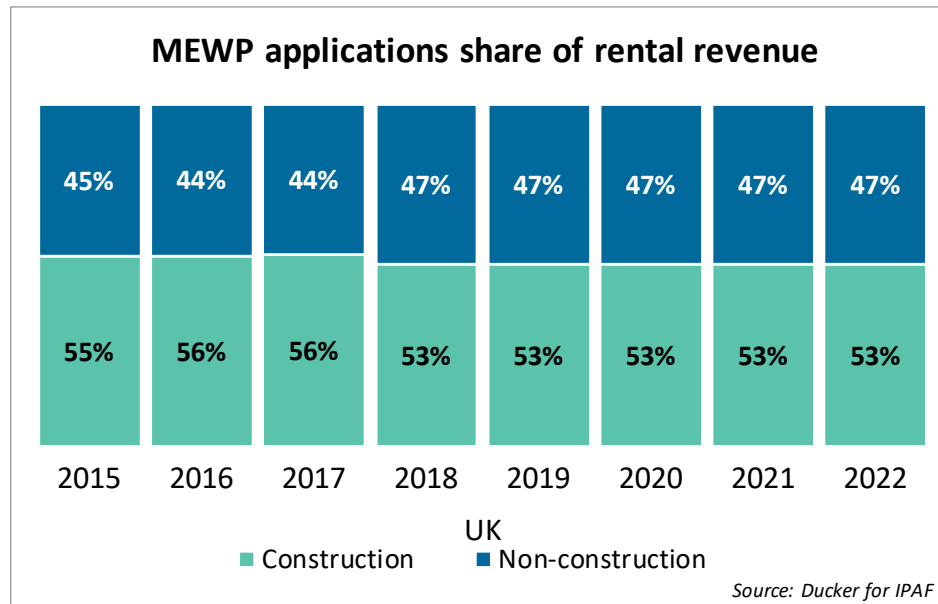
Average revenue per unit further increased in 2022 by around four per cent, continuing the bounce back that began in 2021. It stood at £7,900 per unit per year, driven by an increase in rental rates, exceeding both pre-pandemic and peak levels over the past 10 years. Though rental companies expect to be able to increase their rental rates from 2022 onwards, they consider any increases will not be enough to drive up average revenue per unit significantly in the short-term.



Included: All booms, scissor lifts and vertical masts. Excluded: Low-level access equipment (<3m high), telescopic material handlers, forklifts, cranes, and MCWPs

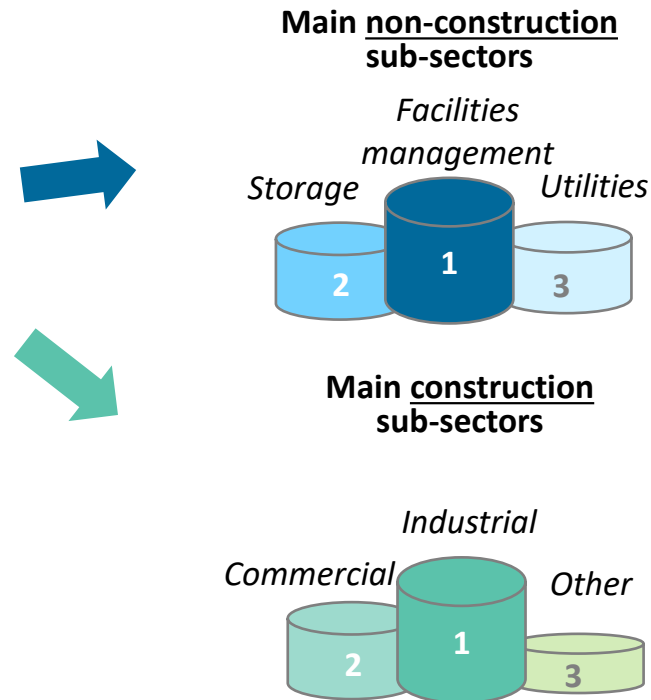
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Companies reported a stable split between MEWP applications, with no significant changes over the past five years. As both construction and non-construction sub-sectors are currently experiencing healthy activity, this 53:47 ratio in the UK is likely to remain unchanged over the next few years. Activity is healthy both in construction and non-construction sectors, including in facilities management, warehousing and wind-power end uses.

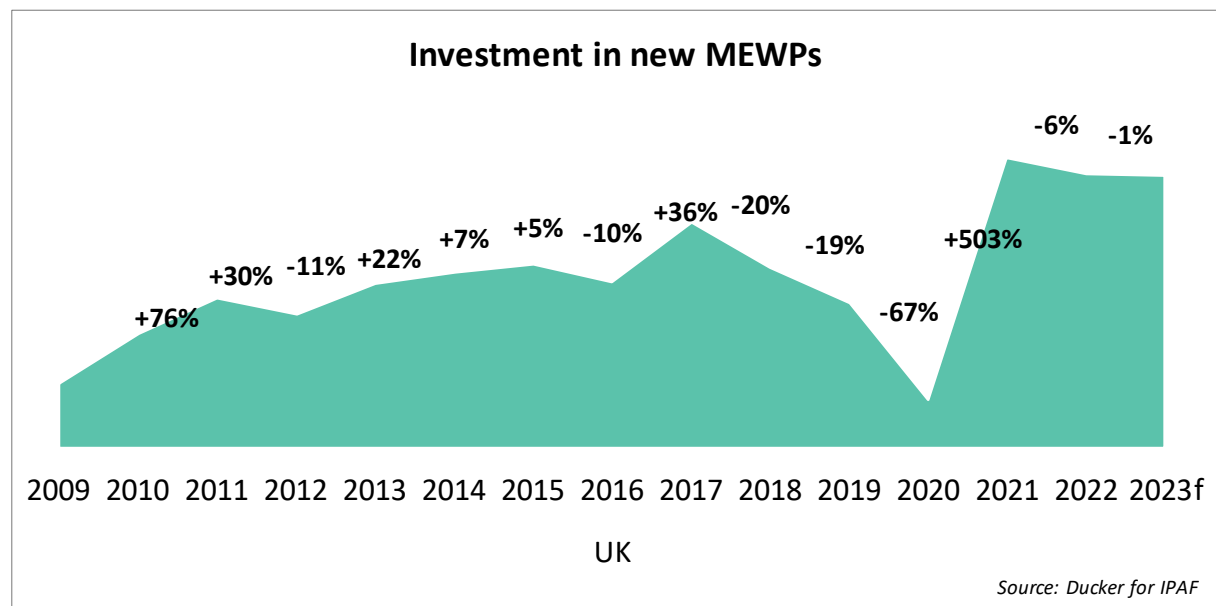


Non-construction activities include industry, maintenance, cleaning, utilities and events.

Construction includes new-build and renovation; including residential, commercial, retail and industrial.



In 2022, investment levels decreased marginally, after a post-pandemic bump the year before. Despite high levels of investment in 2021, some deliveries of new machines only arrived in fleets in 2022, which may have been one of the reasons investment fell back slightly. UK rental companies tend to focus on buying new machines, and usually prefer not to buy used MEWPs because of their higher maintenance costs, shorter lifespan and more negative environmental impacts.

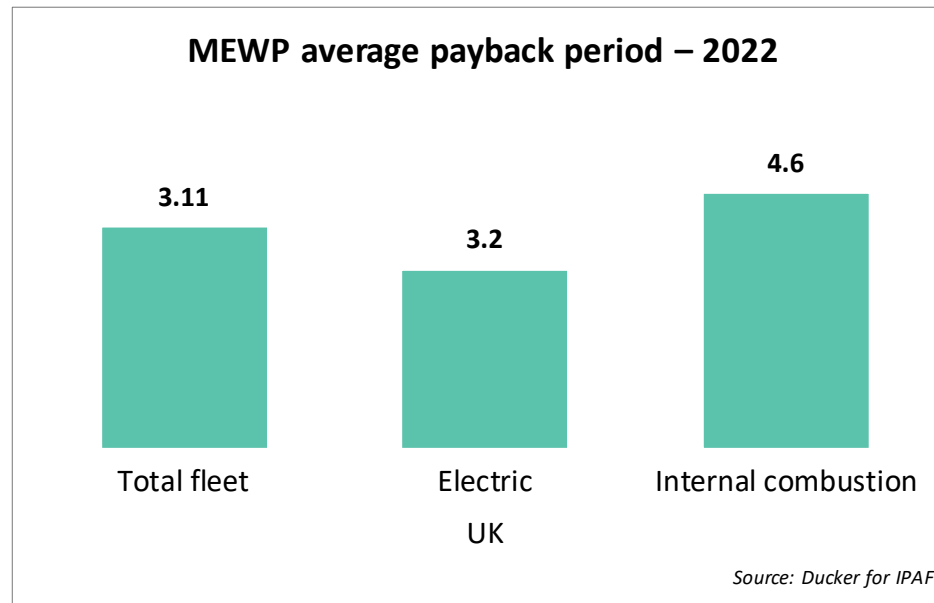


“We had supply chain issues, some of our equipment purchases from 2021 weren’t delivered into our fleet until 2022 – and we’re even still waiting for some!” – MEWP rental company purchasing manager

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UK – typical payback period

During 2022, the average payback period increased by three months, to 3 years and 11 months. While for electric MEWPs this was up four months, internal combustion MEWPs increased by six months due to significant price increases on new equipment. As in previous years, the difference between the average payback period for electric and internal combustion equipment in the UK is higher than in other European countries, owing mostly to higher average rental and utilisation rates.



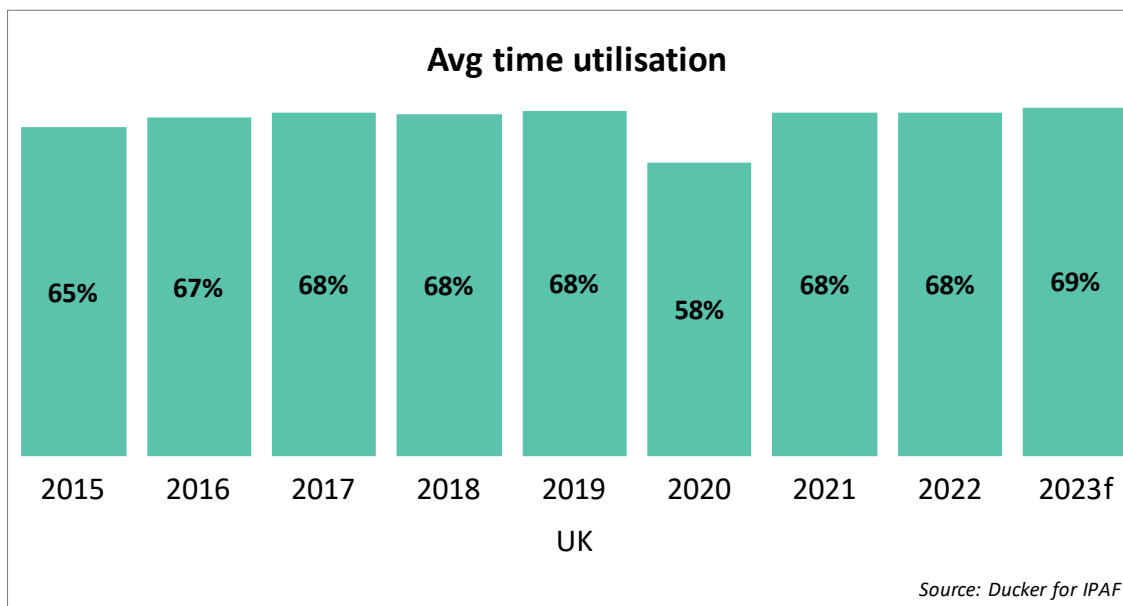
3.11 = 3 years and 11 months

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“We’ve made significant progress as a business on improving rates, but it’s been absorbed by higher wages; the cost of new equipment has gone up significantly and the cost of fuel and other incidentals have also gone up significantly.”
– MEWP rental company manager

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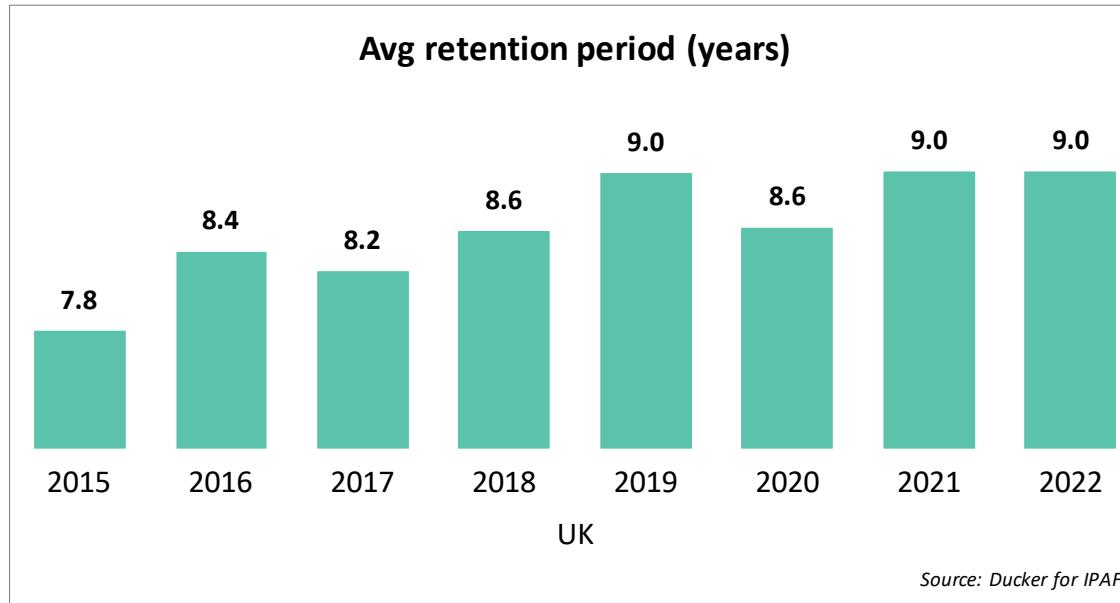
In 2022, utilisation rates remained steady at 68%, owing mainly to healthy levels of activity in non-construction and major or critical infrastructure projects. In 2021 there were supply restrictions on new machines and high levels of demand in the market, which led to increased average rental periods, and this was one of the main drivers of overall utilisation rate jumping by 10 per cent. During 2022, there was improving availability of new MEWPs, which led to a levelling off in the rate.



Utilisation of largest MEWP groups in 2022: scissors: 67%, booms: 69%

Average utilisation is defined as a physical number of machines out on hire as % of total number in fleet at any given time.

Average retention period held steady in 2022, after increasing by four months across 2021. This means that, on average, MEWPs spend almost nine years in UK rental fleets. This increase was largely down to two factors: Rental companies expanding rather than renewing fleets, owing to longer than usual lead times on new OEM machines, and rental companies making concerted efforts to extend the working life of machines through improved processes and maintenance regimes.



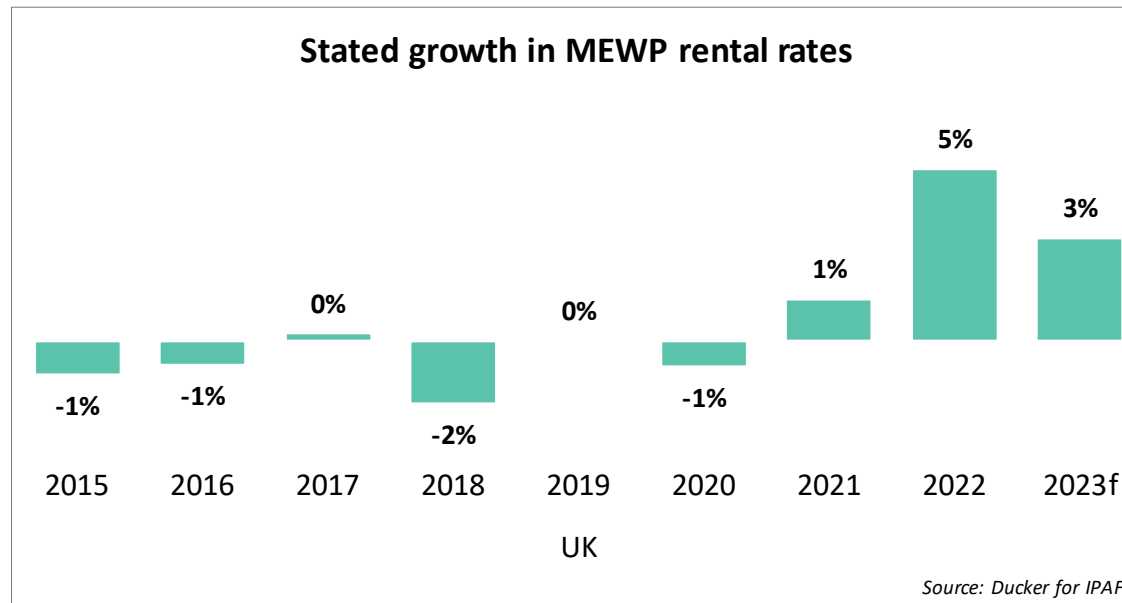
9.0 = 9 years and 0 months

Average retention is a period of time that a machine is kept in fleet = selling age if acquired new.

“We're just trying to look after our equipment better, we have instituted better processes, we have better engineering compliance, we are servicing the equipment better. Hence expecting a longer duration of the machines in service. The smaller electric machines tend not to last as long as the larger booms.” – MEWP rental company purchasing manager

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In 2022, the UK market saw significant rental rate increases by around five per cent, mainly as a result of increasing customer demand combined with rising overheads caused by inflation and increased machine prices. Rental rates are expected to show modest increases during 2023, to further counterbalance the ongoing impact of inflation and rising costs.



“Given the improvement in used equipment prices, there is an opportunity to reprofile the rental fleet to more profitable equipment types. I’ve seen others increase even more compared to our rental rate increases. It’s not sustainable to have a high increase year on year, but rates are likely to further increase in 2023.” – MEWP rental company purchasing manager

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The UK economy faces a range of challenges, including relatively higher inflation and ongoing issues related to Brexit, accompanied by global issues such as the war in Ukraine and supply chain constraints. In its 2022 financial report, Manitou Group said it capped off 2022 with a 26% increase in revenues over the year, reaching a new record of €2.36 billion. On the subject of global markets, Manitou said the situation was buoyant: “Markets remain globally well oriented. Only the construction sector in Europe, in particular the UK and Germany, is showing less dynamism or a slowdown.”

Ashtead, owner of Sunbelt Rentals, reported UK business was down 19% at \$193.3 million in the final quarter of last year. Ashtead said the business was facing a “transition year” as it redeployed equipment it had used in pandemic-related contracts from the UK’s Ministry of Health. This is in comparison to the US division of Sunbelt Rentals, which saw third-quarter revenues up 26% to \$2.07 billion, while sales in Canada were 35% higher at \$163.8 million.

The UK film and TV industry is showing rapid growth, owing to investment by major studios in the UK. In December, Sunbelt acquired London-based film, TV and commercial grip specialist Alpha Grip (UK) Limited. The move follows a number of other recent Sunbelt acquisitions in the sector, including Movietech, a camera, lens and grip rental specialist, PKE Lighting and Media Access Solutions (MAS).

Nevertheless, challenges in the UK market remain. According to the UK’s Construction Products Association (CPA), the UK is one of the worst-performing economies in Europe. Construction output is expected to fall by 4.7% in 2023 before recovering in 2024 with growth of 0.6%. Residential output is forecast to decline by 11% in 2023, as housebuilders focus more on completing existing developments than starting projects, as a result of rising mortgage rates and falling real wages.

By contrast, the CPA says infrastructure continues to go from strength to strength, reaching historic highs in 2022 thanks to projects such as HS2, the Thames Tideway Tunnel and Hinkley Point C nuclear power plant, as well as activity in rail, road and energy. Looking ahead, further growth in infrastructure is expected but likely to be slower than in previous years.

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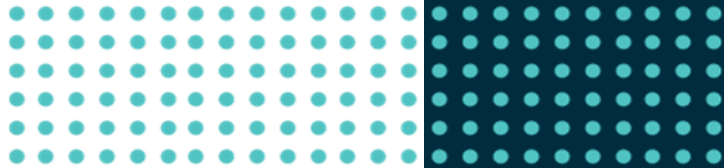
The European Rental Association/IRN RentalTracker confidence survey, at the end of 2022, found that the UK is below average on most counts, though it was not so much confidence levels that were the issue – 50% said they will still increase spending and 60% reported a better 2022 fourth quarter year-on-year. It was more that there was the considerable deterioration over the previous edition of the survey in the second quarter of the year.

The UK's Construction Equipment Association (CEA) has a similar outlook. Sales of equipment are expected to decline by 7% in 2023, reflecting lower levels of construction activity. Sales in the early part of the year may benefit from delayed demand from 2022, owing to supply-chain constraints limiting machine manufacturing activity and supply.

Another challenge comes from Brexit, with Skyjack providing an example. It has traditionally had its European base in the UK. But upheavals caused by the UK leaving the EU have been greater than expected. Ken McDougall, Skyjack president, said: "There's also cost and distribution issues created by Brexit. Brexit has been a pain, especially for a company like us that used the UK as our central distribution point for mainland Europe. Now, if you look at a value stream map, it doesn't make sense. It had us looking at other opportunities for mainland Europe."

While Skyjack's UK operation and skill-set will remain, McDougall added: "We may duplicate and have a secondary EU distribution point, and there are some obvious places. There are some irons in the fire. That market is big and it still forms a very important part of our distribution channel."

The UK is showing strong leadership in green energy. JCB, based in the UK, unveiled a mobile hydrogen refueller that it says will allow refuelling of hydrogen-powered machines in the same way that bowsers are used for diesel-powered equipment. The UK manufacturer said the refueller was part of its £100 million investment in hydrogen engines, which has so far created working prototypes of a backhoe loader and Loadall telescopic handler.

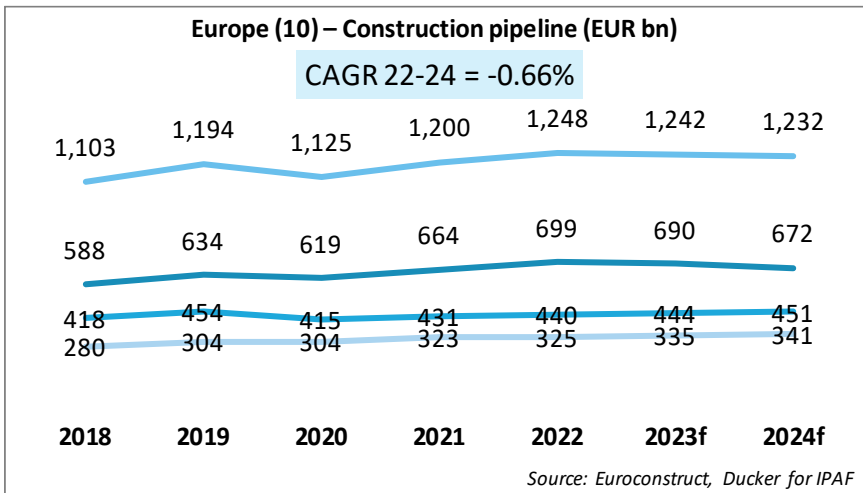


APPENDIX
IPAF Powered Access Rental Market Report 2023
UK

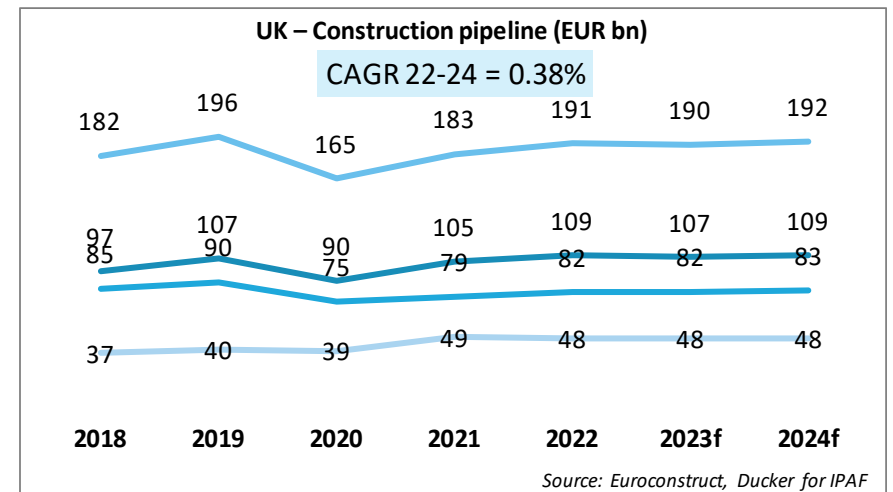
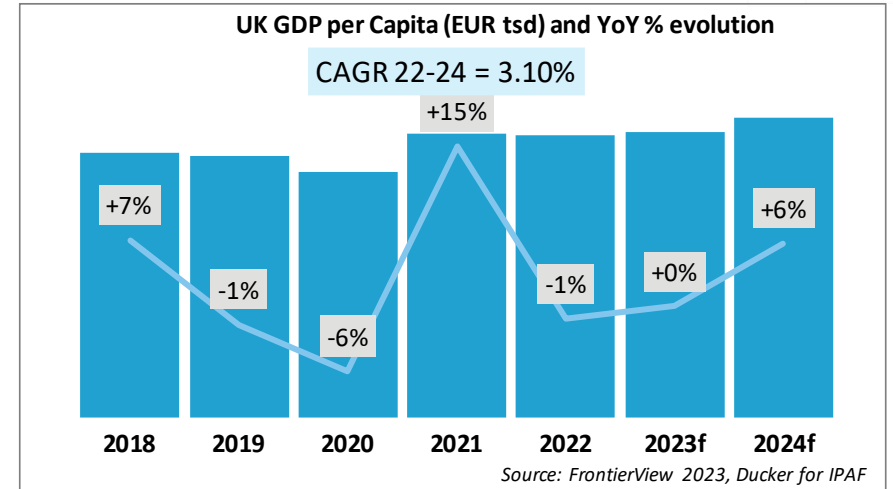
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UK – construction statistics

As expected, the UK construction industry saw output accelerate during 2022 and total value of construction almost reached pre-pandemic levels again. Both the construction sector and GDP as whole is forecast to increase at a more moderate pace in 2023-24.



- Residential construction
- Non-residential construction
- Total construction
- Civil engineering / Major infrastructure



CAGR: Compound annual growth rate

Europe (10) includes Germany, France, UK, Italy, Spain, The Netherlands and the Nordics: Finland, Sweden, Norway and Denmark.

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APPENDIX

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Audrey Courant

Audrey is a Managing Principal at Ducker Carlisle where she heads the Off-Highway practice for EMEA. Audrey holds a bachelor's degree in management and consulting from Toulouse Business School. After starting her career in the US automotive industry, she now has 15 years of experience in the construction, mining and agriculture industries and leads critical market intelligence and customer insights engagements at Ducker Carlisle for OEMs, suppliers, trade associations and the financial community. Clients value Audrey's knowledge and leadership regarding distribution organization changes, digitalisation trends and sustainability goals.



Anne Myon

Managing Director at Ducker Carlisle. With over 10 years of experience, Anne heads Ducker EMEA's Heavy Equipment projects, and has been leading many engagements for key OEMs, suppliers and trade associations, with specific focus in the MEWP segment. Anne has strong expertise in qualitative and multicountry approaches to market modelling and customer insight generation for major industrial corporations in the off-highway equipment. A French native she is bilingual in English and has managed the IPAF MEWP rental market reports preparation for the last 13 years. She has a MSc in Business Administration from ESSEC Business School, France.

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Jana Rohwer

Jana is a Senior Market Analyst on the EMEA consulting team based in Berlin. With more than five years of research and consulting experience, she has developed expertise in market intelligence projects, primarily in the off-highway equipment and construction sectors. Jana holds privileged relationships with multiple industry stakeholders, such as manufacturers, rental companies, and associations. She has led numerous engagements and her combined method and sector expertise are instrumental in delivering actionable market insights. She holds a degree in Anthropology and Ethnology from Aarhus University, Denmark, speaks German and Danish as her native languages, and is proficient in English.



Peter Douglas

Peter has been IPAF CEO & Managing Director since 2019, having previously been an IPAF Board member. He formerly worked for IPAF member firm Nationwide Platforms in a variety of roles over more than 25 years. Peter has almost three decades' experience in powered access and hopes to make the industry worldwide as safe as it possibly can be. Since Peter joined IPAF, he has driven forward IPAF accident reporting, overseen a significant rise in uptake of IPAF eLearning worldwide, as well as the introduction of new training courses and the implementation of the ePAL app for MEWP and MCWP operators. As a member of the Access Industry Forum (AIF), Peter continues to contribute IPAF's views to the UK APPG of MPs inquiring into falls from height. He is also a trustee of the AIF's No Falls Foundation.



Matt Brereton

Matt is IPAF's Communications Manager, having joined in early 2017. Matt is a journalist by profession, having worked in production roles at both *The Scotsman* and *Telegraph* newspaper groups over a career spanning more than 12 years, first in Edinburgh, then in London. Over the past ten years, Matt has worked in a variety of communications roles in construction, commercial and residential property, public affairs and politics. In addition to this, Matt is an elected local government representative in South Cumbria, the member for High Furness ward on the new Westmorland and Furness Council and for six years prior to that on Cumbria County Council. Matt has been closely involved in the production of the DuckerCarlisle *Global Powered Access Rental Market Reports* since assuming his role at IPAF.

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The International Powered Access Federation (IPAF) promotes and enables the safe and effective use of powered access equipment worldwide in the widest sense – through providing technical advice and information; through influencing and interpreting legislation and standards; and through safety initiatives and training programmes.

IPAF is a not-for-profit organisation owned by its members, which include manufacturers, rental companies, distributors, contractors and users. IPAF members operate a majority of the MEWP rental fleet worldwide and manufacture about 90% of platforms on the market.

Visit www.ipaf.org/contact to find details of your nearest office or representative.

The Ducker logo features the word 'DUCKER' in a white, uppercase, sans-serif font, centered within a white square border on a dark teal background.

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