

---

# IPAF POWERED ACCESS RENTAL MARKET REPORT 2016 - USA

*April 2016*

This Report Has Been Prepared Solely For :

*The International Powered Access Federation*

*[www.ipaf.org/reports](http://www.ipaf.org/reports)*



DUCKER WORLDWIDE

Ducker Worldwide | 1250 Maplelawn Drive | Troy , MI 48084 | [www.ducker.com](http://www.ducker.com) | [info@ducker.com](mailto:info@ducker.com)

This report is solely for the use of client personnel. No part of it may be circulated, quoted, or reproduced for distribution outside the client organization without prior written approval from Ducker Worldwide LLC.

## CONTENTS – IPAF POWERED ACCESS RENTAL MARKET REPORT 2016 - USA

Foreword	3
Executive Summary	13
Market Size & Dynamics 2008 – 2016	22
Investment 2008 – 2016	31
Operational Aspects 2008 -2016	34
A Perspective from the Managing Editor of <i>International Rental News</i>	39
Market Trends & Drivers	42
Canadian AWP Market	47
Chinese AWP Market	49

*The International Powered Access Federation*  
[www.ipaf.org/reports](http://www.ipaf.org/reports)



DUCKER WORLDWIDE

# FOREWORD

---

## IPAF Powered Access Rental Market Report 2016 - USA

*The International Powered Access Federation*  
[www.ipaf.org/reports](http://www.ipaf.org/reports)



DUCKER WORLDWIDE



## IPAF

- The International Powered Access Federation (IPAF) promotes the safe and effective use of powered access equipment worldwide. IPAF is a non-profit member organization that represents the interests of rental companies, manufacturers, distributors, users and training companies. It was set up in 1983 and celebrated its 30th anniversary in 2013.
- The IPAF training programme for platform operators is certified by TÜV as conforming to ISO 18878. More than 100,000 people are trained each year through a worldwide network of over 600 IPAF-approved training centers. Successful trainees are awarded the PAL Card (Powered Access Licensed-Registration, in North America), the most widely held and recognized proof of training for platform operators.
- Membership of IPAF is open to users of platforms, manufacturers, distributors, rental and training companies. Members enjoy access to practical information and a growing portfolio of member services. They also have the chance to influence the legislation and regulations that govern platform use. More information can be found at [www.ipaf.org](http://www.ipaf.org).
- IPAF has more than 1000 members.



Additional copies of this report can be ordered at [www.ipaf.org/reports](http://www.ipaf.org/reports) or from your nearest IPAF office. IPAF has also published the IPAF Europe Powered Access Rental Market Report 2016 – details available at [www.ipaf.org/reports](http://www.ipaf.org/reports) or from your nearest IPAF office.

**UK Head Office:**

IPAF, Moss End Business Village  
Crooklands, Cumbria LA7 7NU, UK  
+44 15395 66700  
[info@ipaf.org](mailto:info@ipaf.org)

**Germany :**

IPAF-Deutschland, Alter Schulhof 3  
D-28717 Bremen, Germany  
+49 421 6260 310  
[deutschland@ipaf.org](mailto:deutschland@ipaf.org)

**Brazil:**

IPAF-Brasil, Rua Andaluz 140  
13.280-000 Vinhedo São Paulo, Brazil  
+55 11 39588590  
[portugues@ipaf.org](mailto:portugues@ipaf.org)

**Italy:**

IPAF-Italia, Via Chieti 8  
I-20154 Milano (MI), Italy  
+39 02 319 206 50  
[italia@ipaf.org](mailto:italia@ipaf.org)

**France:**

IPAF-Bâle, Dufourstrasse 11  
CH-4052 Bâle  
Suisse  
Tel: +33 (0)1 30 99 16 68  
[france@ipaf.org](mailto:france@ipaf.org)

**Netherlands:**

IPAF-Benelux, Oranjestraat 167  
NL-3295 AS's – Gravendeel,  
Netherlands  
+31 6 30 421042  
[benelux@ipaf.org](mailto:benelux@ipaf.org)



Additional copies of this report can be ordered at [www.ipaf.org/reports](http://www.ipaf.org/reports) or from your nearest IPAF office. IPAF has also published the IPAF Europe Powered Access Rental Market Report 2016 – details available at [www.ipaf.org/reports](http://www.ipaf.org/reports) or from your nearest IPAF office.

**South East Asia:**

IPAF-South East Asia,  
25 Bukit Batok Crescent  
The Elitist, #04-12  
Singapore 658066  
+65 9686 4191  
[sea@ipaf.org](mailto:sea@ipaf.org)

**Spain:**

IPAF-Iberia, Edificio Europa, 4ª planta  
c/ Vía de Francia s/n  
Interior Zona Franca  
E-11011 Cadiz, Spain  
+34 677 889 049  
[espana@ipaf.org](mailto:espana@ipaf.org)

**Switzerland:**

IPAF-Basel, Dufourstrasse 11  
CH-4052 Basel, Switzerland  
+41 61 227 9000  
[basel@ipaf.org](mailto:basel@ipaf.org)

**UAE:**

IPAF-Middle-East,  
Executive Office: 06, Floor: 08  
Building: 10, DIAC  
Silicon Oasis  
Dubai, United Arab Emirates (UAE)  
+971 (0) 55 3094 333  
[uae@ipaf.org](mailto:uae@ipaf.org)

**US:**

IPAF-US, 225 Placid Drive  
Schenectady, NY 12303, US  
+1 518 280-2486  
[usa@ipaf.org](mailto:usa@ipaf.org)

**Nordic and Baltic Region:**

IPAF-Nordic and Baltic Region  
Konvaljvägen 8 B  
02260 Esbo  
Finland  
+358 41 500 4760  
[nordic@ipaf.org](mailto:nordic@ipaf.org)

**Turkey:**

IPAF-Turkey  
Mahatma Gandhi Cad.  
62/3 G.O.P.  
Ankara, Turkey  
+90 530 200 3211  
[turkey@ipaf.org](mailto:turkey@ipaf.org)



## Ducker

- Ducker Worldwide, a premier consulting and research firm, is driven to help its clients achieve their most ambitious growth goals. Custom market intelligence, strategic consulting and transaction advisory services are delivered by fully-engaged Ducker Principals and a diverse team of global talent.
- 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 AWP 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 and by Ducker's internal multi-lingual call-centers.
  - Methodological expertise: on-going involvement in strategic consulting within areas such as market sizing and segmentation, distribution structure, competitive positioning, customer satisfaction or market opportunity and new product entry assessments for a variety of products within the global construction and transportation industries amongst others.
  - Quality charter: Ducker Worldwide works to the guidelines of the ESOMAR ethics standards.
- More information on Ducker can be found at [www.ducker.com](http://www.ducker.com).



This report was produced by the European headquarters of Ducker Worldwide in cooperation with its US headquarters.

**Ducker Worldwide**

1250 Maplelawn Drive  
Troy, MI 48084, US  
[www.ducker.com](http://www.ducker.com)  
Tel: 248-530-2011

Nicole McGregor, Principal  
[nicolem@ducker.com](mailto:nicolem@ducker.com)

**Ducker Research Europe (European Headquarters)**

89, route de la Reine  
F-92773 Boulogne Billancourt cedex, France  
[www.duckereurope.com](http://www.duckereurope.com)  
Tel: +33 1 46 99 59 60

Audrey Courant, Associate Principal  
[Audrey.courant@duckereurope.com](mailto:Audrey.courant@duckereurope.com)  
Anne Myon, Project Manager  
[Anne.myon@duckereurope.com](mailto:Anne.myon@duckereurope.com)





This study assesses the AWP (Aerial Work Platform) rental market value for the US over an eight-year period. A separate report is available covering the European market.

- The study covers the time period 2008-2017, with particular focus on 2015.
- Main objectives:
  - 2015 AWP rental market value and fleet size.
  - Trends and dynamics (2008–2017).
  - 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 available than rental revenue. This has allowed for cross-checks, revenue-per-unit ratios and the optimization of secondary sources.
  - Estimated size of the 2015 AWP 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).
  - Update of the Chinese AWP rental market.
- New in this report:
  - Ranking of construction and non-construction sub-sectors in the AWP rental revenue.
  - Return on investment / Average payback period by power source (in addition to by equipment type).
  - Utilization rates by equipment type (booms vs. scissors).
  - Preliminary estimate of the number of operators trained annually.
  - Rental companies' equipment service costs and parts purchases
- The current study does not examine rental company profitability.
- All interviews were conducted in the first two months of 2016 which has allowed for primary data collection on the full previous year, thus providing for more specifically targeted and up-to-date information than would have been available from any statistical sources.



## Products and Countries

- The current study focuses on powered access equipment owned by rental fleets, i.e. aerial work platforms (AWPs), also called mobile elevating work platforms (MEWPs). 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 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, mast climbers and equipment owned by non-rental companies.
- This report focuses on the US domestic market.
  - No regional segmentation is included.



## Target Companies and Respondents

- The main source of information for this study is primary research through telephone interviews. Organizations interviewed for this study include rental companies and other industry experts:
  - Rental companies:
    - Specialist AWP rental companies: AWP accounts for more than 50% of total rental revenue.
    - Generalist rental companies: AWP rental revenue accounts for 50% or less of total rental revenue.
  - AWP manufacturers.
  - National rental associations.
  - Industry experts.
- Secondary data was also gathered to validate major market trends identified.
- Only persons with input in machine selection or management were qualified as respondents. Recurrent respondent job functions include in particular Owner, Sales and Technical Manager, Purchasing Manager, Fleet Manager, Branch Manager or Operations Manager.
- Ducker and IPAF would like to thank all industry representatives who have been available for interviews and whose kind assistance made it possible to conduct this research.
- IPAF and Ducker would also like to thank Murray Pollok, Managing Editor of International Rental News, for his contributions and commentary on the current rental market.



## Definitions

- **AWP rental revenue:**
  - Includes for example: machine rental rates, machine repair, support (e.g. fuel services), transportation/delivery, training, damage waiver, operator charges.
  - Used equipment sales are excluded from the AWP rental revenues reported.
- **Re-rental:**
  - Rental by one rental company from another rental company.
- **Utilization rate:**
  - Physical number of machines out on rent as a percentage of the total number in fleet at any given time.
- **Average age of fleet:**
  - Overall average age of the fleet in December 2015, including machines that underwent refurbishment/remanufacturing.
- **Rental rate:**
  - Corresponds more to net prices than list prices. Directly linked to the rental revenue.
  - The dollar amount the customer agrees to pay for possession and use of a machine.

# EXECUTIVE SUMMARY

## IPAF Powered Access Rental Market Report 2016 - USA

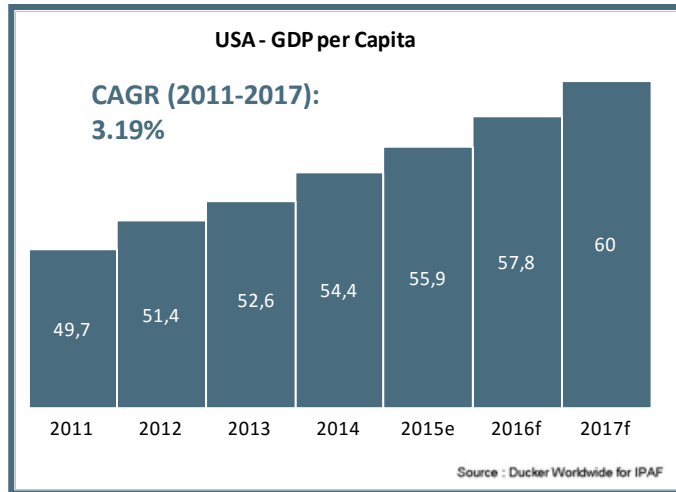
*The International Powered Access Federation*  
[www.ipaf.org/reports](http://www.ipaf.org/reports)



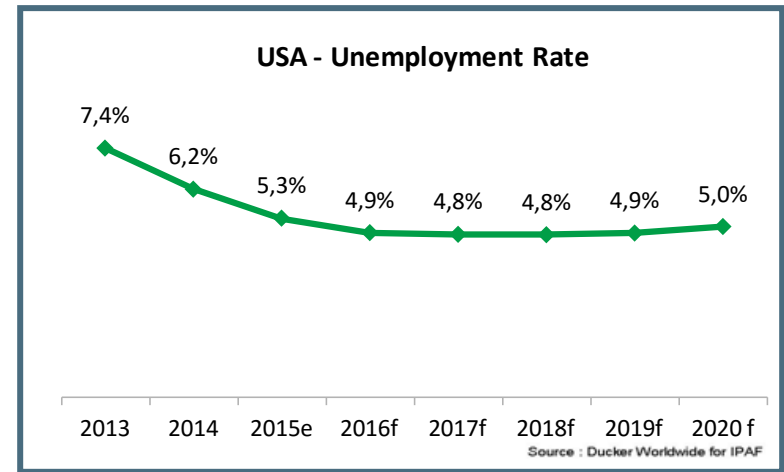
DUCKER WORLDWIDE



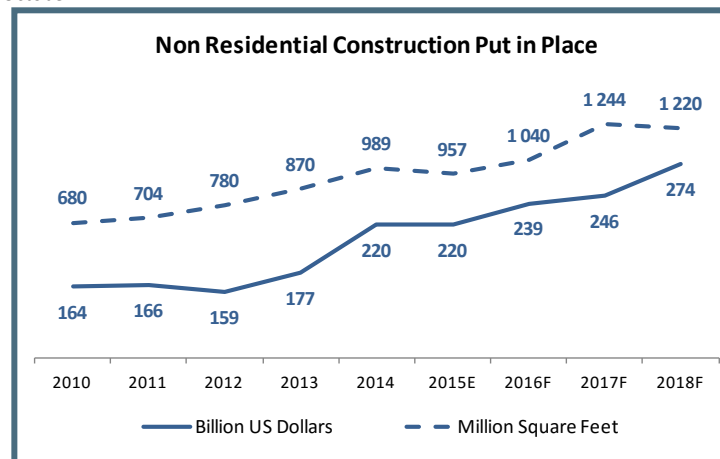
The US economy is on a positive track with steadily increasing GDP per capita and construction sector activity. The unemployment rate is expected to remain stable at around 5% over the next years.



Thousand US dollars at 2014 prices. Source: International Monetary Fund, World Economic Outlook Database, October 2015



Source: International Monetary Fund, World Economic Outlook Database, October 2015

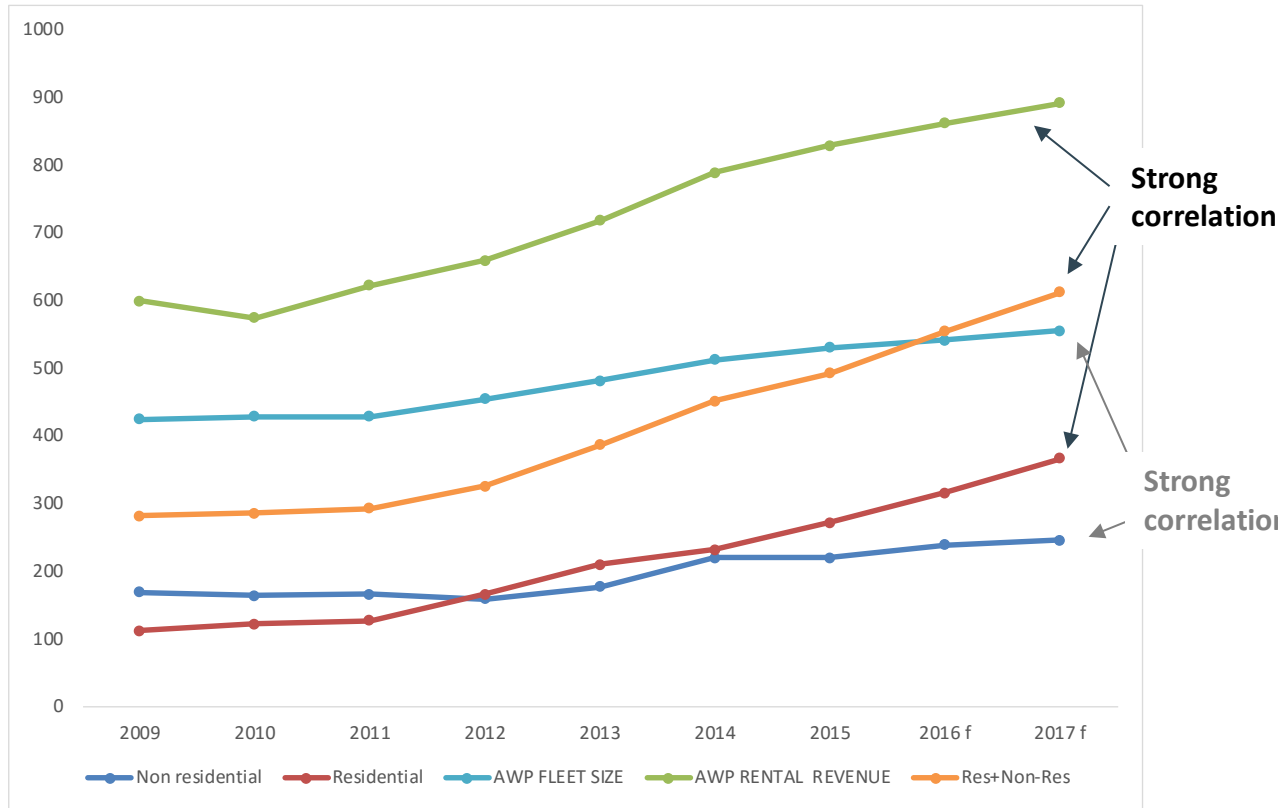


**CAGR (2010-2018): 7.59%**

Source: McGraw-Hill Construction, Dodge Construction Outlook 2015



Correlation analysis shows that while the AWP rental revenue is highly correlated to the residential market, the AWP fleet size is more correlated with the non-residential market.



- For evaluating the relationship between rental revenue and construction indicators, a correlation analysis (PEARSON correlation) was conducted, which compares variances and standard deviations among variables.
- The analysis shows that the AWP rental revenue is directly and highly correlated to the construction market (residential + non-residential spending), but more specifically with the residential market.
- AWP fleet size, on the other end, is strongly correlated to non-residential spending.

Source: McGraw-Hill Construction, Dodge Construction Outlook 2015, International Monetary Fund, World Economic Outlook Database, October 2015



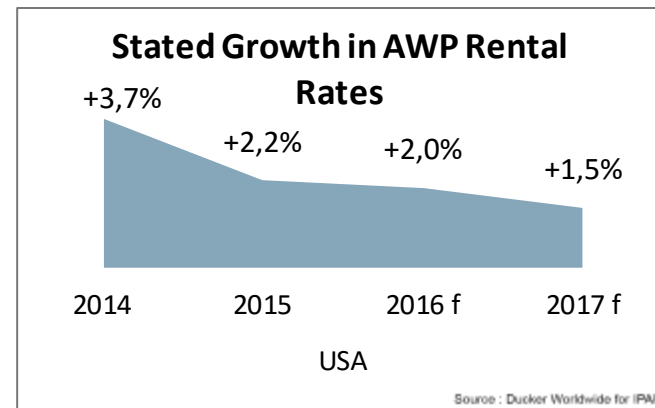
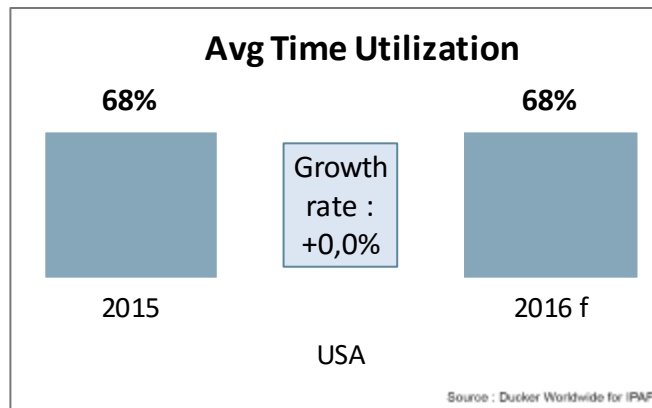
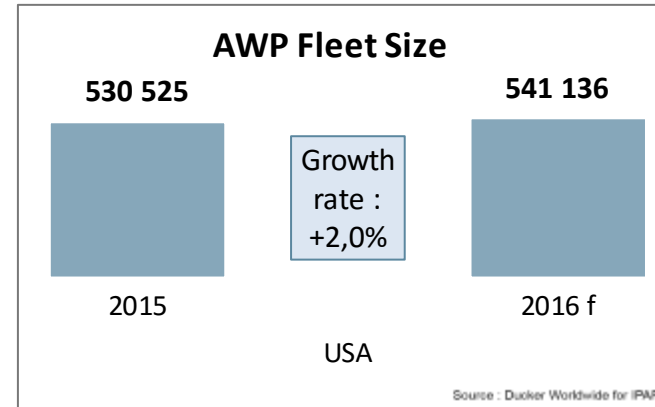
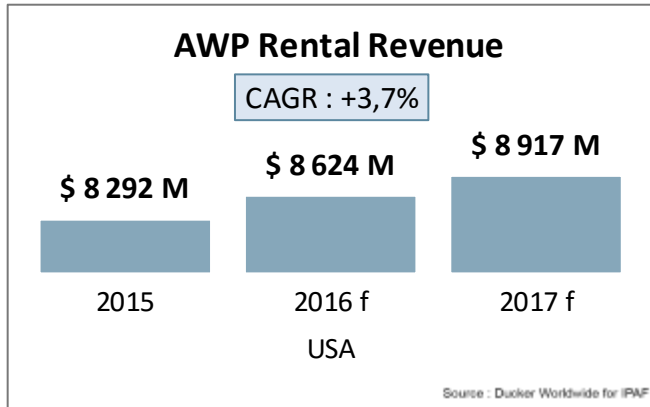
### AWP Rental Market Situation at End 2015.

- The relatively good development of AWP rentals at the beginning of 2015 was reported to have cooled down towards the end of the year, resulting in a 5% increase in rental revenue. The US AWP rental market now is around \$8.3Bn.
- In 2015, AWP fleet size increased slightly by 3%, having now reached more than 530 000 units of which about 60% are scissor lifts.
- The construction sector remains the predominant target market as it accounts for 73% of all rentals. Within the construction business, commercial building projects are identified as the main sub-segment.
- AWP rental rates are continuing to increase, however, at lower rates than in previous years – in 2015 only about 2%.
- Investment decisions were mostly postponed into 2016 and after, resulting in a 3% lower investment level compared to 2014. Investment should grow again in 2016 though.
- Expected regulatory changes regarding safety standards, are reported to possibly have a negative effect on companies' financial performance, especially if they would be too strict.





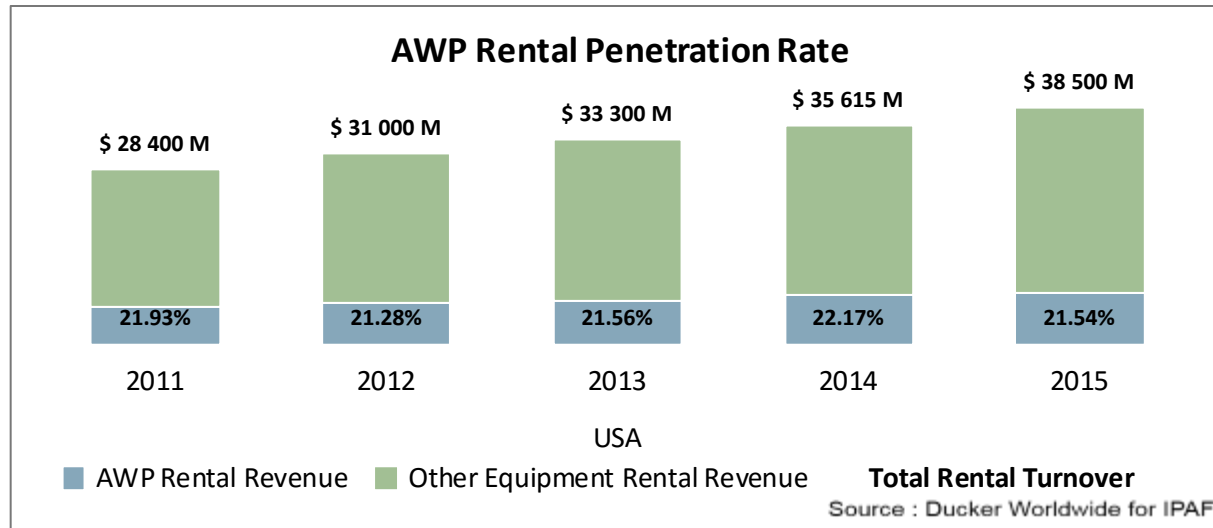
Despite lower growth of rental rates, US rental companies expect a moderate revenue growth of around 7% from now to 2017 as utilization rates remain high and fleet size continues to expand at a decent level.





AWP rentals developed positively but at a lower rate than the overall rental equipment market in the US (+5% vs. +8%, source ARA).

- AWP rentals continue to account for approximately 20% of the total equipment rental in 2015.



ARA overall equipment rental revenue includes:

1. Party & Event
2. General tool
3. Construction & Industrial Equipment

ERA overall equipment rental revenue includes:

1. General Plant
2. Tools & General Equipment
3. Access
4. Power generation & Temperature Control
5. Accommodation & Fencing
6. Industrial Machinery
7. Crane

ARA: American Rental Association  
 ERA: European Rental Association

Exchange rate: \$1  
 = €0.900

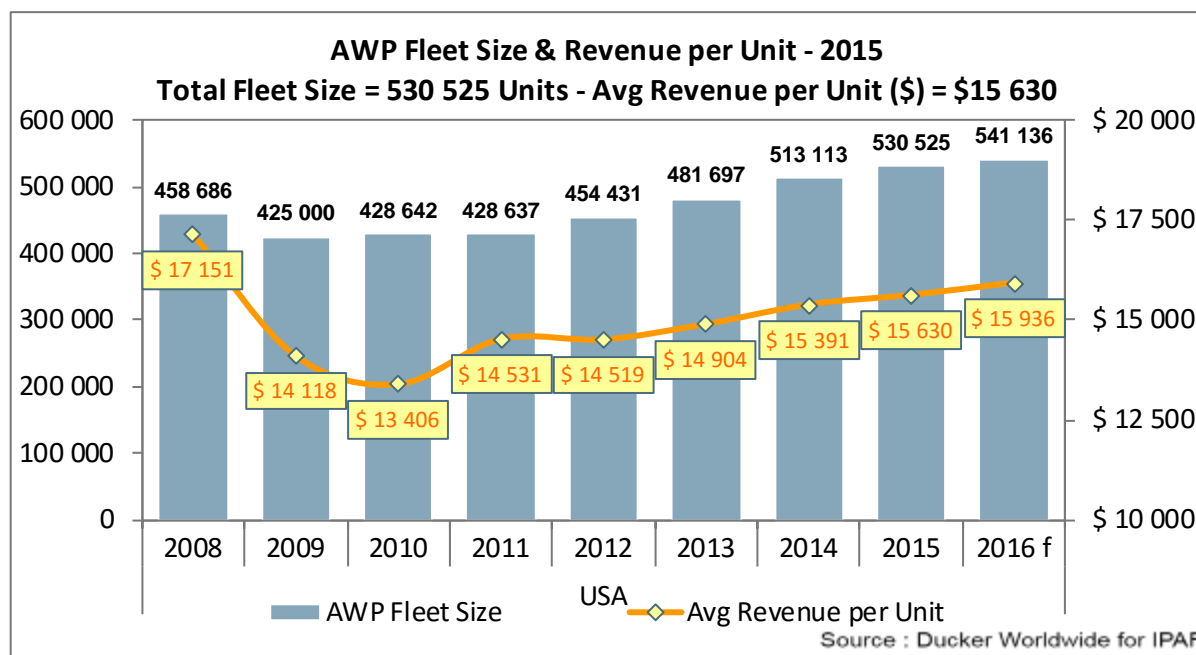


# EXECUTIVE SUMMARY – USA VS. EUROPE

The US rental market is continuing its growth at slightly higher rates compared to Europe.

Region	2015 revenue growth	2015 revenue	2015 fleet size growth	2015 Fleet size	Utilization rate growth	Rental rate growth
<b>USA</b>	<b>+ 5%</b>	<b>\$ 8.3Bn</b>	<b>+ 3%</b>	<b>530 525</b>	<b>- 1 pt</b>	<b>+ 2%</b>
Europe*	+ 3%	\$ 2.6Bn	+ 3%	253 354	+ 1 pt	- 1%

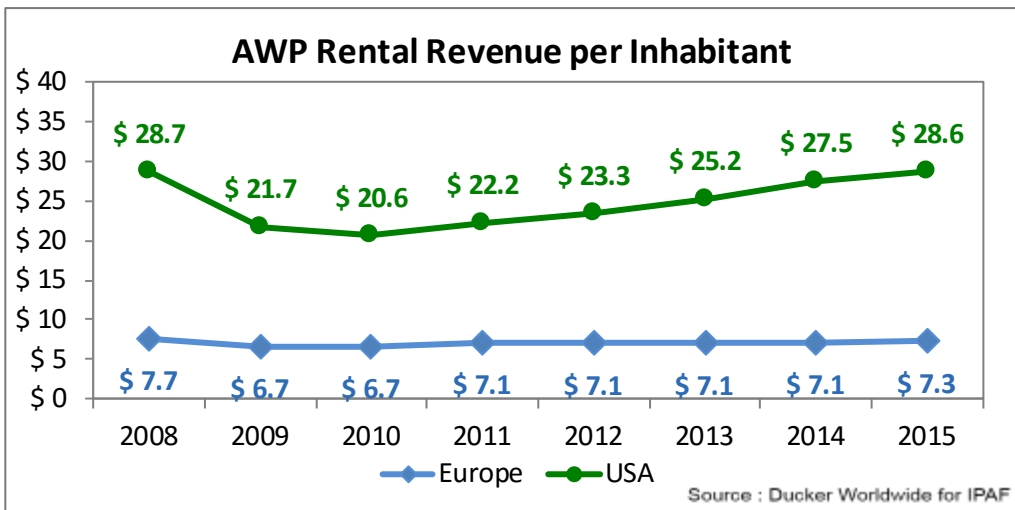
Exchange rate \$1 = €0.900



\* Defined as : UK, FR, SP, IT, GER, NL, DK, NO, SE, FI

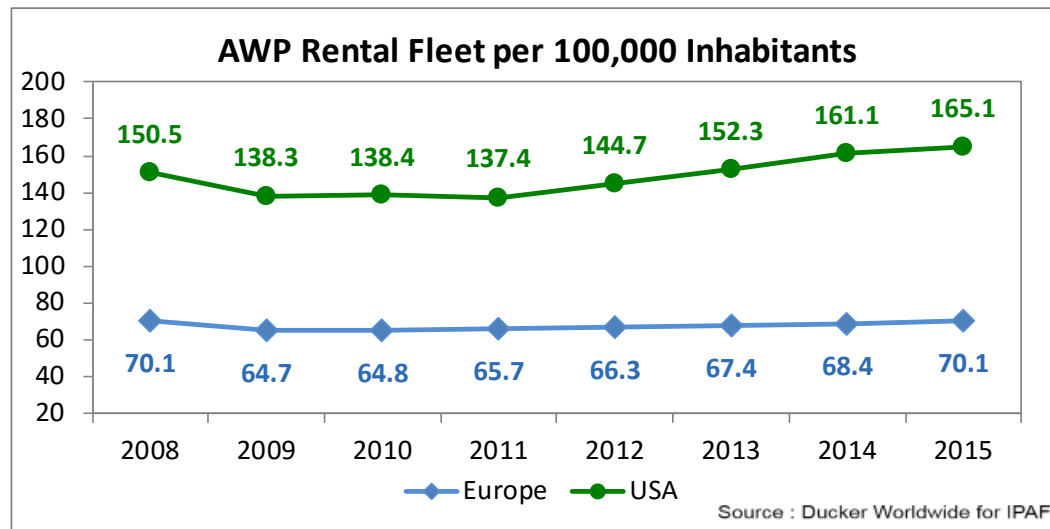


The gap between the US and European revenue and fleet per capita has continued to widen in 2015.



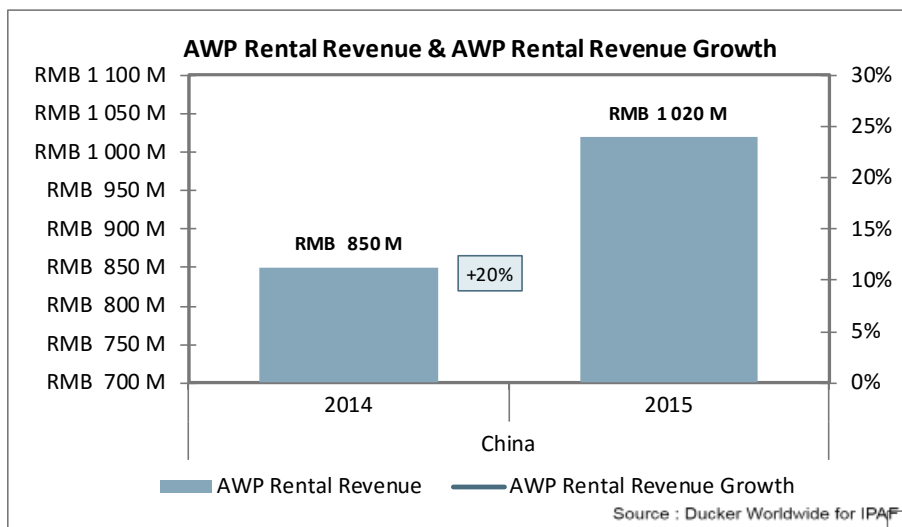
- In 2015, the revenue per inhabitant was around four times higher in the US than in Europe.
- Since the US AWP market is expected to grow faster than Europe, this gap might increase even further.

- Rental fleet per capita has increased at 2.5% both in the US and Europe between 2014-2015.



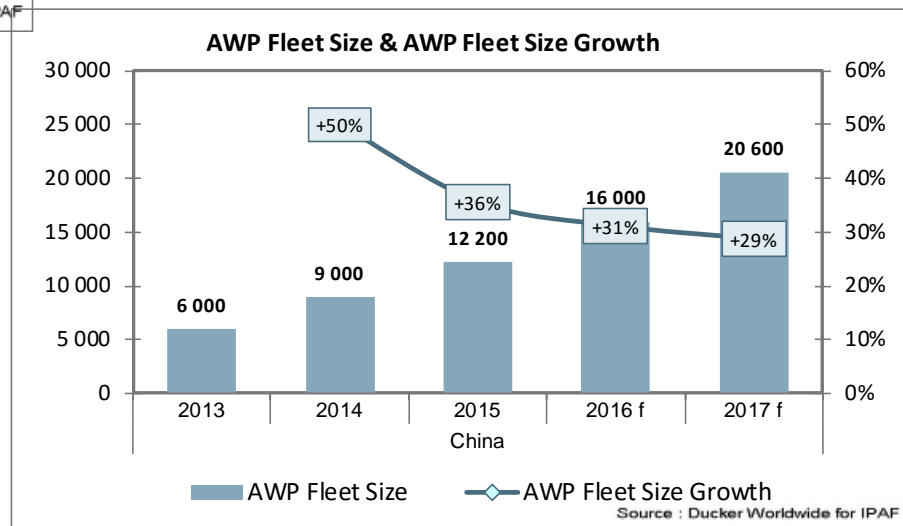


The Chinese AWP rental market continued to experience steep revenue growth in 2015, driven by strong fleet expansion. It is now above RMB1000M (\$165M). The Chinese AWP rental fleet should exceed 20,000 units by 2017.



- That being said, the market is also experiencing intense increasing competition, leading to significant rental rate pressure.
- Utilisation rates remained high in 2015 at above 80%.

- While JLG and Genie are still leading the market, domestic brands i.e. Dingli, Jingcheng, Runshare and Mantall are gaining more and more focus recently, especially among small rental houses





Worldwide AWP rental fleet size is estimated at approximately 1,170,000 units. This represents a 4% increase compared to 2014. Latin America, and especially Brazil, experienced significant decrease in fleet size.

North America	
Articulated Booms	106 450
Straight Booms	126 550
Scissors	329 450
Others	30 950
<b>Total</b>	<b>593 400</b>

EAME	
Articulated Booms	80 750
Straight Booms	39 800
Scissors	167 450
Others	40 150
<b>Total</b>	<b>328 150</b>

ASIA - PAC	
Articulated Booms	20 800
Straight Booms	38 650
Scissors	99 150
Others	39 650
<b>Total</b>	<b>198 250</b>

Latin America*	
Articulated Booms	6 750
Straight Booms	15 800
Scissors	20 700
Others	4 100
<b>Total</b>	<b>30 250</b>

\*Includes Mexico

Overall Europe (27 countries) accounts for 95% of total EAME fleet

*Note: included are powered access: all booms, scissor lifts and vertical masts  
Excluded: low-level access equipment (<10ft/3m high), telescopic material handlers, forklifts, cranes, mast climbers*

*Others include: vertical lifts, vertical masts, vehicle-mounted booms owned by rental companies owning self-propelled fleets*

# MARKET SIZE AND DYNAMICS 2008 - 2016

## IPAF Powered Access Rental Market Report 2016 - USA

*The International Powered Access Federation*

*[www.ipaf.org/reports](http://www.ipaf.org/reports)*

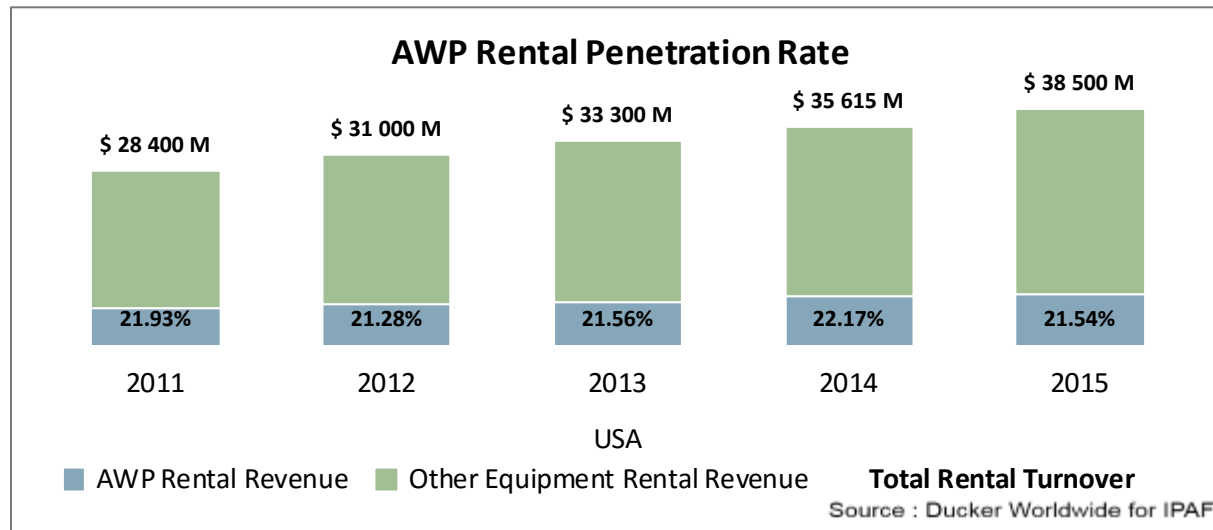


DUCKER WORLDWIDE



The total value of the US AWP rental market in 2015 increased to approximately \$8.3 billion.

- From 2014 to 2015, the US AWP rental market developed at a slower pace (+5%) compared to the overall rental equipment market (+8% ; \$38.5Bn, source ARA).
- The share of AWP rental has decreased slightly by 0.6 percentage points – but still accounts for around one-fifth of the entire rental market.



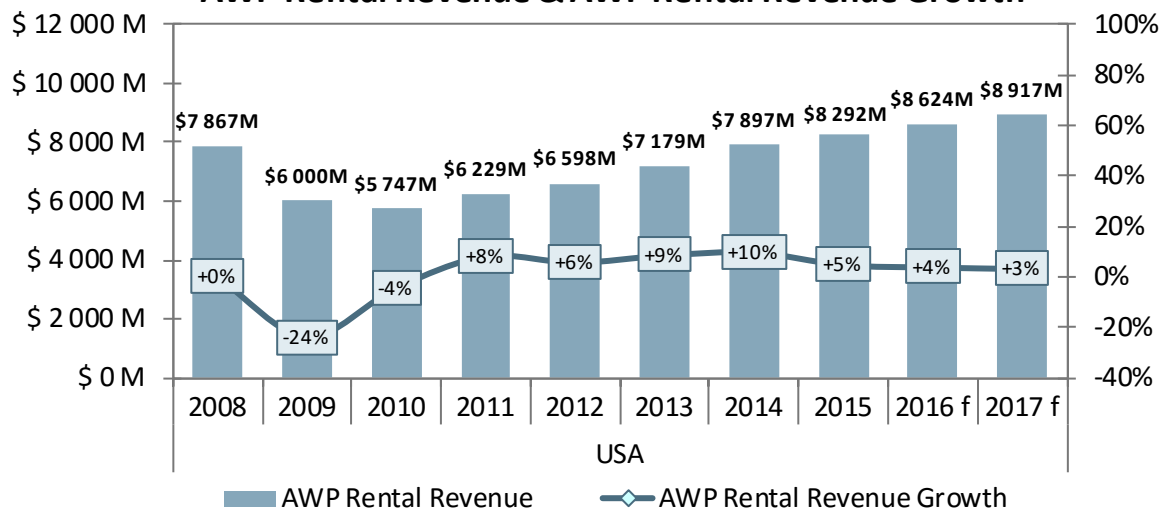


## MARKET SIZE & DYNAMICS – MARKET VALUE GROWTH

The US AWP rental market growth in 2015 only reached half of the 2014 level. Political and economical uncertainties are expected to slow down future growth.

- The 2015 AWP rental revenue increased by 5%, coming down from 10% in 2014.
- This development was in line with the overall US economy. Both, rental market revenue and GDP per capita, decreased by around 0.7 percentage points between 2014-2015.
- Most pressure on the AWP rental market is reported to come from political and legislative uncertainties related to the 2016 US presidential election and regulatory changes.
- The impact of the oil price shock was geographically rather limited to companies primarily focusing on the oil and gas sector.

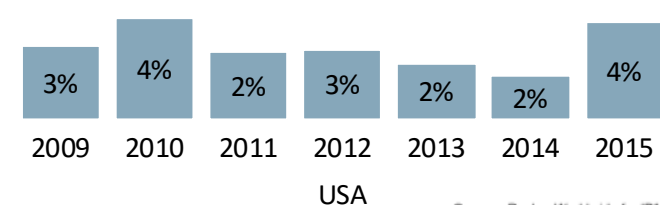
### AWP Rental Revenue & AWP Rental Revenue Growth



Source : Ducker Worldwide for IPAF

Re-rental, i.e. rental by one rental company from another, increased slightly but remained at a low level and represented around 4% of the AWP rental market.

### Re-Rental

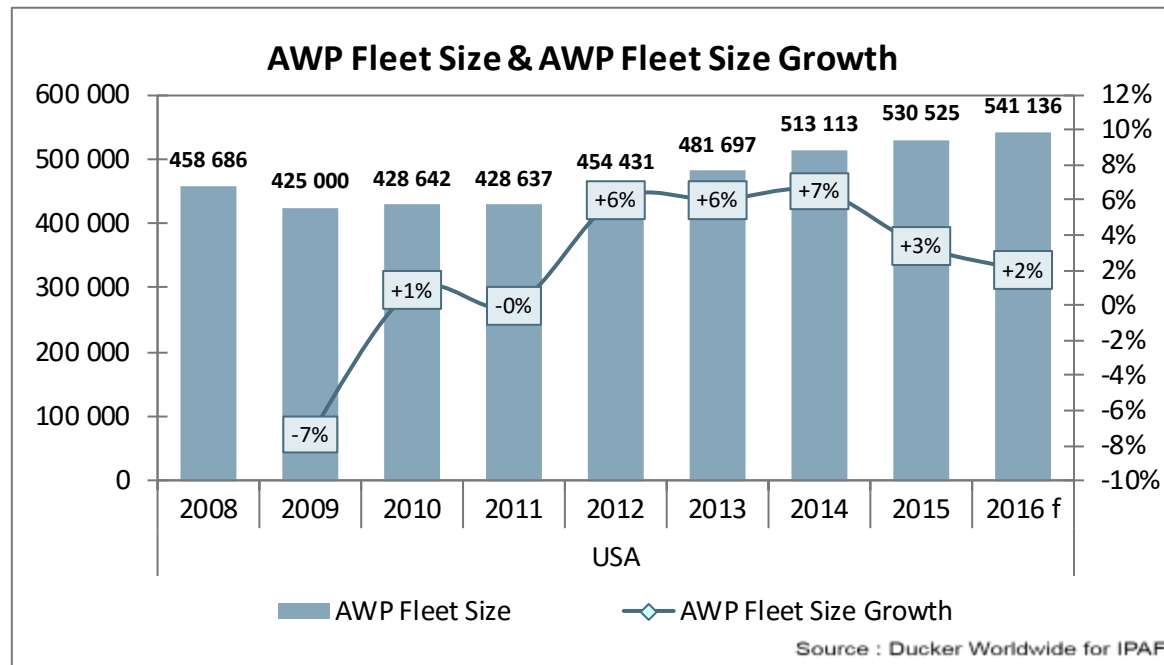


Source : Ducker Worldwide for IPAF

End of the year data

Already high market penetration coupled with relative economical and political uncertainties are expected to put a brake on further fleet size expansion in the following years.

- Positive economical developments and high AWP utilization rates with promising revenue streams led to a higher increase in the AWP fleet in recent years.
- AWP rental companies react to the slowdown of market growth by limiting their future fleet expansion to progressively reach stabilization.
- New to this edition, we have asked rental companies to provide their cost of equipment service and parts purchases cost in 2015. On average, rental companies spend approximately USD2,000 per machine on equipment service, and USD 1,000 per machine on parts purchases.



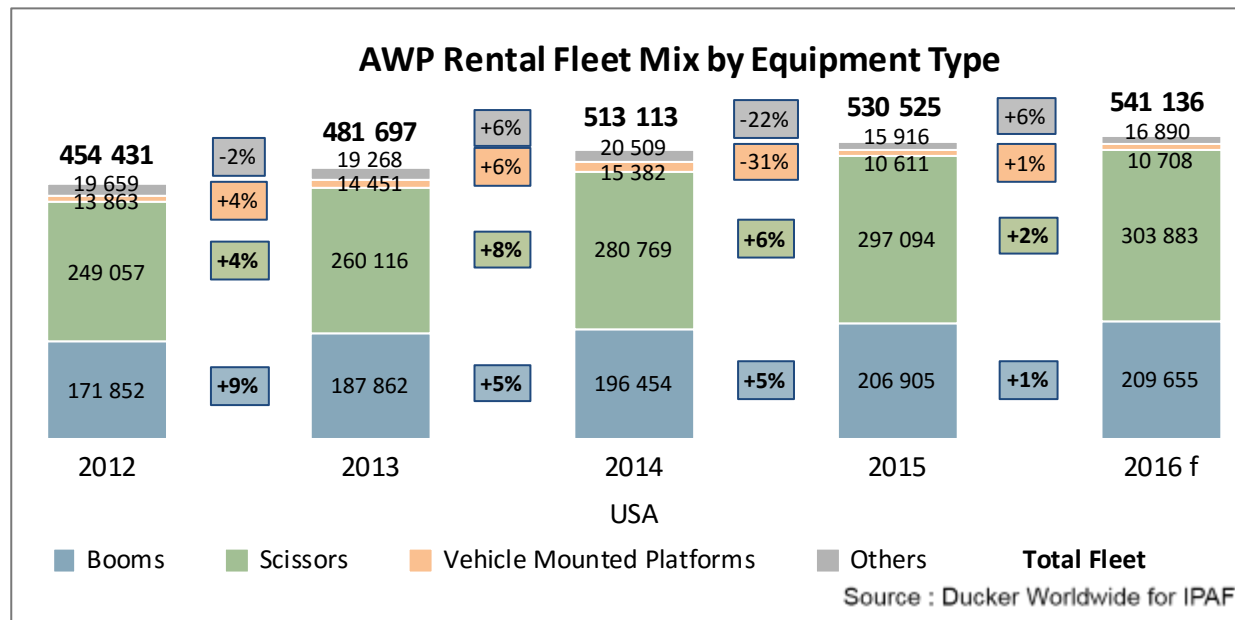
*Note: included are powered access: all booms, scissor lifts and vertical masts  
Excluded: low-level access equipment (<10ft high), telescopic material handlers, forklifts, cranes, mast climbers*



# MARKET SIZE & DYNAMICS – MARKET SIZE IN UNITS

Fleet size growth slowed down in 2015 compared to 2014, especially as the scissor lift fleet grew less rapidly in 2015.

- Scissor lifts now represent 56% of the overall AWP fleet in the US, which is a slight increase compared to 2014.
- Economical advantages, such as a faster payback period, paired with an increase of indoor projects, have been reported to drive the demand for scissor lifts primarily.



*Note: included are powered access: all booms, scissor lifts and vertical masts  
Excluded: low-level access equipment (<10ft high), telescopic material handlers, forklifts, cranes, mast climbers*

+X%

% unit growth, e.g. Boom fleet increased by 5% from 2014 to 2015

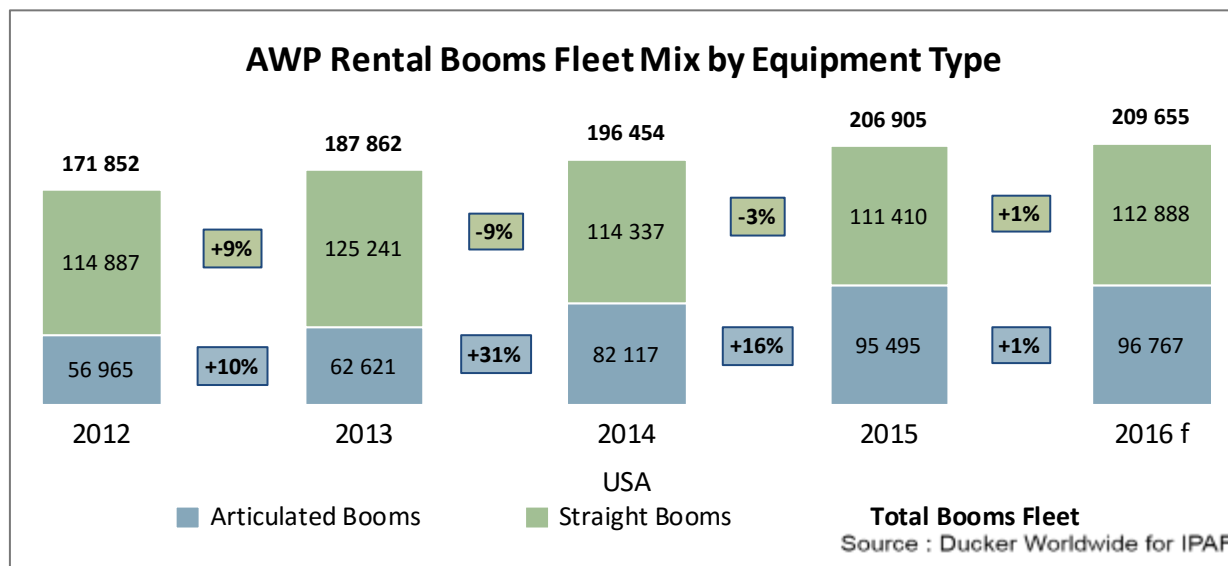
Other includes vertical lifts, vertical masts.



## MARKET SIZE & DYNAMICS – MARKET SIZE IN UNITS

The split between articulated versus straight booms is expected to continue to converge over the next years.

- In 2015, articulated booms again experienced strong growth (+16%) compared to straight booms.
- Although straight booms are said to reach higher heights, the versatility of articulated lifts for different applications is supporting the stronger demand for them.

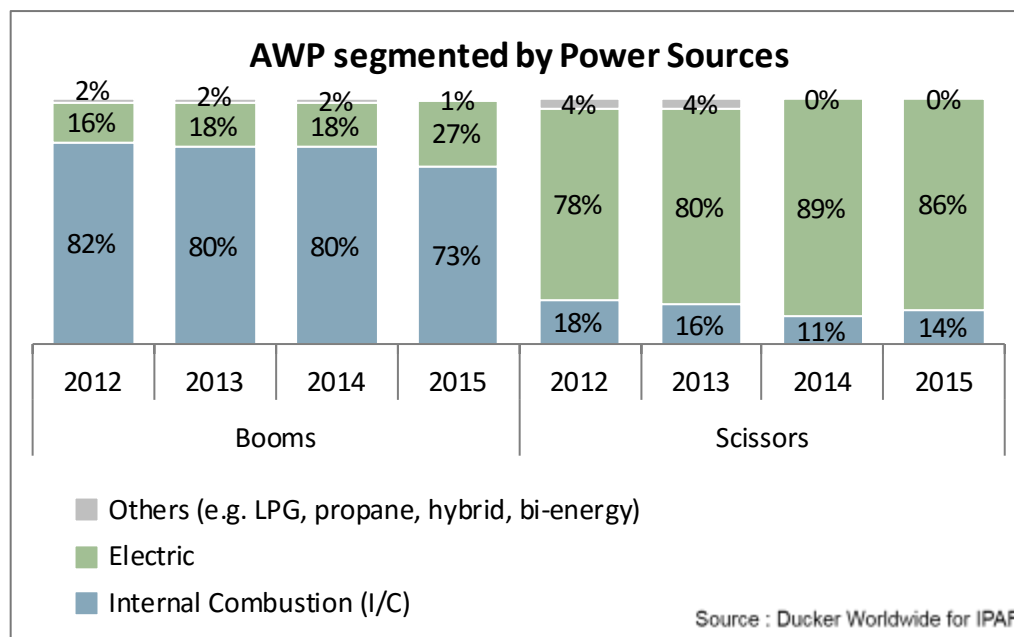


*End of the year data*



The development of electric engines differs between booms and scissors – stabilizing in the scissors category, while increasing in booms.

- Internal combustion engines remain the predominant power source; they accounted for approximately 73% of boom lifts in 2015.
- Stronger and more durable batteries as well as lower running cost are driving the popularity of electric engines – leading to an increase of their share within the boom lift category.



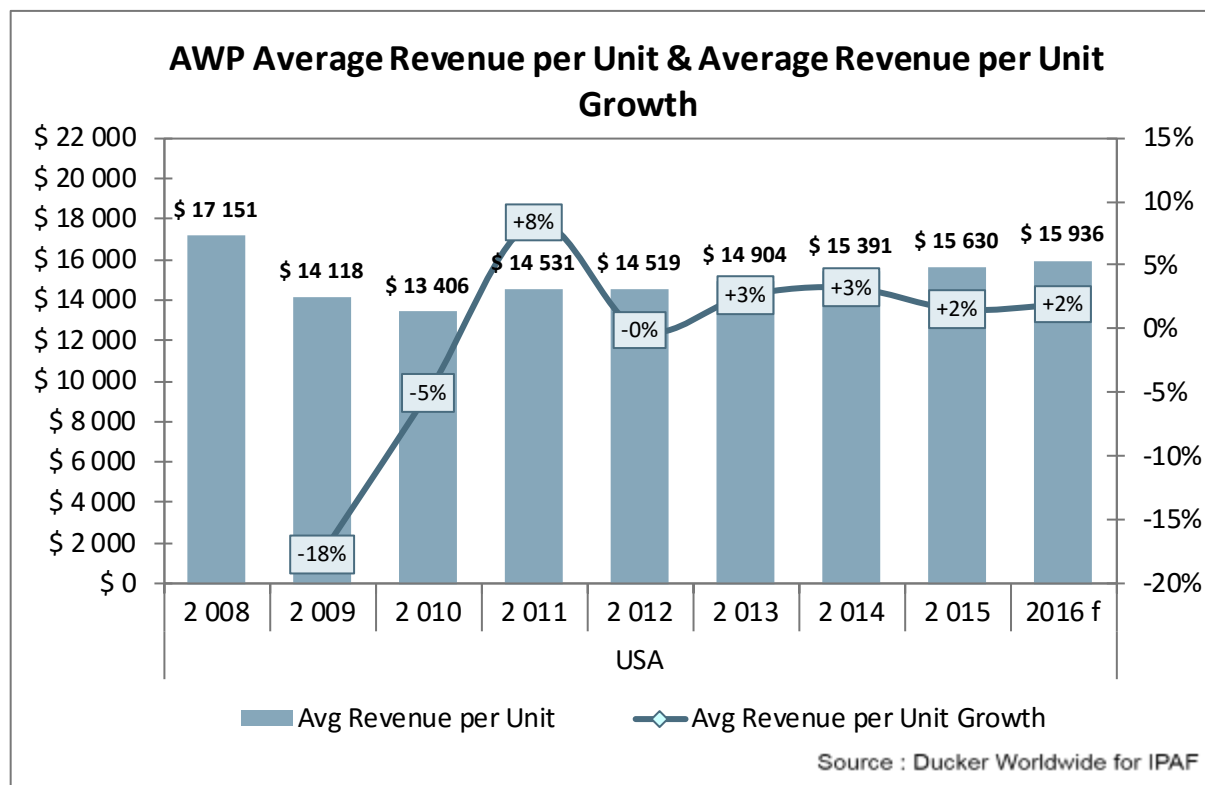
*% of fleet powered by electric vs. diesel engine.*



## MARKET SIZE & DYNAMICS – REVENUE PER UNIT

AWP rental rates are expected to continue to increase over the next years, thus driving average revenue up – however, pre-2009 revenue per unit levels are not expected to be reached again soon.

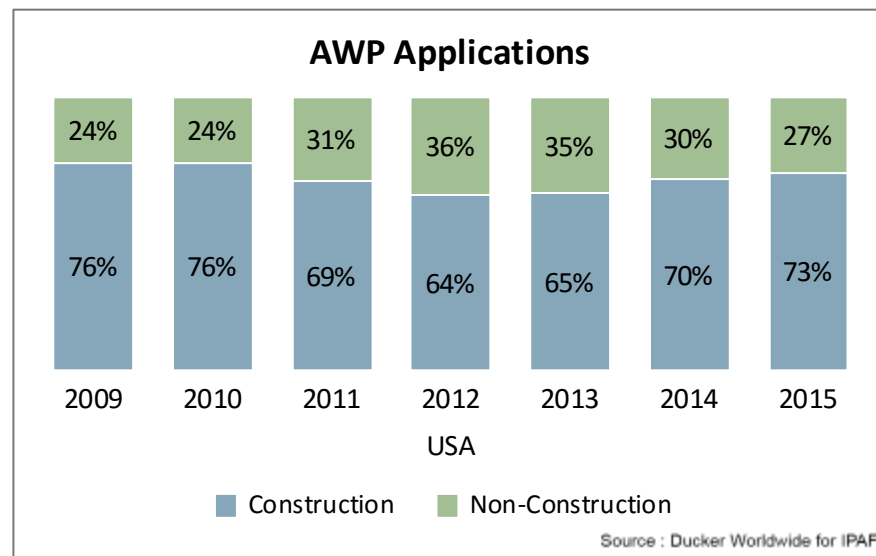
- The average revenue development is expected to slowly increase by 2% in 2016.



*% of fleet powered by electric vs. diesel engine.*

After several years during which rental companies had to turn to non-construction end-markets, the importance of the construction sector is increasing again and currently accounts for 73% of the rental revenue.

- A strong increase in total construction activity between 2014-2015 at around 8%, paired with a re-allocation of AWP rentals away from oil/gas, put a stronger emphasis on rentals for the construction sector.
- It is expected, that AWP rental companies will continue to further diversify their rental portfolio to serve a broader range of sectors.

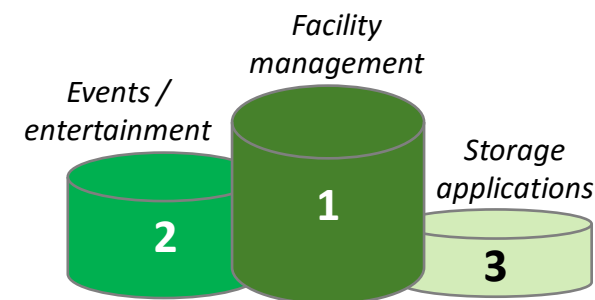


Share of rental revenues

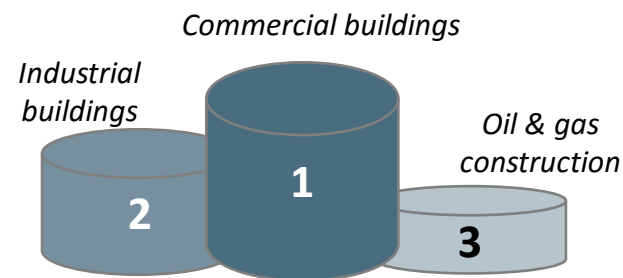
Non-construction includes industry, maintenance, cleaning, utilities, events.

Construction includes new build and renovation; including all types of buildings, also industrial.

## Main non-construction sub-sectors



## Main construction sub-sectors



# INVESTMENT 2008 - 2016

## IPAF Powered Access Rental Market Report 2016 - USA

*The International Powered Access Federation*  
[www.ipaf.org/reports](http://www.ipaf.org/reports)



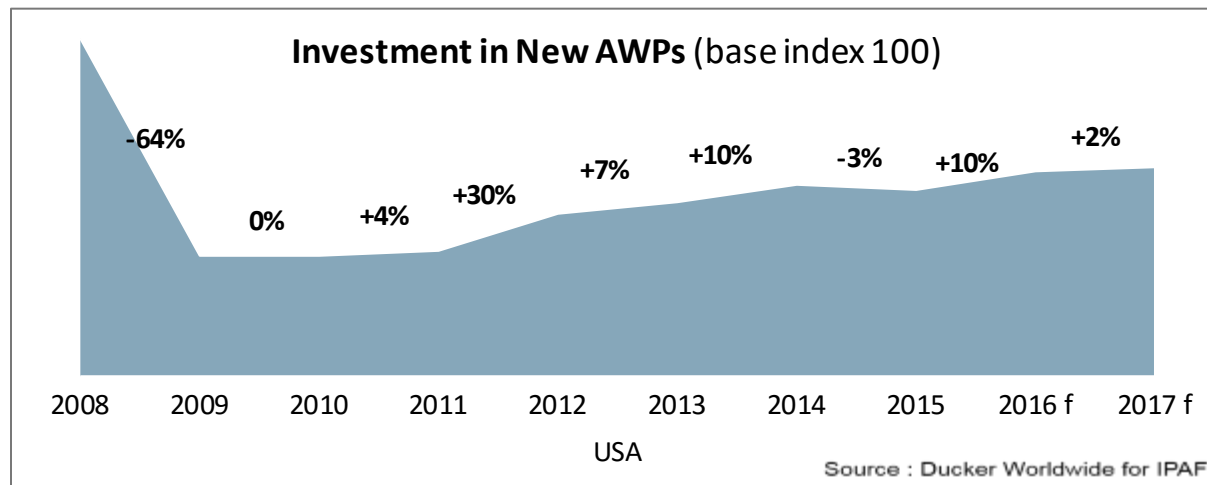
DUCKER WORLDWIDE





AWP rental company investment has shown a significant cool-down in 2015 with a 3% decrease compared to 2014.

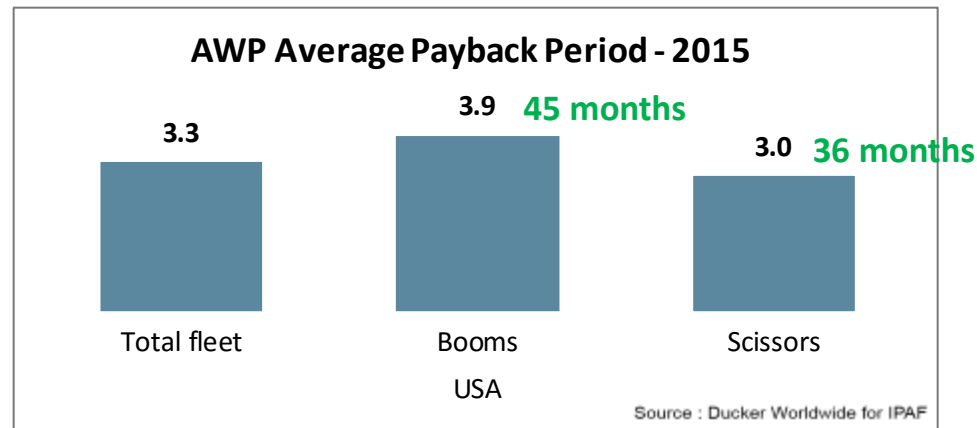
- After strong investment activities post-recession in the years up to 2014, rental companies reported that investment decisions were postponed from 2015 to 2016 as economical and political uncertainties exist.
- Planned spending has been reported to be directed towards the purchase of new equipment for both fleet expansion and renewal.





Scissor lifts are in general amortized nine months earlier than boom lifts with a payback period of around three years.

- On average, the AWP payback period is around 39 months.
- This depends however on the different variables such as the type of equipment (boom vs. scissor), type of power source and equipment height.
- In general it can be observed, that equipment with internal combustion engines have a higher payback period than electric propelled lifts.



**3.9 = 3 years and 9 months**

# OPERATIONAL ASPECTS 2008 - 2016

## IPAF Powered Access Rental Market Report 2016 - USA

*The International Powered Access Federation*

*[www.ipaf.org/reports](http://www.ipaf.org/reports)*



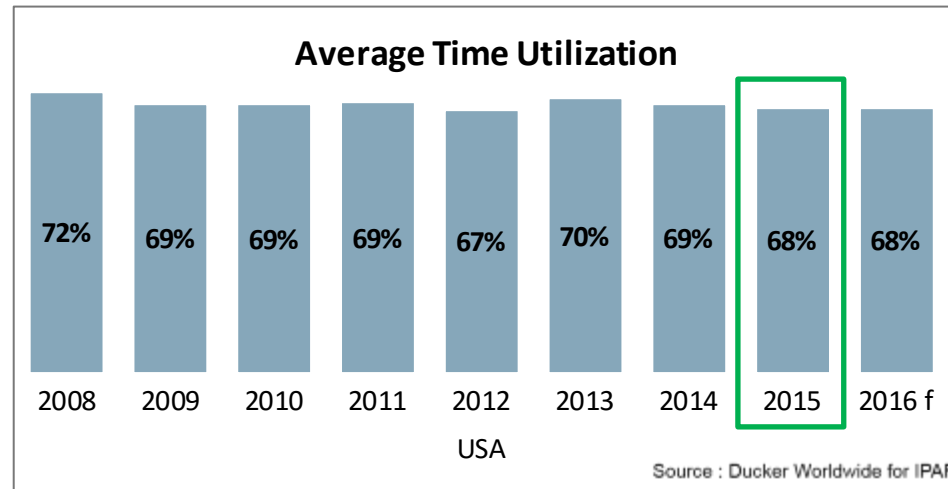
DUCKER WORLDWIDE



## OPERATIONAL ASPECTS – TIME UTILIZATION RATES

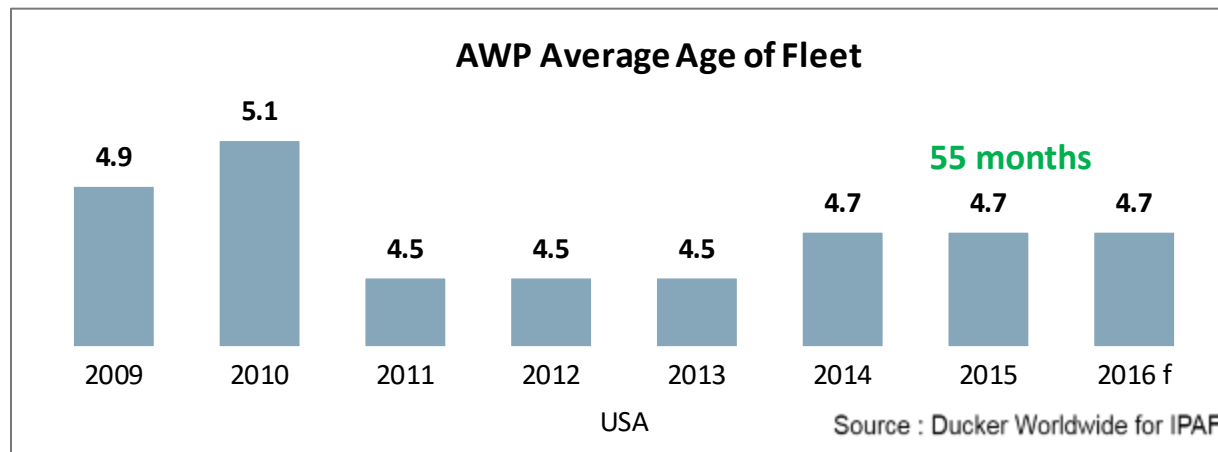
The US average equipment time utilization level remains constantly within the range of 67-70% over the years. In 2015, its level was at 68%.

- Utilizations rates among boom and scissor lifts are reported to have been equally high at around 68% in 2015.
- In general, the 2015 AWP time utilization was about six percentage points higher compared to Europe.
- Rental companies expect that this rate stays rather stable in the mid-term, as the current level is already relatively high.



The average fleet age has been leveled out at around 55 months.

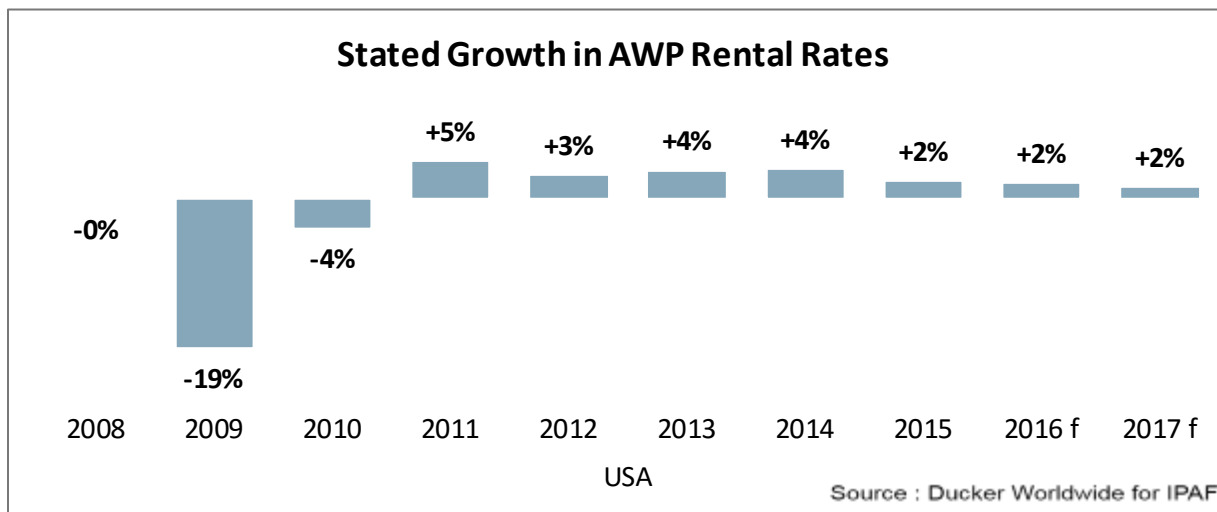
- The average fleet age is slowly increasing again after the recession and a significant drop in 2011.
- As booms are reported to have a longer payback period, the average fleet age is pushed upwards by this AWP type.



*4.7 = 4 years and 7 months*

Rental rates continue increasing but at a slower pace than over the previous years.

- With the uncertainties about political situation and the slow-down of main economic indicators, companies remain careful and face competition by trying not to increase rates too much.
- The ongoing price level is said to be constantly adjusted to optimize opportunities for profits.





## OPERATIONAL ASPECTS – MOST DEMANDED FEATURES

The most demanded feature was by far an additional generator in the basket – similar between boom and scissor lifts.

- Rental companies reported that in most cases, no additional features are demanded. However, when they are, then generators in the basket were asked for most often.
- The demand between booms and scissor is slightly different, as the features for scissors are linked directly to their indoor application.

### Booms

1	Power source in basket
2	Jib / Jib+
3	Welder packages
4	4 wheel drive

### Scissors

1	Power source in basket
2	Deck extension
3	Smaller scissors
4	Non-marking tires

Other mentioned features are:

Control panel  
protection/safety bar  
Glass / Panel tray

# A PERSPECTIVE FROM THE MANAGING EDITOR OF *INTERNATIONAL RENTAL NEWS* IPAF Powered Access Rental Market Report 2016 - USA

*The International Powered Access Federation*  
[www.ipaf.org/reports](http://www.ipaf.org/reports)



DUCKER WORLDWIDE





- Europeans rental managers continue to look over the Atlantic with envy at the growth rates being seen in the USA. That remains the case, although there is perhaps less justification now for the sentiment than there was 12 or 18 months ago.
- The reason is the low oil price and the impact that has had on investment in the shale oil and gas sector in the USA, a sector which has seen the country become almost self-reliant in oil and gas.
- Rental companies like Sunbelt, United and Hertz had all benefitted greatly from the oil and gas investment, and now that development projects have slowed down or been shelved the rental companies have had to reallocate equipment to civil projects.
- This freeing up of equipment previously used on shale projects is one of the reasons that there has been a scaling down of equipment buying by some of the biggest renters in the US, most notably in the second half of 2015.
- And of course the backdrop to this is the scale of investment in the past five years, which saw the largest AWP fleets in the US grow by almost 25% in the years between 2009 and 2015. That's a lot for any AWP market to absorb, never mind the largest and most mature in the world.
- There is no precipitous decline in AWP sales - and the ARA is still forecasting rental market growth rates of 6% or more for the coming years – but the headlong rush to add fleet has definitely slowed. United Rentals, for example, said it would be careful in the timing of its capital expenditure plans this year.
- (One interesting sideline to this slowdown in rental fleet investment is that the American Rental Association reported a small reduction in the rate of rental penetration in 2015 – for all equipment, not just aeriels. The ARA measures penetration by looking at the size of the active rental fleet as a proportion of the size of the active construction fleet overall – and it found that contractors added fleet at a higher rate than rental companies, hence the reduction in penetration.)



- So, after several years of 8-10% rental industry growth, US companies are facing a slightly slower market – although many would be delighted with a ‘slower’ rate if it was 6%!
- The aerials market seems even to be slightly exceeding this general growth rate. That was certainly the case at Chicago-based NES Rentals, which reported an 8% increase in revenues in 2015 on the back of 7% larger fleet and continued high utilisation rates (exceeding 71% for the year).
- This healthy state of affairs is leading to continued consolidation of the rental market, with Sunbelt Rentals – the Ashtead-owned giant – leading the way with several acquisitions as it seeks to plug gaps in its network. Blueline’s acquisition of Trico Lift in February 2015 was notable within the aerials sector, another example of a specialist being snapped up by a generalist.
- Re-rental specialist ACME raised finance for further growth, and Hertz Corp prepared for the spin-off of its equipment rental subsidiary – with the separation expected by the middle of 2016 and with the new company taking the name Herc Rentals.
- Those speculating that US rental companies would inevitably move into foreign markets may well be right, but in the short to medium term, there remains plenty of opportunities at home.

# MARKET TRENDS AND DRIVERS

## IPAF Powered Access Rental Market Report 2016 - USA

*The International Powered Access Federation*  
[www.ipaf.org/reports](http://www.ipaf.org/reports)



DUCKER WORLDWIDE



Increasing safety regulations and costs related to further staff training are expected to have an impact on the ROI if higher costs cannot be transferred to customers.

### **AWP new safety standards**

- Some companies reported that revised AWP related standards might impact their business if new regulations call for stricter and complicated rules.
- If they are unable to translate higher internal costs onto higher rates, they are afraid, that their ROI will further decrease.
- On the other end, some other rental companies report being less anxious about legislative changes, as they feel well prepared with already high safety standards.

### **Training trends**

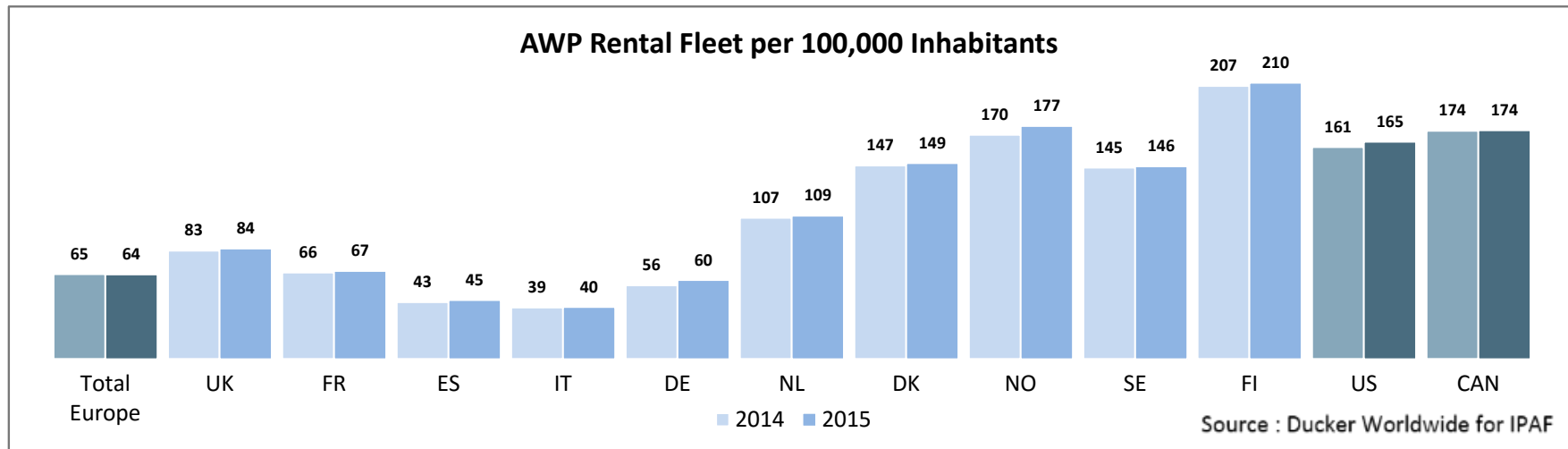
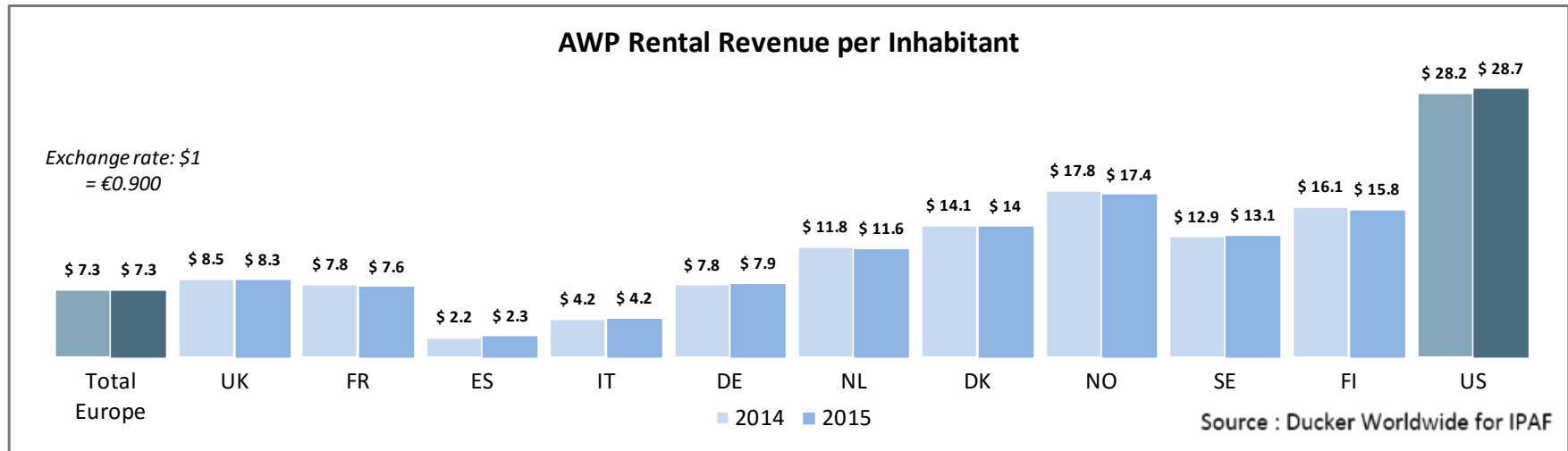
- Many rental companies already offer familiarization classes and training to their customers.
- It has been reported, that approximately 150,000 operators have been trained in 2015 in the US.

### **Rental companies' market expansion**

- Most rental companies reported not to have any expansion plans.
- If expansion plans were stated, it was rather within the same state or geographical region.

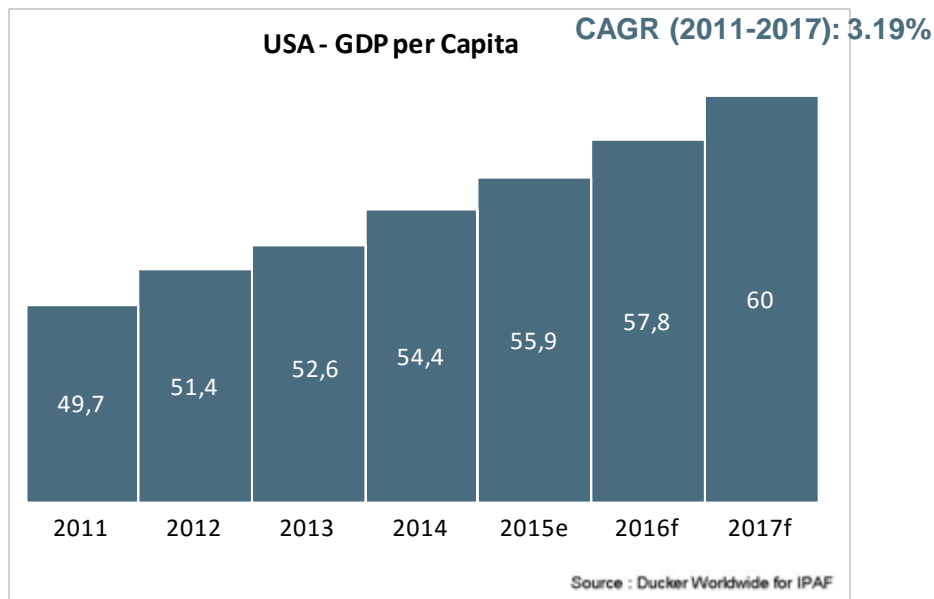


## Country Population Penetration – AWP rental revenue per inhabitant

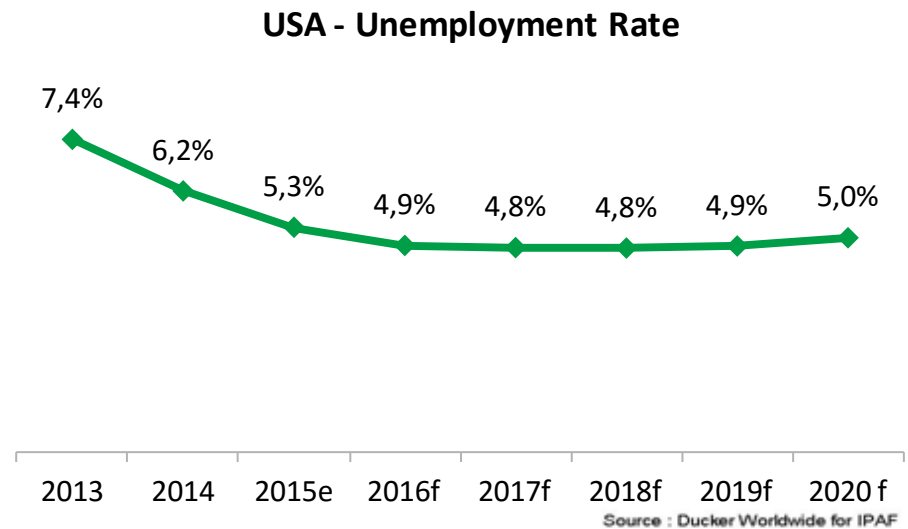




Economic figures for the US are pointing in a positive direction with a GDP per capita increase of 3% and a one percentage point reduction of the unemployment rate in 2015.



Thousand US dollars at 2015 prices. Source: International Monetary Fund, World Economic Outlook Database, October 2015



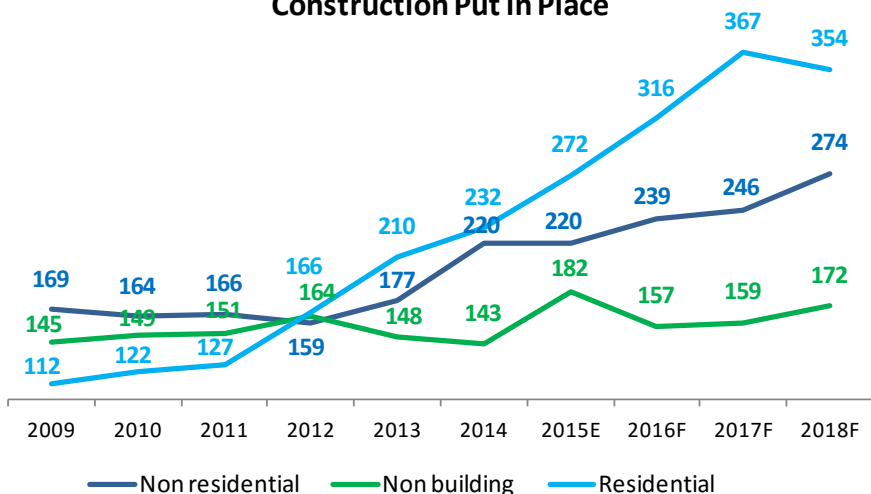
Source: International Monetary Fund, World Economic Outlook Database, October 2015



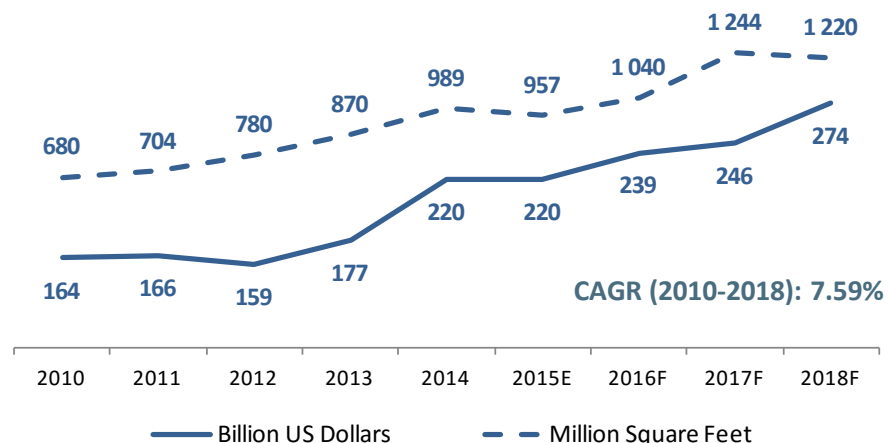
# MARKET TRENDS AND DRIVERS

Next to economic indicators, construction activity is also forecasted to be advantageous with higher growth in residential applications.

### Construction Put in Place



### Non Residential Construction Put in Place



Source: McGraw-Hill Construction, Dodge Construction Outlook 2015

# CANADIAN AWP MARKET

## IPAF Powered Access Rental Market Report 2016 - USA

*The International Powered Access Federation*  
[www.ipaf.org/reports](http://www.ipaf.org/reports)



DUCKER WORLDWIDE



Contrary to the US market, the Canadian AWP rental market only remained stable in 2015, affected by the oil and gas situation and the slow-down of the mining business.

- The Canadian AWP market remained flat in 2015. Government change and the non-attractive USD / CAD exchange rate did not allow the Canadian market to grow as fast as expected.
  - In addition, mining extraction slowed down in 2015, affecting AWP rental demand.
  - Furthermore, scaffolding and mast climbers seems to be gaining market share.
- The oil and gas situation had a mixed impact on the Canadian AWP rental companies: while it negatively impacted rental companies located on the West coast i.e. in British Columbia, the East Coast on the other end took advantage of the current oil development due to lower cost of repairs and equipment shipping.
- The Canadian fleet increased by +1% in 2015 to reach approximately 62,200 units.
  - Booms account for slightly more than 40% of all AWP units.
  - Scissors represent 52% of the Canadian fleet.
- Rental rates slightly decreased in 2015 due to a high number of AWP's available, and thus increasing competition.
  - New construction projects (like the Alberta pipe) are expected to drive prices up in 2016.
- The utilization rates in Canada reached a comparable level to the US, at 67% in 2015.

# CHINESE AWP MARKET

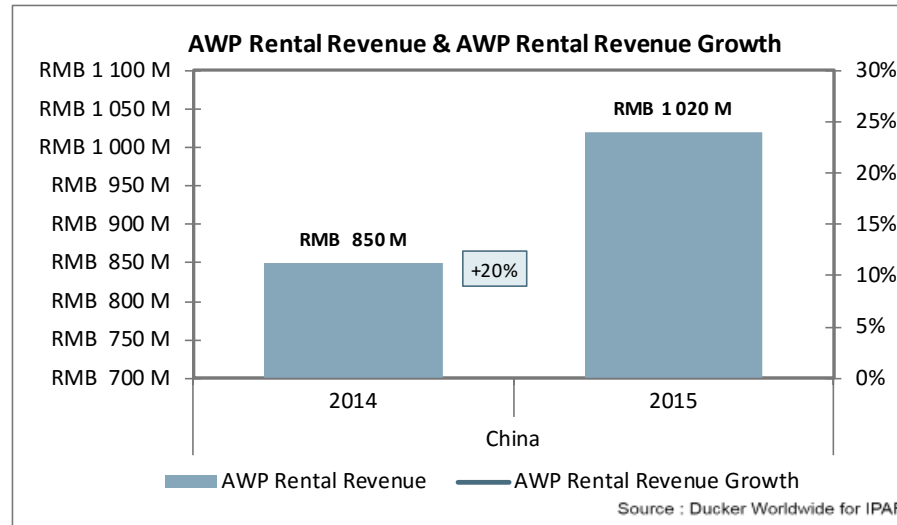
## IPAF Powered Access Rental Market Report 2016 - USA

*The International Powered Access Federation*  
[www.ipaf.org/reports](http://www.ipaf.org/reports)



DUCKER WORLDWIDE

The Chinese AWP rental market continued to experience steep revenue growth in 2015, driven by strong fleet expansion. It is now above RMB 1000 M (\$165 M).

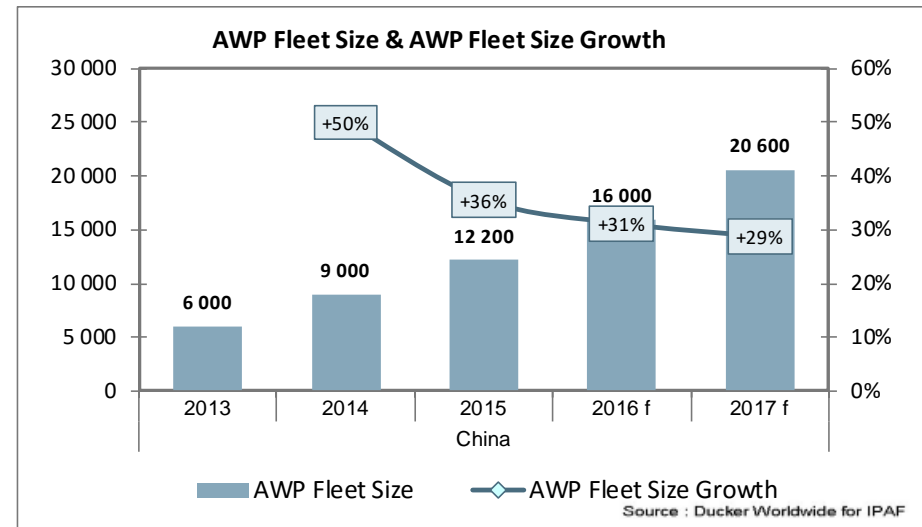


- Positive development of the AWP rental market in China encouraged small and medium-sized companies to invest into AWP machines.
- Rental companies of other equipment types than AWP show interest in adding AWP to their fleet.
- Several large rental houses are preparing for M&A activity in order to increase market shares.
- AWP manufacturers show interests in rental activities and have start offering AWP in their rental subsidiaries.
- These new players entering the AWP market are offering very aggressive rental rates which led to significant rental rate pressure in 2015 (-5%).
- The typical rental contracts are from 3 to 12 months long. Long rent (> 6 months) is getting more popular.



The AWP rental fleet grew in 2015 by approximately 35%. It is expected to go beyond 20,000 units by 2017.

- Scissors represent the majority of the rental AWP fleet in China, accounting for 55 to 60% of total fleet size. Booms account for about 30-35%, while vehicle mounted platforms and other smaller equipment represent approx. 10%.
- Scissors are valued for their flexibility in a wider range of use. Further advantage is their rental price, which is more attractive than booms and vehicle mounted platforms.
- Booms are heavily used in public and industrial building maintenance i.e. airports, high-rise office building and shopping malls, followed by outdoor construction work.
- Vehicle mounted machines are used mostly in municipal and utility maintenance projects.
- Although the majority of AWP brands available in China are European and North American, domestic machines are gaining importance and acceptance.
- While JLG and Genie are still leading the market, domestic brands i.e. Dingli, Jingcheng, Runshare and Mantall are gaining more and more focus recently, especially among small rental houses.
- Average fleet retention period in China is between 7 and 8 years.
- Average utilization rates are estimated at 82%.





The Chinese AWP rental market is experiencing strong development, which will continue in the coming years.

## **Increasing AWP awareness**

- The geographical reach of AWP is expected to broaden. It is currently somewhat limited to the major Chinese cities, however other cities/regions will see an increase in awareness of AWP.
- New end-applications will grow in importance in the future. Strong potential exists for higher AWP usage in events/exhibitions, hospitality, hospitals, and industrial parks.
- Scaffolding and ladders are perceived by the Chinese government in the *12<sup>th</sup> five-year plan* as not being sufficiently safe when working at height. This equipment type will be progressively replaced by AWP in the future.

## **Increased focus on work safety**

- Rental players expect the introduction of official safety standards within the next 3 to 5 years.
- Since the end of 2015, the Association of Equipment Manufacturers (AEM) and IPAF have been working with manufacturers of AWP with the aim of developing new safety standards for work at height in China.

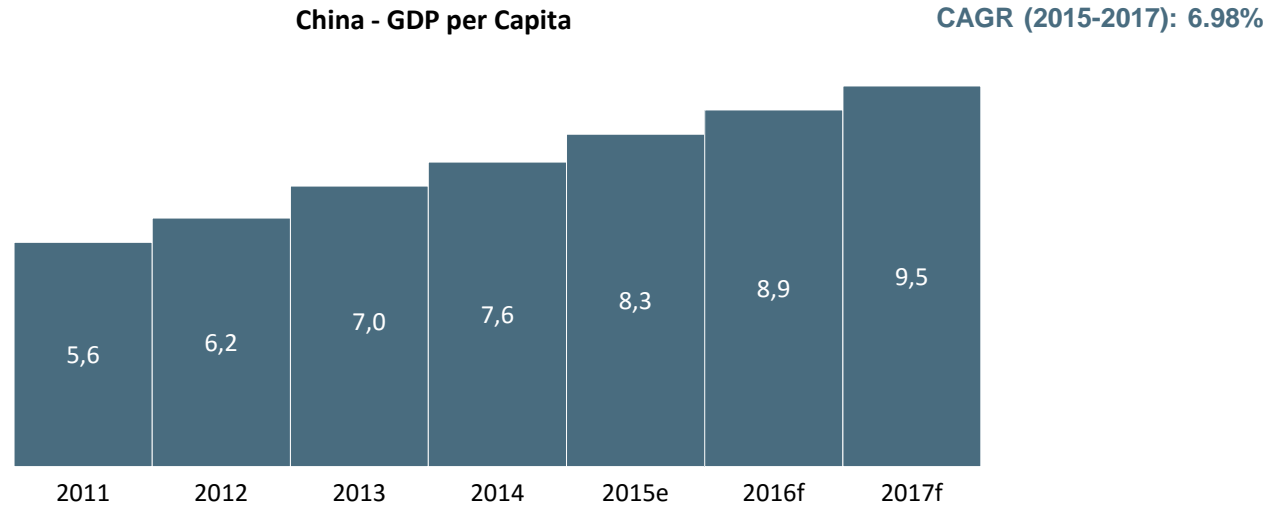
## **Fleet Management**

- Services like training, maintenance, spare parts supply, etc. are expected to gain more focus within the overall rental business in the forthcoming years.
- A better geographical spreading of rental companies will facilitate and simplify rental, thus driving the rental activity up.
- Increased demand for various AWP heights will lead to a more diversified AWP fleet in the future.



Macro-economic indicators show stable growth of the Chinese economy in the next years.

- After experiencing rapid growth for more than a decade, China’s economy experienced a slowdown in recent years.
- The Chinese Central Government emphasized the concept of NEW NORMAL for the economical development, forecasting the GDP growth rate to remain below 7% in the 13th five-year plan 2016 – 2020.
- Multiple national and international construction projects are planned in the forthcoming years: ‘One-belt, ‘One road’ scheme and ‘Maritime Silk Road’.



Source : Ducker Worldwide for IPAF

Data Source: International Monetary Fund, World Economic Outlook Database, October 2015

# THANK YOU.

The International Powered Access Federation (IPAF) is a not-for-profit members' organisation that promotes the safe and effective use of powered access equipment worldwide. Members include manufacturers, rental companies, contractors and users.

Offices in: UK, Brazil, China, Finland, France, Germany, Italy, the Netherlands, Singapore, Spain, Switzerland, Turkey, UAE, USA.

[www.ipaf.org](http://www.ipaf.org)

[info@ipaf.org](mailto:info@ipaf.org)

*The International Powered Access Federation*

[www.ipaf.org/reports](http://www.ipaf.org/reports)



DETROIT | PARIS | BERLIN | SHANGHAI | BANGALORE | LONDON  
[www.ducker.com](http://www.ducker.com) | [info@ducker.com](mailto:info@ducker.com)



DUCKER WORLDWIDE