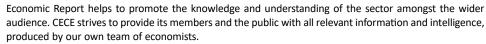


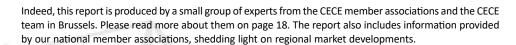
Dear reader,

Welcome to the CECE Annual Economic Report. 2021 was the year of recovery and comeback!

The report you are reading contains an in-depth analysis of the macroeconomic situation in Europe, insights into the major client groups, such as construction, mining and rental and a substantial focus on the market performance of machinery & equipment.

Please share it within your network with no moderation whatsoever! Indeed, as a publicly available source of information, the CECE Annual





In terms of highlight, the counter-cyclical impact of public investments in Europe and the US helped the sector recover fully, most of all considering the substantial slowdown of the Chinese market.

As you will see in the equipment chapter, the sector in Europe staged a grand comeback, well beyond our expectations and the statistical base effect of 2020. All the product segments posted spectacular growth above +20%, with volumes nearing the all-time records of 2007, but with a very different geographic spread.

This positive result is even more remarkable when a few substantial systemic challenges are factored in. Indeed, 2021 saw the emergence of major issues such as component scarcity, shipping bottlenecks and increases in freight prices. The backlash of these issues and the sustained demand point to full order books, with many OEMs predicting backlogs and very long delivery times.

The business sentiment that we gauge monthly through the CECE Business Barometer is at very optimistic levels in early 2022. This leads us to believe that 2022 will be another positive year and possibly a record-breaking year in terms of absolute levels. It is now difficult to make a numerical forecast, but the final chapters of this report will provide some relevant market intelligence leads for companies and investors to ponder.

Comments are always welcome and can be directed to info@cece.eu. If you want to get an overview of the report before reading it, please take a look at this short video.

Riccardo Viaggi CECE Secretary General

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Executive Summary

CONSTRUCTION INDUSTRY

The construction sector in the Eurozone has been hit hard by the pandemic, but not to the same extent as other industries in the services sector. 2021 was a year of recovery in all markets, especially in countries that applied severe containment measures such as Spain and France. However, given the uncertain business outlook and the weak financial situation, growth did not fully offset the declines seen in 2020.

MINING INDUSTRY

Exploration and drilling activity in the global mining market continued on a growth path in 2021, after suffering from a reduction in activity in the early part of 2020 due to the impact of the Covid pandemic. While drilling activity showed a slight dip towards the end of 2021, it showed a significant increase of 68% for the whole year, in terms of drill holes, compared with 2020.

EXTRA FEATURE: RENTAL INDUSTRY

The Q4 2021 ERA/IRN RentalTracker survey – undertaken at the end of 2021 - shows that levels of rental business confidence in Europe remain at a good level and have not changed dramatically since the previous survey in June 2021.

EQUIPMENT MARKET

Demand for construction equipment in Europe stayed on a growth path in 2021, after the industry had already seen a return to growth in the second half of 2020 when the impact of the pandemic was receding.

OUTLOOK

From a market demand perspective, Europe is expected to stay strong in 2022, with some of this due to the ongoing benefits of the EU's Covid recovery funding. All end-using industry segments, including general construction, mining and quarrying, and landscaping are reporting a positive situation for order bookings.





MACROECONOMIC VIEW

A return to growth

European countries saw their economies return to growth in 2021. This reflected the gradual easing of measures to reduce the spread of the Covid-19 pandemic and the macroeconomic policies associated with it.

t the same time, major overseas markets that are key export destinations for European countries experienced strong recoveries in demand. In 2021, GDP within the euro zone increased by 5.3%, following a fall of 6.4% in 2020.

Germany recorded the weakest performance with only 2.8% growth, while Spain saw a 5% increase, Italy improved by 6.5% and France by 7%. Outside of the European Union, gross domestic product rebounded by 7.5% in the United Kingdom in 2021.

During the first half of 2021, the strength of the economic recovery was surprising in terms of its speed and magnitude. Private consumption surged, as households started to spend savings that had accumulated during 2020.

In addition, the reopening of service sectors and the ending of travel restrictions within the intra-EU area stimulated recovery, especially in Greece, Italy, and Spain that all have large tourist sectors. However, in the second half of 2021

the region faced significant headwinds. This involved the manufacturing sector which experienced significant supply chain disruptions, caused mainly by shortages of shipping containers and capacity limitations in Asian ports.

This included the automotive industry, which was forced to scale back production due to the global shortage of semiconductors. On top of this, many industries and service sectors were faced with large-scale shortages of workers.

Consumer price inflation had been negative in many European countries in 2020, but then accelerated significantly in the second half of 2021 and exceeded the European Central Bank's 2% target rate.

Very large increases in the cost of raw materials and energy and persistent supply-chain problems were the main reasons for this surge in inflation.

In Eastern European countries with volatile exchange rates, depreciation added to these inflationary pres-

sures. While some of these factors are considered to be temporary, there is a risk that there will be a longer-than-anticipated period of above-target inflation in the region. Economic growth is expected to remain strong over the next three years despite some headwinds in the short term.

Significant increases in rates of coronavirus infections in several of the countries in the euro area has led to a renewal of restrictions and heightened uncertainty about the duration of the pandemic. In addition, supply chain bottlenecks have intensified and are now expected to last longer.

The expectation is that they may gradually ease after the second quarter of 2022 and fully unwind by 2023. GDP is now expected to exceed its pre-crisis level in the first quarter of 2022.

Private consumption will remain the key driver of economic growth, benefiting from the rebound in real disposable income, increased spending of accumulated savings and a robust labour market.

	Gross Domestic Product growth in %			Gross Investment in equipment in %				
	2020	2021	2022	2023	2020	2021	2022	2023
Germany	-4.6%	+2.8%	+3.6%	+2.6%	-11.2%	+5.4%	+5.6%	+4.7%
France	-7.9%	+7.0%	+3.6%	+2.1%	-10.6%	+11.3%	+2.8%	+2.4%
UK	-9.4%	+7.5%	+6.0%	+2.1%	-15.4%	+1.7%	+6.6%	+1.1%
Spain	-10.8%	+5.0%	+5.6%	+4.4%	-12.9%	+15.0%	+8.0%	+7.5%
Italy	-8,9%	+6.5%	+4.1%	+2.3%	-15.1%	+15.8%	+5.4%	+5.2%
EU	-5.9%	+5.3%	+4.0%	+2.8%	-11.4%	+10.1%	+6.1%	+4.6%

Sources: European Commission - Feb.2022

(GDP)ONS for UK (GDP)

European Commission - Nov.2021 (Investment)





CONSTRUCTION INDUSTRY

The construction industry is expected to continue to grow in 2022 but at a more moderate pace than the rapid acceleration seen in 2021

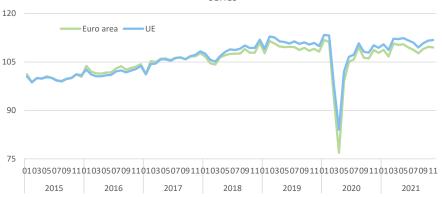
CONSTRUCTION OUTPUT IN 2021 SHOULD RECORD A RECOVERY OF AROUND 5.6%

In November 2021 compared with November 2020, construction output increased by 0.5% in the euro area and by 1.3% in the EU. Annual comparisons by sector and by Member State in the euro area show that civil engineering increased by 0.7% and building by 0.3%. In the EU, civil engineering increased by 1.5% and building by 1.2%. Among the Member States for which data is available, the highest annual increases in output in the construction sector were observed in Poland (+12.7%), Hungary (+12.3%) and Finland (+8.4%). The largest decreases were recorded in Slovenia (-17.3%), Belgium (-8.8%) and Spain (-5.6%). Although data for the month of December is not available yet, the year 2021 will go down as the year of the rebound in the construction sector in Europe.

DESPITE STRONG GROWTH IN THE CONSTRUCTION SECTOR IN EUROPE IN 2021, NOT ALL COUNTRIES HAVE RETURNED TO PRE-COVID LEVELS

The construction sector in the Eurozone has been hit hard by the pandemic, but not to the same extent as hotels and the aviation sector. 2021 was a year of recovery in all markets, especially in countries that applied severe containment measures such as Spain and France. However, given the uncertain business outlook and the weak finan-

Production in the construction sector 2015=100, seasonally adjusted series



cial situation, growth did not fully offset the declines seen in 2020.

A number of factors within the sector supported the widespread international recovery and helped to improve the situation within the construction industry. This included investment in infrastructure projects and the introduction of generous incentives for the renovation and modernization of buildings.

Construction output in 2021 should record a recovery of around 5.6% according to Euroconstruct, which, after a difficult year in 2020, represents a bounce back similar to the level of declining activity the year before.

At a country level, the situation is quite varied. In some countries precrisis levels of output have already been exceeded. In others, market activity reached a similar level last year compared with 2019. However, in some countries there is still a shortfall compared with pre-crisis levels of output.

In Italy, levels of investment in construction in the 3rd quarter demon-

strate a positive outlook, at 8.9% above the same period in 2020. This includes investment in housing (+9.5%) and in non-residential buildings (+8.4%).

This also represents a rising trend when compared with the same "pre-pandemic" period in 2019 (+13.1%), which demonstrates that construction is on a gradual recovery path. This dynamic should continue, thanks to the significant measures put in place by the Italian overnment, such as the Superbonus 110% and the opportunities offered by the Recovery Plan. In 2021, CRESME estimate that investment in construction will show a 17.6% increase compared with the previous year. This growth is mainly driven by residential renovation (+25.2%), and also a significant contribution from investment in new public works (+15.4%). In Germany, residential construction activity remains as the main driver of growth. In 2021, growth in construction output picked up, driven by the government's focus on the development of the country's transport and energy infrastructure. Manufacturing output in Germany in 2021 increased by 3% year-on-year, but was still 5.5% below





the pre-crisis level in 2019, according to Destatis, the Federal Statistical Office.

The Spanish construction industry is expected to show only marginal growth in output of 0.8% in 2022, after seeing a sharp decline of 11.3% in 2020.

In France, public works activity rebounded in 2021 by 10%, due to the impact of a post-covid catch-up, particularly in the spring-time, before a less dynamic second half of the year. However, it remains well below pre-crisis levels (-3.8%), due mainly to sluggish order intake throughout the year.

The volume of building activity remains 5% below 2019 levels. Taking into account production times, new housing comes out at -5.8%, despite a small increase in site openings (+ 0.9%) which are recorded at 390,000 units.

New non-residential activity remains at very low levels, with output at -10.5%, and all segments within the sector contributing to this weak position.

In contrast, repair and maintenance activity held up much better, at -2.6%, thanks to energy renovation in the housing sector. This exceeded its pre-crisis level by 5.0%, boosted by the redeployment of the MaPrimeRénov' scheme.

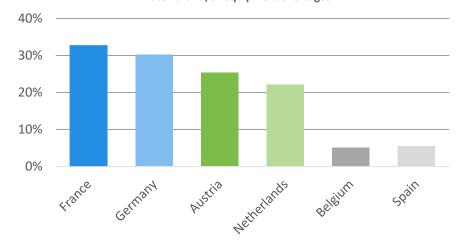
Construction experts in the United Kingdom are forecasting a positive picture for the industry over the next year with strong levels of activity expected, despite on-going concerns regarding sourcing of materials and labor. Annual construction output increased by a record 12.7% in 2021 compared with 2020.

However, this was comparing activity with a weak 2020 due to the coronavirus pandemic which resulted in a record decline in annual output of 14.9%.

THEEUROPEANCONSTRUCTION SECTOR IS EXPECTED TO GROW BY 2.5% IN 2022

Despite the pressure on prices, business confidence at the start of 2022 is positive among most entrepreneurs in the European Union and is returning to pre-covid levels. The highest ratings

% EU construction firms that have to limit production because of material and/or equipment shortages



for business confidence have been recorded in Austria and the Netherlands.

Optimism among entrepreneurs was already high in both countries before the Covid-19 outbreak and recovered quickly after the first wave.

In addition, construction activity in these countries was hardly affected by lockdowns as construction sites remained open. Sentiment in the Spanish construction industry has been fairly neutral in recent months, although order bookings are improving.

It is forecast that non-residential construction will show improved growth in the near future, with 2.5% growth expected on average between 2022 and 2024. Similar levels of growth are expected for civil engineering, at 3% per year. In contrast, more moderate increases are expected in levels of expenditure for housing.

Across the different markets, strong growth of more than 4% p.a. is expected in Ireland, Spain, Hungary and the United Kingdom.

However, fairly flat construction activity is anticipated for Germany and Switzerland, and output will probably decline in Finland and Sweden.

According to ING research, construction activity is currently being stimulated by new investment from the EU Recovery fund. Alongside this, ongoing housing shortages and high house prices are driving demand for new residential construction. In addition, non-residential construc-

tion will see a rebound as the Covid-crisis fades, and entrepreneurs are more willing to invest in both new company premises and renovation of existing properties.

A record number of building companies are planning to increase their prices at the beginning of 2022. This involves 36% of EU building firms who planned to increase prices in January 2022.

It is expected that German, Austrian and Dutch construction firms, in particular, are expected to increase their prices.

The construction sector in Germany has been quite resilient during the Covid crisis.

In contrast, a recovery of construction activity is expected in Spain this year and in 2023, but probably won't recover fully from the drop in output seen in the last two years.

A recovery in construction activity is expected to continue in France and Belgium this year and in 2023. France recently implemented a new law requiring half of the materials used in public buildings to be wood or other bio-based materials. This has led to growing demand for these materials and to some shortages, especially as wood is still in short supply.

Shortages could also be significant in Germany, Austria and the Netherlands, as construction activity will remain at high levels in these countries.

Shortages of building materials are expected to continue for some time to come,





especially due to China's "zero-Covid" strategy, and the measures put in place to contain the virus in cities and ports which are an important part of global supply chains.

This will result in construction activity suffering further in future, alongside increasing costs. This will continue to have a negative impact on the profit margins and cash flow of construction companies.

However, despite building material shortages and labor shortages, the EU construction sector is forecast to grow in 2022 and 2023.

EU Construction Forecast: Growing construction volumesVolume output (value added) construction sector, % YoY

	2020	2021*	2022*	2023*
Austria	-3.0%	4.2%	2.5%	2.0%
Belgium	-4.9%	7.0%	2.0%	1.0%
France	-16.1%	12.8%	2.5%	1.5%
Germany	2.8%	0.0%	2.0%	1.5%
Netherlands	-1.1%	2.0%	3.0%	2.5%
Spain	-11.2%	-4.1%	3.5%	4.0%
European Union	-5.0%	5.0%	2.5%	2.5%

Source : Eurostat, ING Research

*Forecasts





GLOBAL MINING INDUSTRY

Shipments of surface mining equipment showed a strong recovery in 2021

Exploration and drilling activity in the global mining market continued on a growth path in 2021, after suffering from a reduction in activity in the early part of 2020 due to the impact of the Covid pandemic. While drilling activity showed a slight dip towards the end of 2021, it showed a significant increase of 68% for the whole year, in terms of drill holes, compared with 2020.

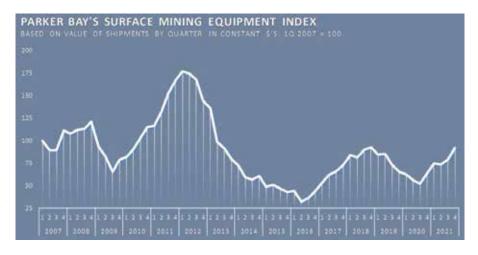
he Parker Bay Company monitors deliveries of surface mining equipment to the global mining market on a quarterly basis. Their latest update for Q4 2021 is shown in the graph below, and shows how shipments recorded strong gains during the year, despite some supply chain problems.

During the last quarter of 2021, shipments increased by 16% compared with the third quarter of the year, and a very impressive 43% over the fourth quarter of 2020. For the full year, 2021 shipments topped US\$7 billion for the first time since 2018, while remaining well below the peak levels seen in 2012-13.

On a regional basis, shipments showed some significant differences in 2021. On a year-on-year basis, Russian/CIS shipments more than doubled and reached c.\$2 billion, accounting for nearly 30% of all global shipments. Australasia showed a similar level of growth, nearly doubling and reaching just under \$2 billion.

Deliveries to mines in Latin American increased by 37% compared with 2020, resulting in a total value of \$1.2 billion. In contrast, North America saw shipments decline by 5% in 2021, and Africa fell by 3%.

Mining trucks are the most significant equipment type and accounted for the



majority of 2021 shipments, reaching \$4.5 billion from deliveries of nearly 2,700 units to mines. Hydraulic shovels/ excavators recorded the second highest shipments valued at just over \$1 billion, followed by crawler and wheeled dozers at \$830 million.

Parker Bay operate a mining equipment database which includes eight different types of surface mining equipment.

Their latest assessment of the machine population suggests more than 85,000 pieces of equipment were active in the global mining market at the end of 2021.

This includes mining trucks (over 52,000 machines) and crawler and wheeled doz-

ers (over 15,000 machines) as the two most popular machine types.

Prospects for the global mining industry in 2022 look promising overall, based on the latest consensus forecasts for base metals prices from leading industry analysts. Most commodities are forecast to show increases in 2022, with iron ore being the exception.

Forecasts of lower steel production in China, while iron ore supply is increasing are the most significant factors behind lower ore prices.



RENTAL MARKET

Europe's rental sector remains positive



The Q4 2021 ERA/IRN RentalTracker survey — undertaken at the end of 2021 - shows that levels of rental business confidence in Europe remain at a good level and have not changed dramatically since the previous survey in June 2021.

The Tracker, which is organised by the European Rental Association (ERA) and International Rental News (IRN), reveals that in a wide range of measures – from business confidence and future expectations to employment intentions and fleet utilisation – the historically high levels of sentiment from Q2 2021 were sustained through to the end of the year.

That means, for example, that 70% of respondents were seeing increasing time utilisation at the end of Q4, with a positive balance of 65%. In other words, 70% reported improvements and only 5% reported worsening utilisation.

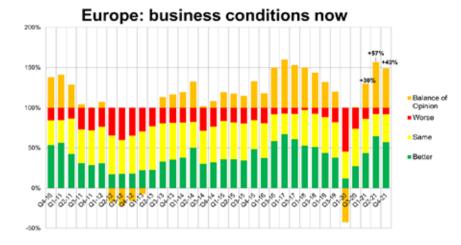
More than 125 companies in Europe - predominantly equipment rental businesses - responded to the survey.

EMPLOYMENT INTENTIONS

Likewise in employment intentions, with 70% of respondents expecting to add staff in the first quarter of 2022. That mirrors the level seen in June last year and means companies who were thinking of adding staff seven months ago were still hoping to boost their workforce as the new year started. (It could also mean that they are finding it difficult to recruit.)

In terms of business conditions at the end of 2021, there was a positive balance of opinion of 49%, with 57% seeing conditions improve, 35% reporting no change, and just 8% experiencing worsening conditions. That remains a very positive picture, even if it is slightly less so than the second quarter of 2021, when the positive balance was eight points higher at 65%.

How have investment intentions for 2022 changed since the middle of last year? Six



months ago, 68% of respondents were anticipating higher spending in 2022, with only 6% forecasting a lower spend. Now, 63% expect to increase spending in 2022 and 6% will spend less.

The positive balance of opinion – at 57%-is only a few percentage points behind the Q2 2021 survey and reflects the continued recovery from the lower investment during the pandemic period. In 'normal' conditions there is typically a positive balance on between 10% and 30%.

REGIONAL RENTAL TRENDS

Regional or country trends are more difficult to assess, partly because relatively low respondent numbers from individual countries make it impossible to provide definitive results. However, it is clear that Nordic countries – taken as a whole – are more confident than their counterparts in southern Europe.

In every measure, their confidence levels have improved since Q2 2021. That is most notable in their investment intentions, with 76% expecting to spend more this year than last.

In contrast, French companies seem to be much more cautious. They were least likely to report improving conditions or make positive predictions about conditions a year from now, and were also the most shy in terms of investment in 2022 and recruitment in the first quarter of 2022.

No doubt the high rates of Omicron infections in the country at the end of December – when the survey was completed - had a significant impact here.

Spain retained its generally positive outlook in most areas, including fleet utilisation, recruitment and investment in 2022. Spanish companies were also the most optimistic, with 86% forecasting better or much better conditions in 12 months' time.

So, the Q4 2021 RentalTracker makes for mostly positive reading. Europe's rental industry continues to climb out a pandemic-sized hole.

Source: KHL, European Rental Association ERA. Rental Tracker is jointly organised by International Rental News (IRN) and ERA.





EQUIPMENT MARKET

Demand for construction equipment in Europe stayed on a growth path in 2021

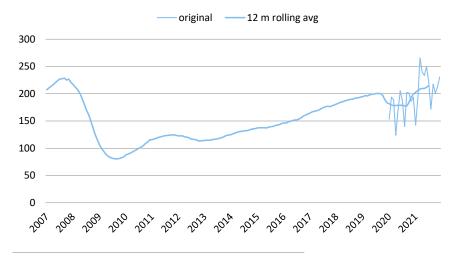
Demand for construction equipment in Europe stayed on a growth path in 2021, after the industry had already seen a return to growth in the second half of 2020 when the impact of the pandemic was receding. Demand benefitted from a combination of stable demand in different end using segments, as well as pandemic stimulus measures, which saw their benefits fully unfold in 2021. On the other hand, the construction equipment industry also experienced the most severe supply-chain disruptions in recent history, in particular, shortages of raw materials and components, as well as scarce and expensive freight transport.

gainst this backdrop, the 24% increase in sales in 2021 on the European market is a remarkable outcome. This does include a statistical "base effect" – specifically in the second quarter, when sales were being compared with the very low levels in the first pandemic lockdown in 2020. However, after weathering the Covid crisis, underlying demand within the industry has been very strong and is on track to close the gap on the record levels of sales seen in 2007.

2021 saw consistent trends across the equipment sub-sectors with all product segments recording growth in sales of between 22% and 30%. Concrete machinery saw the strongest growth, slightly above the levels seen in the other sectors.

Also, the light and heavy equipment segments showed similar levels of growth in 2021, with the compact segment only slightly behind the growth rate seen in the heavy segment. This was different to the experience in 2020. From a regional perspective, the markets that were hit hardest in 2020 – particularly the UK and Spain – saw strong recoveries in 2021.

Southern European and the CEE markets saw above-average growth in sales, and even the mature markets in Northern Europe saw similar levels of recovery.



Monthly construction equipment sales in Europe (index 2010=100)

None of the markets saw a fall in sales in 2021, and the only market that experienced single-digit growth was the high-volume German market. The fact that it has still not reached saturation levels can be considered as a positive outcome. Turkey continued its recovery from the catastrophic levels of decline seen in 2018/19, and saw the highest levels of growth across the market regions.

EARTHMOVING EQUIPMENT

Sales of earthmoving equipment in Europe went up by 23% in 2021. After a first quarter with moderate growth of

10%, the second quarter saw an increase to 46%, when compared with the impact of Covid in Q2 2020. Following this, the second half of the year saw solid growth in sales at 16% and 14% in the third and fourth quarters, respectively.

After significant growth in 2021, the market is now close to the all-time record high levels seen in 2007. However, the geographical pattern of machine sales has changed significantly.

Most striking is the change in Southern Europe's share of total European sales, which has fallen from 24% back in the day, to only 13% in 2021.





In contrast, markets like Germany and the Nordic countries have seen their shares increase significantly.

In contrast with the trend seen in 2020, heavy equipment (+28%) performed considerably better than light equipment (+18%) last year. Within the compact segment, backhoe loaders saw extraordinary growth in sales of 39%, thanks to exceptional levels of demand in the two largest markets, Russia and Turkey.

Mini excavators recorded a 21% increase in sales, while skid-steer loaders (+7%) and compact wheel loaders (+6%) saw much more moderate levels of growth. In the heavy segment, the niche products ADTs and rigid dump trucks experienced the strongest growth, at rates above 50%.

Crawler excavators also saw significant growth in 2021, as sales went up by 36%, while wheeled loaders (+13%) and wheeled excavators (+11%), saw more moderate growth.

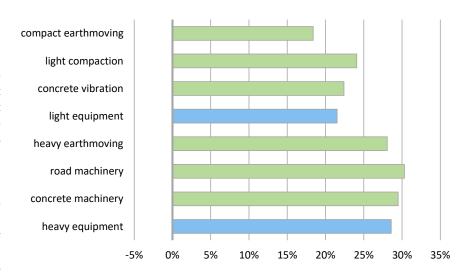
All the major markets recorded growth in sales in 2021. The leading market Germany went up by 9%, and the UK reclaimed second place after substantial growth of 49%.

This resulted in France falling back to become number three in Europe again, after sales only grew by 5% in 2021. In line with expectations, the stable Nordic (+11%) and Benelux (+9%) markets saw moderate growth at high absolute levels of sales. Sales in Austria and Switzerland outperformed expectations and saw growth of 21%.

Southern Europe finally took a big step towards recovery as sales increased by 29% in 2021. Much of this was attributable to growth in Italy which was driven by government incentive schemes, and as a result, may not be sustainable in the longer term. The Spanish market also saw substantial growth in sales at 26% last year.

CEE markets delivered growth of 25%, with Poland once again being the most dynamic market. The Balkan markets, which are by far the smallest region, recorded a solid 37% increase in sales.

The Russian market saw growth of 48%, and as a result, almost reached the level of sales seen in France. Finally, the Turk-



2021 sales development of light and heavy equipment

ish market continued its recovery and showed another 80% increase in sales.

ROAD EQUIPMENT

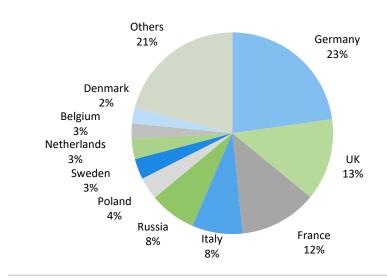
Road machinery had been the only subsector to record growth in 2020, but did not disappoint in 2021 with further growth in sales. Driven by infrastructure investments from Covid stimulus measures, sales on the European market grew by 25%.

The quarterly pattern of sales was similar to the earthmoving equipment sub-sector. Moderate growth of 12% in the first quarter, was followed by a

45% boost in Q2, before the second half recorded 18% and 25% increases in sales in Q3 and Q4, respectively.

It was surprising to see light compaction equipment grow by 25% in 2021 after the strong performance in the year before during the pandemic (+5%). This segment benefits from the fact that light compaction equipment is used in activities beyond road construction, such as in civil engineering applications and in the landscaping industry.

Sales of vibratory plates went up by 25% in 2021, while sales of tampers increased by 21%. In addition, the



Shares of construction equipment sales in European countries, 2021





low-volume product pedestrian rollers, saw sales grow by 33% last year.

In the heavy segment, single-drum rollers recorded a sales increase of 46% last year. Tandem rollers, which are the largest volume segment within self-propelled rollers, grew more moderately by 28%. All other products, including trench rollers, combination rollers, and PTRs recorded solid growth in sales. Finally, the asphalt paver business saw sales increase by approximately 10%, thanks primarily to strong sales in Italy.

From a regional perspective, the number one market Germany saw disproportionately low growth in sales at only 7% last year, but this was at impressive high absolute levels of sales. France, Europe's second largest market, recorded strong growth of 28%. The UK recovered from the 2020 market decline and saw a remarkable 72% hike in sales.

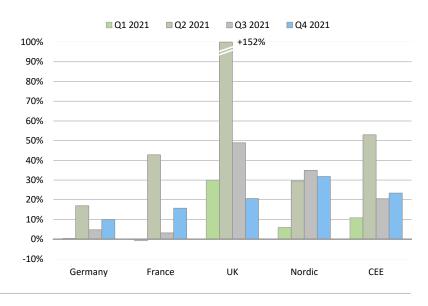
The Nordic markets also stood out amongst the positive regional market performances last year, as sales went up by 46%. This was on top of modest growth in 2020 and confirmed the healthy state that the sector finds itself in. The Benelux markets (+16%) and Austria/Switzerland (+11%) showed more moderate sales growth.

Similar to the earthmoving segment, Southern European experienced a long-awaited upturn in 2021, as sales grew by 47%. Spain, recovering from low absolute levels of sales, was the main contributor to this growth.

The CEE and Balkan markets recorded sales growth of 30% and 17%, respectively. In Russia, the road machinery market saw sales increase by 34% last year, following a very strong 2020. Growth on the Turkish market was at 38%.

CONCRETE EQUIPMENT

Sales of concrete machinery on the European market went up by 29% last year which made it the strongest performing equipment segment in 2021. The dynamics throughout the year followed the same pattern as other sectors. After a first quarter with moderate sales growth of 11%, the sector jumped up by 50% in Q2. However, the second half of the



Construction equipment sales in major European markets compared to previous year in %

year was very strong, too, with growth of 30% and 27% in Q3 and Q4, respectively.

Trends amongst the different types of concrete equipment were fairly similar in 2021. Sales of truck-mounted pumps were the strongest, at a remarkable rate of 46%, while stationary pumps recorded an increase in sales of 25%.

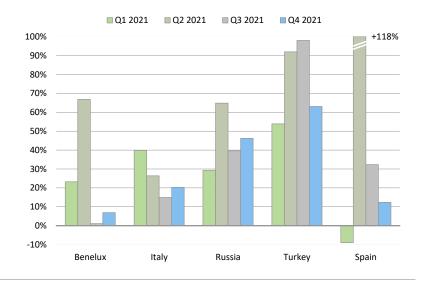
Growth in sales of truck mixer pumps was more modest, at 16%. Sales of truck mixers went up by 30%, while mixer systems recorded an 18% increase last year.

Sales of batching plants, which are a low-volume product, saw 31% growth in sales. Finally, concrete vibration equipment – representing light equip-

ment within the concrete machinery sector – saw sales increase by 22%.

Looking across the major markets, Germany experienced small growth in sales of only 8%, which was just enough to offset the declines in 2020. The second biggest market, France, almost closed the gap on the German market, thanks to very strong growth in sales of 50%. Southern Europe also gained ground with 46% growth, as did Austria/Switzerland (+33%) and the UK (+32%). The Russian market also saw sales increase by 50% in 2021, while the Turkish market saw sales double.

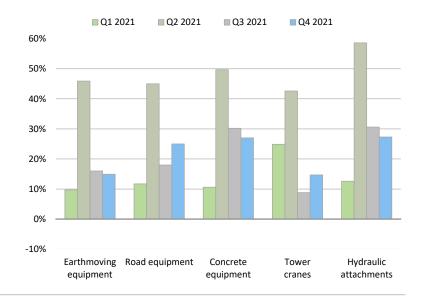
More modest levels of growth were seen in other markets, including CEE at 19%, Nor-



Construction equipment sales in major European markets compared to previous year in %







Product groups: construction equipment sales in Europe compared to previous year in %

dic markets at 6%, while the Benelux market saw a decline in sales of 18% last year.

TOWER CRANES

Tower cranes sales in Europe grew by 22% in 2021 making it the sector with the most modest growth rate. However, as highlighted above, the quarterly pattern of sales were very similar across the different equipment segments last year.

After a strong start to the year with first quarter sales at 25% above the previous year, the well-known statistical effect due to Covid was seen in Q2, when sales grew by 43% year-on-year. The second half of the year saw more moderate growth, with sales increasing by 9% and 15% in Q3 and Q4, respectively.

Looking at the regions from largest to smallest, the leading market in Europe, France saw a small decline in sales last year of 1%. As a result, the German market in second place almost closed the gap, as sales went up by 13% in 2021. The Italian market saw sales almost double, but it is questionable as to whether this level of activity can be sustained, given that sales last year were largely driven by public investment subsidies.

The Russian market saw a continuation of its recovery, as sales increased by more than 50%. Benelux markets saw sales grow by 90%. However, this may well be a "one-off" situation, as sales were

strongly supported by individual largescale projects. The Nordic markets and the UK experienced very strong growth in 2021. Austria and Switzerland were the only exceptions to growth in regional sales, recording declines, albeit coming from very high levels in earlier years.

SUMMARY AND OUTLOOK

All industry experts had anticipated that 2021 would see a return to growth after the impact of the Covid pandemic. However, the scale of growth in sales was beyond expectations, particularly when considering the severe supply chain disruptions that were experienced.

The levels of order intake that the industry received last year suggest that sales could have been even higher if the industry had maintained the ability to build and deliver machines on time. As a result, order backlogs within the industry increased significantly over the course of last year.

In February this year, the CECE Business Barometer survey, highlighted that more than 50% of manufactures surveyed were experiencing order backlogs of six months or more.

The business climate index for the industry recorded its highest ever value in the July 2021 survey and maintained extremely high levels throughout the rest of the year. In the first two months of 2022, there was another small uptick

both for the current business situation and future sales expectations. This suggests that supply-side bottlenecks are not creating too many concerns for European manufacturers for the rest of the year.

In all equipment sub-sectors, the majority of manufacturers are expecting business to improve in the months leading up to the summer of 2022.

At the beginning of the year, earthmoving equipment manufacturers were the most optimistic, with 63% of companies anticipating growth, including 26% expecting it to be at double-digit levels. The market region which has been assessed as the most positive by manufacturers has been North America, by a fair margin. However, this is not surprising when considering the strong boost in demand expected from the recently signed US infrastructure bill.

All European markets are viewed as positive by the industry, with the best prospects being CEE countries, France, and Germany. Manufacturers also expect a continuation of growth in Latin America, after 2021 saw very high growth rates coming from low levels of sales. In addition, a resumption of growth in India is also anticipated.

China is not being assessed too positively, with a small number of manufacturers expecting the market to show further declines in sales. Uncertainty remains high in China with a looming real estate crisis and ongoing disruptions to power supplies.

The biggest downside risks in 2022 are associated with political tensions. A war between Russia and the Ukraine would certainly eliminate any positive outlook, and in addition, China-US relations continue to threaten stability. From a different perspective, there is a moderate risk that ECB measures to tackle inflation could constrain economic growth, particularly in Southern Europe.

However, on a more positive note, the risk of further restrictions to business due to a resurgence of the pandemic is viewed as being limited by most players within the industry.

Taking on board the large order backlog within the industry, it is tempting to say that prospects for 2022 are on safe ground. The key question is whether



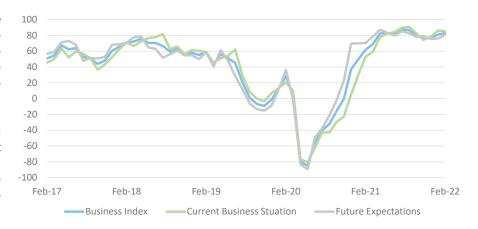


the order backlog will remain during the year or if it can be converted into additional sales. Realistically, availability of components cannot be expected to improve in the short term, particularly for electronic components and control systems.

However, availability of hydraulics and power transmission components might improve in the first half of the year. Freight transport could also see some improvement with an easing of the pandemic in some important trade areas.

From a market demand perspective, Europe is expected to stay strong in 2022, with some of this due to the ongoing benefits of the EU's Covid recovery funding. All end-using industry segments, including general construction, mining and quarrying, and landscaping are reporting a positive situation for order bookings.

In addition, the rental sector might start fleet renewals earlier than normal due to lower levels of availability of new machines in recent months.



European business climate index, CECE Barometer February 2022

Based on the assumption that supplychain problems should ease back during the course of 2022, 5% to 10% growth in sales in the European market seems realistic. This would be driven by a continuation of the recovery in Southern and Eastern Europe and stable business in the higher-volume markets of Northern and Western Europe. If this level of growth materializes, the European market would see sales exceed the historical record levels seen in 2007. Alternatively, if a more moderate scenario materializes, with ongoing supply-side disruptions, market sales can be expected to be close to 2019 pre-pandemic levels.



SNAPSHOT

Electrification, low emissions and sustainability in construction equipment

The green revolution seems to be an established route already for construction equipment. The recent progress made in the fields of electrification and low or zero-emission engines has opened up new and interesting prospects for the development of increasingly sustainable machines.

Indeed, in recent years many European countries have begun to provide economic incentives for the modernization of their machines fleets with the aim of reducing the environmental impact of construction activity.

Looking at the regional pattern of these incentives, two major groups emerge. Northern European countries have focused on the use of loans and subsidies. However, in Central Europe and Mediterranean countries, the preferrance has been to use taxation via extra credit and tax breaks. In both cases, the approach of providing an economic advantage in the purchase of a new machine is significant, however the impact on the market of these different interventions must be assessed on a case by case basis.

For example, the use of a regenerated oil or a vegetable lubricant on construction sites might seem like the right approach for public authorities to encourage, and perhaps even consider making compulsory for use in construction machinery. However, use of these oils/lubricants are not currently recommended by the equipment manufacturers.

Alongside this, the increase in fuel taxation may lead to the use of electrical construction equipment. However, perhaps this should have taken in to account that

at this stage, only a limited range of machines are available with electric power. Currently, the market does not offer alternative solutions to the use of non-electric machines for certain activities. Therefore, It would seem unwise at this stage to handicap the users of fuel propelled machines in an undifferentiated fashion.

It should also be remembered, that as well as introducing electric machines, the industry is demonstrating its commitment to sustainability via the on-going introduction of lower emission engines. Following significant industry investment in research and development, stage V engines in construction equipment reduce emissions by over 98% in comparison with prestage engines. This poses questions such as - should we consider a machine with a stage V engine as obsolete because of the availability of electric powered machines ? In addition - should we encourage the purchase of only zero emissions machines while they are currently unable to fulfill many requirements for the industry ?

This questions the use of fiscal measures in isolation as the best approach to encourage sustainability activity within the industry. While it appears to be a quick and simple approach, it is clearly inappropriate by itself to meet the challenges within the sector in a coherent way. Perhaps they should be accompanied by a more pragmatic approach, for example, as in the case of the Finnish Green Deal.

This scheme involves a framework of voluntary membership between equipment companies (including their distributors) and the government, to define detailed intervention plans to be introduced in the short and medium-term. As a result, it is possible to define economic incentives that can be traced back to the targets and goals that hope to be achieved. So in the case of the Finnish deal, the incentives and target actions can be clearly linked to individual equipment types. For example, in the next few years, lifting equipment (e.g. forklifts and scissor lifts) rather than the wheel loader, have different targets in terms of sustainability and emissions, and these are in line with what is achievable using the technology that is currently available on the market.

Given this approach, it is not surprising that the plan identified to reduce CO2 from construction equipment in the Green Deal also includes operator training and increasing knowledge overall within the sector. This means that it involves end user customers of the equipment and their operators.

In conclusion, the use of economic incentivization to help to develop cutting-edge construction equipment to pursue sustainability goals is in itself a goal achieved. By itself, the market is unable to drive an epochal change, which it now faces, and as a result, some form of public intervention is both necessary and desirable.

However, this public intervention must be properly managed, or there will be a risk of missing the desired objectives, or even worse, creating damaging effects. As things stand, the green revolution within the construction equipment industry has started. It needs to be managed carefully in future to keep on track and avoid any lurking disasters.





EUROPEAN MARKETS

National perspectives by CECE members

The national CECE member associations shed more light on regional developments in the European construction equipment sector, describing main drivers of growth and forecasting the year 2022.

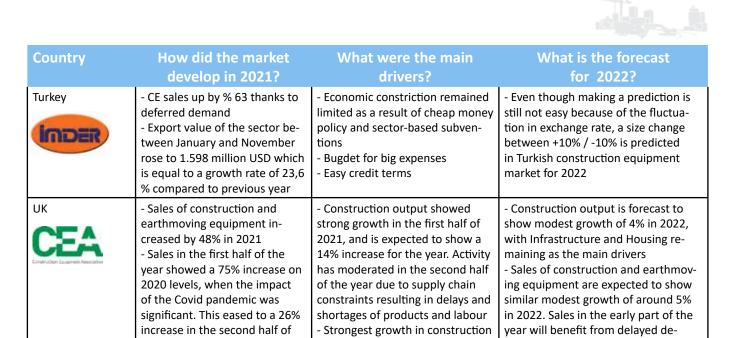
Country	How did the market develop in 2021?	What were the main drivers?	What is the forecast for 2022?
Belgium .AGORIA	Earth moving and construction equipment Most surprisingly (after a more difficult 2020 covid year) 2021 is reaching never seen summits although covid is still impacting general business. Back to record year 2019. <10T: +27% versus 2020 >10T: +23% versus 2020	Earth moving and construction - Major public contracts giving long-term prospections - Exceptional demand level and lack of availability of products & parts due to worldwide logistical issues make customers proactively order massively, sometimes even for 2023	Earth moving and construction 2022 will be an excellent year in terms of sales, but not in terms of order intake, since machines are being ordered now for 2023 due to lack of availability: amazing level of order intake for 2022 + 2023, small equipment (<10T): +80%; large equipment (>10T): +65%. - Will these machines ever be delivered? The worldwide logistical issues are huge. Deliveries should hopefully return to a normal level as from semester 2 2022. - Huge price increases (+10% and +20+25% for low cost products). - Major issue: how to bridge the gap between products and parts' availabilities (machines cannot be repaired due to lack of components as well as new machines which cannot be delivered for the same reason). Source: Sigma (Equipment Represen-
Czechia	- Construction equipment sales up by 27% - Earthmoving equipment sales: 12% - In the 4Q of 2021 signs of slowdown	- Real estate boom in metropolitan areas - Road/bridges programmes benefit civil engineering - CZ Rental customers with strong fleet investments - Investment into maintenance of road network - Finance not affected by Covid crisis	tatives for Public and Private Works, Building and Handling) - Sales volume: +5% - Turnover:100% to 108% - Worldwide industry turnover: +8% - Possible problems with supply chain will affect supplies throughout 2022

Country	How did the market	What were the main	What is the forecast
Country	develop in 2021?	drivers?	for 2022?
Finland Technology bed ustrices at the family	- Equipment export estimated to increase by 19 % and import by 18 %, returning to pre-Covid levels in 2019 - Rental markets increased by 2% - Housing construction increased	- Economic growth drives construction (Finnish GDP +3 % both in 2021 and 2022) - Component shortage affects equipment manufacture - Construction costs on the rise - Construction product prices increasing - Shortage of construction labour	- Rental markets will increase by 6 %, driven by facility construction - Construction will increase by 2-4 %
France EVOLIS	- Construction equipment sales go up 11% - Earthmoving equipment sales: +10% [+13.3% for Heavy Equipment and +9.0% Compact Equipment] - Equipment sales are slowly approaching the record level of 2019	- 2021 will have been a year of strong recovery - The shortage of raw materials had a strong impact on the availability of equipment in the second half, which slowed down invoicing - Timid growth in investment by rental companies on the market +12% growth in new construction activity, driven by housing construction - 6% increase regarding French Building renovation sector - 10% increase in the French civil engineering market compared to 2020 - Local authorities are slow to accelerate their investments	- Sales volume: +8% - The activity should be carried by the renters and an increase in local government investment - Production constraints should gradually decrease
Germany	- Construction equipment sales went up by 9.5% - Compact equipment performed slightly better than heavy segment - Market reached historical record levels	- Demand could have enabled much higher growth rates - Severe supply-chain disruptions had a dampening effect - Investment climate in Germany is still favourable - All major customer segments are in good shape	- Germany sales volume in 2022: +/-0% - International turnover from German production: +7% - Order backlog remains extraordinari- ly high - With supply-side not expected to ease, market won't realize its poten- tial
Italy UN With the second sec	- Construction equipment sales up by 29% - Earthmoving equipment sales: 30 % - Market is not on par with 2008 crisis record levels: -30%	- End of Stability pact - Recovery and Resilience Plan - Positive expectations - Road works - Civil works - Safety and 4.0 incentives	- Sales volume: 10%
The Netherlands	During 2021 we saw the total market demand for construction machinery grow by 10 % to 15%. In q4 of 2021 total market demand increased again by a further 10%. In particular we have seen growth across the earthmoving product range. The challenge has been to meet customer demand due to ongoing parts and component shortages relating to the covid pandemic.	The main driver has been the growing confidence in the market that we are slowly coming out of the pandemic. We have seen an increase in construction projects driving demand and those projects that had slowed down are now ramping up once again.	We believe total market demand will continue to grow in 2022 by a further 10% but supply will still be constrained by parts and component availability. Product costs driven by steel and energy prices will continue to increase during 2022 but we expect a levelling off towards the end of the year.



Country	How did the market	What were the main	What is the forecast
	develop in 2021?	drivers?	for 2022?
AEB.	- Construction equipment sales up by 47% - Earthmoving equipment sales (excavators): 56%	- Significant pent-up demand contributing to accelerated market rally throughout a year - Large infrastructure projects in Russia driving the increasing need for construction equipment machinery (e.g. federal highway Moscow-Kazan M12) - Investments in new special machinery for mining / extraction industries and the active development of construction and forestry processing industries	- Supply chains disruption and caused semiconductors shortage - The market has the huge potential for further dynamic growth as pent-up demand has not been fulfilled yet and obsolete fleet has not been fully renovated - The non-worsening of current situation is subject to geopolitical aspect, non-adoption of additional restrictive measures and regulatory changes
Spain	- Construction equipment sales up by 38,5% - Earthmoving equipment sales: 40% - Best year of sales since 2008 - Improvement of sales by 4,1% of 2019 figures - Despite the uncertainty due to the evolution of the pandemic and the difficulties that the production chain has experienced with the supply of components and equipment deliveries, sales of equipment have been very positive in all machinery segments	- Spanish economy grew by 5% in 2.021, its highest growth in 21 years - Growth of exports 15,8 % over the previous year - Good performance of residential construction and civil engineering	- Sales volume: + 10 % % - Turnover: 2.% to 5 % - Worldwide industry turnover: 2 % - Forecast growth Gdp by 6 % in 2022 - Civil engineering subsector expects a growth of 8,5% in 2.022 and 5,9 % in 2.023 - High investment in public works - Worries among manufacturers because high price of energy and raw materials that affects their production costs - Spanish construction output is forecast to grow strongly by 13% in 2022 - It is expected that rehabilitation increases around 7% till 2023, but with some uncertainty - Housing will recover pre-pandemic figures thanks to high demand: it is expected +7,5 % - Non residential building recover will be in 2023: strong impact in 2020 and a slight recovery in 2021 (5%)
SACE BY AND	Earthmoving: A rather big increase in domestic sales as well as exports Road Construction: A big increase in domestic sales as well as exports Compaction: A big increase in domestic sales as well as exports Attachments: A big increase in domestic sales as well as exports Others: A slight increase in domestic sales as well as exports	Earthmoving: Generally higher level of activity in the construction industry. However, there were still problems due to the covid-19 pandemic, such as problems with material transport worldwide and an increasing demand which causes certain material and resource shortages Road Construction: The total market has increased but no one can really say for sure if there is a real need due to several projects or if it is the lack of new machines that has created a bit of "panic" Compaction: Generally higher level of activity in the construction industry. Several big infrastructure projects are still in progress. Attachments: General growth after the pandemic year 2020. Increased interest from abroad Others: General increased demand, as well in Sweden as abroad	Earthmoving: Continued strong demand for CE machines. Continued limitations in capacity regarding materials and components will determine the delivery capacity in the industry. Rising costs are likely to cool down the market Road Construction: Possible invoicing and deliveries are not in parity with the high inflow of orders Compaction: The biggest problem will be the lack of components. Possible invoicing and deliveries are not in parity with the high inflow of orders Attachments: Continued growth driven by backward investment needs. Continued rising interest driven by security and sustainability Others: Covid-19 will probably generate continued material and resource shortages during at least the first half of 2022





activity in 2021 was seen in the

building (+16%) sectors

Infrastructure (+34%) and house-

the year

2007

- Equipment sales in 2021

exceeded the recent peak levels

reached in 2018 and 2019, and were the highest since just before the "financial crash" in

mand from 2021 due to supply chain

turing activity

constraints limiting machine manufac-



CECE REPORTING TEAM

Contributors

Take a moment to get to know our CECE reporting Team. Below we list the contributors to this publication.



SEBASTIAN POPP
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Sebastian contributes to the publication by providing the text for the Equipment Market chapter, covering tower cranes, earthmoving, road and concrete equipment. Sebastian is also involved in the drafting phase of the script of the report's animated movie.



ROMA GUZIAK
Communications Manager, CECE

Roma keeps the publication in order by managing deadlines and laying out the publication into a publishable version, once all chapters have been drafted. In addition, together with Riccardo, she coordinates the production of the report's animated movie.



CORRADO SERRENTINO
Communication & Public Affairs Manager,
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Corrado contributes to the report by drafting the Snapshots. These chapters change from year to year, in order to cover the most relevant topics for the industry at a given moment in time. The topics range from areas like exhibitions and trade fairs, to major investments and CECE Economic Forums.



RUDOLPH GANZEL
Director of Economic Affairs, EVOLIS

Rudolph is responsible for drafting the Macroeconomic View which provides insights into the economy of the euro zone. He also contributes to the publication by drafting the Construction Industry chapter, covering the construction sector by country.



RICCARDO VIAGGI Secretary General, CECE

Riccardo is the head of the organisation, and oversees the whole publication. He is also involved in providing input into the report by writing the opening statement and drafting the rental industry chapter. In addition, together with Roma, he coordinates the production of the report's animated movie.



Paul, apart from being one of the contributors of the report by drafting the Global Mining Industry chapter, is also responsible for the proof-reading of the entire text. Being a native English speaker, this task was entrusted to him. Thanks to Paul no linguistic bloopers sneak into our report.

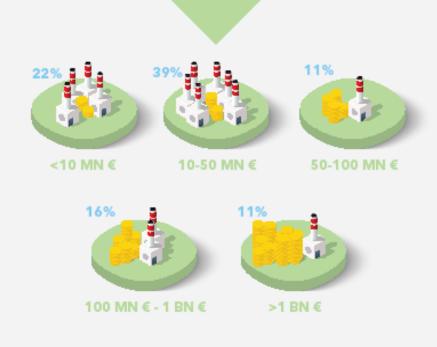




CONSTRUCTION EQUIPMENT SECTOR IN EUROPE



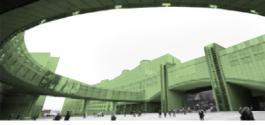
MOST COMPANIES ARE SMEs





Source: McKinsey 2016







What is the Committee for European Construction equipment?

CECE represents the European construction equipment industry towards the European Institutions, coordinating the views of its national member associations, and working with other organizations worldwide to achieve a fair competitive environment via harmonized standards and regulations.

Our figures

- 13 COUNTRIES
- 1,200 COMPANIES
 EMPLOYING DIRECTLY AND
 INDIRECTLY AROUND 300,000
 PEOPLE
- INDUSTRY REVENUES: 40 BN €
- 20% OF THE WORLDWIDE PRODUCTION

WHAT WE DO

CECE is the acknowledged partner of the institutions of the European Union for all questions related to the construction equipment industry. Based in Brussels, CECE's work involves political representation and the monitoring of legislation and standardization on behalf of its member associations and their corporate members.

CECE also cooperates with CEN and ISO, the European and International Committees for Standardization. CECE furthermore delivers and economic and statistical services to its members and partners.

Representing the interests of the industry

New buildings and infrastructures connect people, boost economies and serve people all over the globe. Construction equipment manufacturers are highly innovative and have invested heavily in increasing the productivity of their machines, while reducing their environmental impact.

The European construction equipment industry forms an important, integral part of the European machinery sector. Manufacturers are predominantly small and medium-sized companies but also large European and multinational companies with production sites in Europe. The industry employs directly and indirectly up to 300,000 people.

Statistics and economic topics

CECE collects a and provides up-to-date market data for many types of construction equipment, providing a leading indicator for the development of European construction equipment markets.

Since 2008 CECE runs a monthly business trend enquiry, the CECE Barometer. The companies taking part in the Barometer receive a report about the economic situation in Europe each month.

Exhibitions

CECE gives patronage to a limited number of leading sector exhibitions, contributing to successful trade fairs around the globe.



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