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Irish Defence Forces Light Tactical Armoured Vehicle. Image: Irish Defence Forces
JGSDF Komatsu Light Armoured Vehicle. Image: Wikimedia/Los688
Foxhound Patrol Vehicle. Image: UK MoD
Arjun MBT. Image: Ajai Shukla
Diplomatic and geopolitical activity in the past year has been tumultuous. Among the factors that have made the biggest impact on the armoured vehicles market is the widespread sense of instability and unpredictability when it comes to knowing the type and pace of combat operations in the coming years.

With a new US Presidential administration, the world’s leading power has vowed to increase defence spending while demanding Nato members commit to raising their own contributions. At the same time, Britain’s impending split from the European Union has put pressure on Europe to re-evaluate the possibilities of further consolidating armed forces. Further East, disputes have left the Gulf Cooperation Council fractured.

As for immediate threats, Western relations with Moscow have remained sour and while multilateral sanctions have forced the Kremlin to apply its deepest cuts to defence since the 1990s, there remains unease about Russia’s expansionist ambitions. Of course, North Korea has also demonstrated an unprecedented level of aggression in its nuclear weapon ambitions, while global terrorism remains a concurrent problem as insurgencies continue to claim lives and territories from Syria to the Philippines.

Within this broad strategic context, the market for armoured vehicles and related equipment has become equally wide-ranging. Technological advancements have seen a significant rise in the use and utility of unmanned ground vehicles, artificial intelligence, virtual training and survivability equipment. Active protection systems – long seen as the preserve of wealthy states – are being developed in lighter, cheaper and more accurate forms,
supporting their case as a popular solution for the future battlespace. Meanwhile, the deployment of main battle tanks is still seen as a necessity by most in spite of climbing demand for light protected mobility.

Defence IQ estimates that the armoured vehicles market will reach $16.22bn in 2018

In this edition of Defence IQ’s annual Global Armoured Vehicles Market Report, the latest survey data and analysis demonstrates that the market – in the face of fluctuating economies and an unpredictable operational environment – remains in a period of growth, with most regions witnessing an expansion of vehicle production, acquisition and operational deployment. On a global scale, Defence IQ estimates that the armoured vehicles market will reach $16.22bn in 2018.

Clearly, the armoured vehicles market has recovered from its brief period of decline following the withdrawal from Afghanistan and the initial expectations that land warfare would be less probable in its aftermath. The emergence of further political instability in the Middle East, Eastern Europe and Asia-Pacific has reignited demand, and these regions in particular will be the key driver of market growth. In particular, Turkey, Saudi Arabia and the UAE remain key players on the global stage.

As this year’s market study illustrates, the threat of small ballistic arms has overtaken the threat of landmines and improvised explosive devices (IEDs), which had for many years dominated the list of concerns for international land forces. This indicates an increased wariness of small armed militant groups – primarily those Islamist groups organising attacks in the Middle East, Africa and Asia. There is however a wider span of concern for all types of threat – including heavy machine-gun and CBRN attacks. While low-end insurgencies are the focus of most existing military campaigns, the apparent risk of a return to high-end, state-on-state warfare has pushed many armed forces to outfit their arsenals in preparation for a more sophisticated adversary.

As recent history has taught us, defence budgets are prone to sharp fluctuation. When they do, strategies must adapt quickly and force structures are inevitably realigned. The only way to stay on top of these changes is to continue to communicate with others in the field, to intelligently observe the emerging threats, and to absorb reliable market intelligence.

As we continue into an uncertain future, Defence IQ invites you to join us and so many others from across the globe at next year’s International Armoured Vehicles Conference, to be held at Twickenham Stadium, London, 22-25 January 2018. Now in its 18th year, the Conference will bring together practitioners, providers and wider stakeholders to take an in-depth, contemporary look at armoured vehicles in the Defence and Security context.

The risk of a return to high-end, state-on-state warfare has pushed many armed forces to outfit their arsenals in preparation for a more sophisticated adversary

This event offers an unparalleled opportunity to share these varied experiences in this vital field, at a venue that offers the space to exhibit, confer and network with a wide variety of international colleagues on one site. Whether you are a military practitioner, acquisition staffer, decision maker, programme manager, technical expert, industrial supplier or strategic leader, I believe you will all benefit considerably from attending and look forward to welcoming you into the discussion.

In the meantime, we hope this report offers you a useful context.

The Defence IQ Team
DEFINING A ROBUST LAND POWER NARRATIVE IN AN ERA OF HYBRID DETERRENCE

"One of the advantages of seminars like this is that we, the military, get to describe our challenges... and then our industry partners can give us an idea of what is in the realm of the possible - what technologies are out there - and then as we give them requirements, they can give us possible solutions"

General Perkins, Commanding General, U.S. TRADOC, 2017-2018 Keynote Speaker

KEYNOTE SPEAKERS

KEYNOTE SPEAKER: 23 JANUARY
General Sir Nick Carter, Chief of the General Staff, British Army

KEYNOTE SPEAKER: 24 JANUARY
General David G. Perkins, Commanding General, U.S. Army TRADOC

KEYNOTE SPEAKER: 25 JANUARY
General John W. Nicholson, Commander, Resolute Support mission and U.S. Forces – Afghanistan

CONFERENCE PARTNERS: ASSOCIATE PARTNERS:
SURVEY ANALYSIS
This section of the report is based on an exclusive Defence IQ survey of senior executives and professionals within the armoured vehicle domain, which includes commercial and military (currently serving and retired) respondents. The analysis of the survey data has been supplemented with proprietary interviews and desktop research. Defence IQ’s Global Armoured Vehicle Market Report is now in its seventh year, meaning the data in this report has been analysed within the context of recent developments and offers a reliable framework for the future trends of the armoured vehicle market.

Topics examined include; the key emerging regional markets, global procurement requirements, the primary challenges facing armoured vehicle manufacturers over the next decade, armoured vehicle design requirements, and the ‘new normal’ in the industry as the effects of the global financial crisis begin to wane and new opportunities emerge.

1. Analysis of respondents by type

*Please select which of the following categories best describes your current role with armoured vehicles.*

The largest segment of survey respondents (34 per cent) derived from the commercial sector, which is a decrease of 8 per cent on the number of respondents from industry in last year’s Global Armoured Vehicle Market Report. This variance is due to an increase in academia and media participation (up 9 per cent), with military respondents accounting for 32 per cent of all respondents. ‘Other’ respondents derived largely from independent consultancies.
2. Analysis of respondents by REGION

What is your primary region of interest with regards to armoured vehicles?

![Pie chart showing region of interest](image)

Participators in this year’s report had a diverse interest but two regions were highlighted as most active. Almost half (47 per cent) of respondents identified as having a primary interest in Europe – up 14 per cent on last year – indicative of commercial activity and opportunity in this part of the world. The European market has rebounded in the past few years – particularly in Eastern Europe – with rising demand for land systems in the wake of continued fears of Russian expansionism and insurgent-related security pressures on NATO’s southern frontier. The Middle East meanwhile represented the primary interest for 19 per cent of respondents. It should be noted that while this data can go some way to indicating which regions are seeing an increasing interest in the armoured vehicle market, they are dependent on responses from the Defence IQ community, which has greater participation from Europe and North America and the Middle East than other parts of the world.

Figure 2 is more a reflection of the make-up of Defence IQ’s membership base than any particular insight into wider armoured vehicle trends – please consult the data in Figure 4 for target markets and regional growth potential. The graph above is only designed to give the reader an understanding of where geographic interest is focused and should be considered within this regional context. A number of graphs and figures in this report have been broken down into their regional responses but the majority are taken as a ‘global’ response.
3. Analysis of armoured vehicle market confidence by REGION

How confident are you in the future of the armoured vehicle market in your region over the next 10 years?

<table>
<thead>
<tr>
<th>REGION</th>
<th>Very confident</th>
<th>Quite confident</th>
<th>Not confident</th>
<th>Unsure/no opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFRICA</td>
<td>23%</td>
<td>75%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>ASIA-PACIFIC</td>
<td>61%</td>
<td>33%</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>EUROPE</td>
<td>32%</td>
<td>50%</td>
<td>14%</td>
<td>4%</td>
</tr>
<tr>
<td>MIDDLE-EAST</td>
<td>79%</td>
<td>11%</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>NORTH AMERICA</td>
<td>27%</td>
<td>50%</td>
<td>18%</td>
<td>5%</td>
</tr>
<tr>
<td>LATIN AMERICA</td>
<td>38%</td>
<td>50%</td>
<td>5%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Overall, confidence in the global armoured vehicle market is near level with last year’s statistics which were found to be at a six-year high. This amounts to 46 per cent of respondents stated a firm assurance in order books over the next decade, marking a 4 per cent rise on 2016-17 and a 13 per cent climb from where the result stood in 2014 when only a third of participants identified being ‘very confident’ in the future of the armoured vehicles market. Strong confidence in the once-dominant North American market slid marginally again with only 27 per cent of participants centred in this region indicating a robust confidence (compared to 30 per cent last year and 47 per cent in 2015-16). However, overall confidence for this region has barely budged in the last 12 months. A number of high profile government contracts and investments, as well as a reinvigorated defence budget and the increased potential for overseas conflict, has seen confidence in the world’s largest armoured vehicle market stay afloat with 77 per cent still declaring faith in continued commercial activity.

Latin America saw a rise in assurance levels, with gains in confidence (up 19 per cent) despite ongoing economic and political uncertainty across the region. Likewise, the Asia-Pacific – once seen by most analysts as driving the future of the market over the next ten years – saw a minor gain on last year, with 3 per cent more projecting a robust faith in the regional market, but equating to a massive 94 per cent of regional market confidence.

Steadily increasing budgets, new contract opportunities, and the continued intensity of local conflict saw the Middle East retain sincere market confidence, with 79 per cent feeling particularly buoyant about future business. This represents only a negligible one per cent drop in overall confidence from last year.

African registered the largest overall confidence with 95 per cent of respondents (over 91 per cent for the Middle East) expressing faith in the continent’s commercial position. This however is a more modest level of confidence that the Middle East figure, with around three quarters of relevant respondents calling themselves ‘quite confident’ compared to less than one quarter as ‘very confident’. Europe has also climbed in this category, with those claiming to be ‘very confident’ up by 27 per cent since last year. Overall, 82 per cent of these respondents saw the region as promising against 14 per cent cynical.

One of the clearest signs of self-assurance is being decisive; sitting on the fence rarely inspires confidence. With this in mind, the number of respondents stating they were ‘unsure’ about the market outlook dropped from 7 per cent in the 2017 report to 5 per cent in 2018. While confidence in the market remains careful since the economic slump, recovery has been established and industry is once again investing heavily in future capabilities and infrastructure. That said, the market for the year ahead is reliant on many external and unpredictable factors, so those involved are advised to remain cautious and watchful of market movement.
4. Overview of key armoured vehicle growth markets

Which countries present the greatest potential for growth and will be targeted as a priority over the next 10 years?

<table>
<thead>
<tr>
<th>Country</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>13%</td>
</tr>
<tr>
<td>Australia</td>
<td>9%</td>
</tr>
<tr>
<td>Brazil</td>
<td>9%</td>
</tr>
<tr>
<td>Canada</td>
<td>6%</td>
</tr>
<tr>
<td>China</td>
<td>22%</td>
</tr>
<tr>
<td>Colombia</td>
<td>16%</td>
</tr>
<tr>
<td>Finland</td>
<td>6%</td>
</tr>
<tr>
<td>France</td>
<td>6%</td>
</tr>
<tr>
<td>Germany</td>
<td>19%</td>
</tr>
<tr>
<td>India</td>
<td>28%</td>
</tr>
<tr>
<td>Iraq</td>
<td>25%</td>
</tr>
<tr>
<td>Israel</td>
<td>19%</td>
</tr>
<tr>
<td>Japan</td>
<td>19%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>13%</td>
</tr>
<tr>
<td>Mexico</td>
<td>5%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>6%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>6%</td>
</tr>
<tr>
<td>Norway</td>
<td>3%</td>
</tr>
<tr>
<td>Pakistan</td>
<td>9%</td>
</tr>
<tr>
<td>Poland</td>
<td>25%</td>
</tr>
<tr>
<td>Qatar</td>
<td>19%</td>
</tr>
<tr>
<td>Russia</td>
<td>16%</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>38%</td>
</tr>
<tr>
<td>South Africa</td>
<td>5%</td>
</tr>
<tr>
<td>South Korea</td>
<td>28%</td>
</tr>
<tr>
<td>Sweden</td>
<td>2%</td>
</tr>
<tr>
<td>Thailand</td>
<td>9%</td>
</tr>
<tr>
<td>Turkey</td>
<td>41%</td>
</tr>
<tr>
<td>UAE</td>
<td>31%</td>
</tr>
<tr>
<td>Ukraine</td>
<td>25%</td>
</tr>
<tr>
<td>UK</td>
<td>16%</td>
</tr>
<tr>
<td>USA</td>
<td>19%</td>
</tr>
<tr>
<td>Central America</td>
<td>9%</td>
</tr>
<tr>
<td>Other Eastern European/Baltics</td>
<td>9%</td>
</tr>
</tbody>
</table>
Turkey has topped the countries being targeted for armoured vehicles for the next decade, surpassing the Kingdom of Saudi Arabia and the United Arab Emirates (UAE) - both of which have dominated this chart for the past two years.

41 per cent of respondents declared Turkey a priority nation, with Saudi Arabia and the UAE remaining high at 38 and 31 per cent, respectively. Last year, Turkey came in second place alongside India, the latter having now dropped to 28 per cent (down 7 per cent) and into fourth position.

Turkey’s seemingly unshakeable progress as a defence equipment provider is globally significant given its unique diplomatic and geographical position. Few restrictions are placed on prospective customers and include Nato members, Middle Eastern states and Russia. This freedom, coupled with a strong economy, has enabled Turkish industry to refine and establish the skills of its workforce to promote new products to a large swathe of the international defence industry. Turkey’s armed forces are also being remodelled in the wake of political division within the country with the intent of promoting strength and stability under the current government. Saudi Arabia and its neighbours have been involved in operations in Yemen since 2015, with fighting expected to continue for at least several more months at time of writing. The faith in these nations to make new armoured vehicles purchases or to produce their own for local and international use is notable in that oil prices have yet to recover and regional economies may continue to experience instability given the diplomatic schism with Qatar. However, with insurgencies and power vacuums still peppering the Middle East, it is likely that governments in the West will seek to support the capabilities of both countries to ensure they remain pillars of strength in the region.

Nigeria, Pakistan and the United States all saw significant decreases on perceived growth potential last year (12, 12 and 14 per cent).

Despite Europeans demonstrating strong confidence in their home market, the global outlook for individual markets remains modest when compared with the powerhouse production capabilities of the likes of China, the US or Israel. Perhaps unsurprisingly, Ukraine and Poland are seen as Europe’s most viable candidates for armoured vehicle business as the countries continue to invest and collaborate in upscaling their forces while seemingly on the precipice of further conflict with Russia. As with Saudi Arabia and the UAE, both Poland Ukraine will continue to find monetary and diplomatic support from Western nations wanting to maintain a strong front in the region in the event of any warfare.

Aside to Poland, the biggest surges in the past year are seen in South Korea (up 11 per cent) and Japan (up 7 per cent). Heightened risk of conflict in south-east Asia may be driving attention and investment into military equipment for operational use, but both nations are also positioning their technological strengths to appeal to international markets as leading equipment providers. Japan in particular is likely to see a continued upswing in defence equipment sales as it steadily builds on the recent removal of legal sanctions.

Sweden, Mexico and South Africa registered as the least likely nations to experience growth in this market within the next decade.
5. Analysis of key armoured vehicle attributes over the next decade

Please rate how critical you view the following attributes in terms of key armoured vehicle requirements over the next 10 years.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Unimportant</th>
<th>Somewhat important</th>
<th>Very important</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballistic protection</td>
<td>2%</td>
<td>9%</td>
<td>34%</td>
<td>55%</td>
</tr>
<tr>
<td>Blast protection / counter-IED</td>
<td>2%</td>
<td>7%</td>
<td>38%</td>
<td>53%</td>
</tr>
<tr>
<td>Environmental control systems</td>
<td>4%</td>
<td>41%</td>
<td>43%</td>
<td>13%</td>
</tr>
<tr>
<td>Interoperable communications</td>
<td>2%</td>
<td>9%</td>
<td>57%</td>
<td>31%</td>
</tr>
<tr>
<td>Load carrying capacity</td>
<td>2%</td>
<td>35%</td>
<td>50%</td>
<td>13%</td>
</tr>
<tr>
<td>Mission range</td>
<td>6%</td>
<td>29%</td>
<td>40%</td>
<td>25%</td>
</tr>
<tr>
<td>Modular / interchangeable mission role (adaptability)</td>
<td>6%</td>
<td>28%</td>
<td>46%</td>
<td>20%</td>
</tr>
<tr>
<td>Power/weight ratio</td>
<td>2%</td>
<td>28%</td>
<td>48%</td>
<td>22%</td>
</tr>
<tr>
<td>Reducing repair/maintenance costs</td>
<td>2%</td>
<td>16%</td>
<td>55%</td>
<td>27%</td>
</tr>
<tr>
<td>Speed/ maneuverability</td>
<td>5%</td>
<td>25%</td>
<td>48%</td>
<td>21%</td>
</tr>
<tr>
<td>Easily transportable</td>
<td>4%</td>
<td>29%</td>
<td>48%</td>
<td>20%</td>
</tr>
<tr>
<td>Reduced unit cost out of factory</td>
<td>2%</td>
<td>22%</td>
<td>51%</td>
<td>25%</td>
</tr>
<tr>
<td>Reliability</td>
<td>4%</td>
<td>5%</td>
<td>30%</td>
<td>61%</td>
</tr>
</tbody>
</table>

In the history of this report, protection has consistently been identified as a key attribute for armoured vehicles, and this year is no different. However, following last year’s trend, this demand has again been pipped to first place by the need to prioritise ‘reliability’ (with 61 per cent of respondents calling this a ‘critical’ feature – an 8 per cent increase on 2016-17). While admittedly a vague term, the growing importance of reliability in this study suggests a collective recognition that inventories are in need of not only long-term service but must also show a capacity to deal with a quickly evolving theatre of operations, wherein many of the threats are becoming more numerous as well as more sophisticated. In efforts to reduce through-life costs, government requirements for reliability also represent a step-change as vehicle integrators are working hard to meet the new demands.

Ballistic protection was said to be ‘critical’ by 55 per cent of respondents, overtaking IED and blast protection for the first time in this report’s history. This is perhaps driven by a continued presence of insurgencies worldwide which largely employ small arms tactics. However, while the mine resistant ambush protected (MRAP) vehicle market has contracted since the Afghanistan campaign, all land forces are likely to be faced with the prospect of IED emplacement in any current and future theatre, keeping protective systems in this category under high demand.

As with the previous two years, both load carrying capacity and environmental control systems scored as the least important attributes for most respondents. Mission range experienced a notable increase (from 16 per cent to 25 per cent) in those who see this as a critical capability. Other capabilities remained relatively similar to each other and to last year’s results in terms of their general importance, suggesting that most militaries and manufacturers are remaining broad and versatile in response to multi-mission/environment requirements.
6. Overview of key threats to armoured vehicle survivability

Thinking specifically about the requirements in your region of interest, which threats should armoured vehicles seek to protect against most when considering the present and future threat landscape?

<table>
<thead>
<tr>
<th>Region</th>
<th>CBRN (Chemical Biological Radiological Nuclear)</th>
<th>Small arms ballistic attack (up to and including 7.62mm)</th>
<th>HMG ballistic attack (above 7.62mm)</th>
<th>Blast / IEDs</th>
<th>Directed energy systems attack</th>
<th>RPG</th>
<th>Unfamiliar and difficult terrain / climate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GLOBAL</strong></td>
<td></td>
<td></td>
<td></td>
<td>28%</td>
<td>62%</td>
<td>70%</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>Global CBRN</td>
<td>Small arms ballistic attack</td>
<td>HMG ballistic attack</td>
<td>Blast / IEDs</td>
<td>Directed energy systems attack</td>
<td></td>
<td>Unfamiliar and difficult terrain / climate</td>
</tr>
<tr>
<td></td>
<td>28%</td>
<td>62%</td>
<td>70%</td>
<td>80%</td>
<td>30%</td>
<td></td>
<td>36%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AFRICA</strong></td>
<td></td>
<td></td>
<td></td>
<td>1%</td>
<td>90%</td>
<td>50%</td>
<td>94%</td>
</tr>
<tr>
<td></td>
<td>Global CBRN</td>
<td>Small arms ballistic attack</td>
<td>HMG ballistic attack</td>
<td>Blast / IEDs</td>
<td>Directed energy systems attack</td>
<td></td>
<td>Unfamiliar and difficult terrain / climate</td>
</tr>
<tr>
<td></td>
<td>1%</td>
<td>90%</td>
<td>50%</td>
<td>94%</td>
<td>2%</td>
<td></td>
<td>52%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ASIA-PACIFIC</strong></td>
<td></td>
<td></td>
<td></td>
<td>33%</td>
<td>44%</td>
<td>65%</td>
<td>88%</td>
</tr>
<tr>
<td></td>
<td>Global CBRN</td>
<td>Small arms ballistic attack</td>
<td>HMG ballistic attack</td>
<td>Blast / IEDs</td>
<td>Directed energy systems attack</td>
<td></td>
<td>Unfamiliar and difficult terrain / climate</td>
</tr>
<tr>
<td></td>
<td>33%</td>
<td>44%</td>
<td>65%</td>
<td>88%</td>
<td>42%</td>
<td></td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EUROPE</strong></td>
<td></td>
<td></td>
<td></td>
<td>29%</td>
<td>58%</td>
<td>75%</td>
<td>71%</td>
</tr>
<tr>
<td></td>
<td>Global CBRN</td>
<td>Small arms ballistic attack</td>
<td>HMG ballistic attack</td>
<td>Blast / IEDs</td>
<td>Directed energy systems attack</td>
<td></td>
<td>Unfamiliar and difficult terrain / climate</td>
</tr>
<tr>
<td></td>
<td>29%</td>
<td>58%</td>
<td>75%</td>
<td>71%</td>
<td>42%</td>
<td></td>
<td>33%</td>
</tr>
<tr>
<td>Region</td>
<td>CBRN (Chemical Biological Radiological Nuclear)</td>
<td>Small arms ballistic attack (up to and including 7.62mm)</td>
<td>HMG ballistic attack (above 7.62mm)</td>
<td>Blast / IEDs</td>
<td>Directed energy systems attack</td>
<td>RPG</td>
<td>Unfamiliar and difficult terrain / climate</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------</td>
<td>--------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>-------------</td>
<td>-------------------------------</td>
<td>-----</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>MIDDLE EAST</td>
<td>38%</td>
<td>75%</td>
<td>88%</td>
<td>97%</td>
<td>25%</td>
<td>90%</td>
<td>50%</td>
</tr>
<tr>
<td>NORTH AMERICA</td>
<td>35%</td>
<td>53%</td>
<td>67%</td>
<td>72%</td>
<td>38%</td>
<td>79%</td>
<td>32%</td>
</tr>
<tr>
<td>LATIN AMERICA</td>
<td>17%</td>
<td>67%</td>
<td>50%</td>
<td>65%</td>
<td>2%</td>
<td>33%</td>
<td>34%</td>
</tr>
</tbody>
</table>

Blast and IED incidents are seen as the most significant threat to armoured vehicles over the next decade. Globally, 80 per cent of respondents believe the IED to be the key threat (up marginally on last year), followed by heavy machine gun attacks (up 14 per cent year-on-year in what is the biggest change to these statistics).

Regionally, the IED is still the biggest threat in the Middle East (97 per cent), Africa (94 per cent) and the Asia-Pacific (88 per cent), but has dropped from its top spot position in both Europe and North America.

Overall, this year’s survey found that statistics this year represent a more disparate range of threats, which – in line with the results of Figure 4 – suggest an increasing concern over low-end, low-cost weapons, such as small arms and heavy machine gun attacks.

While the threat from rocket-propelled grenade (RPG) attacks dropped in Latin America – perhaps as a result of new peace treaties and arms amnesties underway for militant groups, such as Colombia’s Revolutionary Armed Forces of Colombia (FARC) and National Liberation Army (ELN) – RPG attacks are seen as significantly more probable in the Asia-Pacific (up 16 per cent) and Middle East (up 25 per cent). Again, this is largely in line with the present concentration of insurgencies and civil conflict.
7. Analysis of global demand for armoured vehicle type through 2027

Which type of armoured vehicles are likely to be in the highest demand globally over the next ten years?

<table>
<thead>
<tr>
<th>Type of Vehicle</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Battle Tanks (MBT)</td>
<td>8%</td>
</tr>
<tr>
<td>Mine-Resistant Ambush-Protected (MRAP)</td>
<td>20%</td>
</tr>
<tr>
<td>Light Protected Vehicles (LPV)</td>
<td>12%</td>
</tr>
<tr>
<td>Armoured Personnel Carriers (APC)</td>
<td>24%</td>
</tr>
<tr>
<td>Amphibious Armoured Vehicles</td>
<td>8%</td>
</tr>
<tr>
<td>Unmanned Ground Vehicles (UGV)</td>
<td>20%</td>
</tr>
<tr>
<td>Little demand for any armoured vehicles</td>
<td>2%</td>
</tr>
</tbody>
</table>

For the third year in a row, the armoured personnel carrier (APC) remains the vehicle most likely to be in highest demand over the next decade after the slow decline of the once-prominent MRAP vehicle. The APC was identified as the vehicle likely to be in highest demand globally over the next ten years with 24 per cent of respondents but experienced a 4 per cent drop year-on-year. The MRAP fell a single point to 20 per cent.

Demand for the main battle tank (MBT) dropped slightly this year, as did that of the light protected vehicle (LPV). Previously a growing trend for lighter, more agile and flexible vehicles was seen as being directly consistent with the MBT but the uncertain nature of future warfare has slowed the pace of change, forcing many armed forces to remain ‘on the fence’ about refurbishing their vehicle fleets in any dramatic way until long-term strategies are fully confirmed. Urban conflict is probable but the MBT seems persistent in its presence as an auxiliary capability, a deterrent or a battlefield support vehicle for the major land forces of the future.

Overall, these figures remain very similar to last year, but in the biggest change (albeit just 5 per cent), the unmanned ground vehicle (UGV) climbed further up the chart with 20 per cent of the vote, clearly in response to the growth of this market and the rising number of operationally proven platforms in active use. A number of countries are investing in this technology including Russia, China, the US and Great Britain. Many platforms have been built on the research and development of support operations, such as IED clearance, and are now evolving into armoured fighting vehicle concepts.

A 3 per cent rise in demand for amphibious armoured vehicles was also recorded, with the likes of Japan, Brazil, Turkey and China announcing new investments in recent months.
8. Analysis of technology investment over the next decade

Thinking about how governments will apportion budgets over the next 10 years, which areas of armoured vehicles will see the greatest investment globally?

Consistent with previous figures and maintaining the annual trend, technologies that respondents believe will be granted the most significant levels of investment are counter-IED measures and blast protection systems.

While this is a majority result (58 per cent), the figure has dropped 8 per cent on last year, almost all other requirements showed a rise in investment interest.

This indicates a growing diversity in budget allocation when it comes to responding to front-line vehicle needs, with the IED issue – though still important – slowly losing its dominant presence in the budget sheets. As with Figure 7, overall results differed little on last year.

Vehicle training and simulation remained the lowest in global investment among the options provided.
9. Analysis of technology impact over the next decade

In terms of improving performance and survivability, which technology do you think will have the greatest impact on the armoured vehicle market over the next decade?

Active Protection Systems (APS) were identified as likely to have the greatest impact on future armoured vehicle design, with over two thirds of respondents citing this as the front-running technology. APS climbed back to the top spot, last held in 2015-16, beating last year’s preference for Active Mine Protection Systems (AMPS) into third place. APS, designed to identify and intercept incoming projectiles, has received more public attention in the past year. This includes an August 2017 demonstration in China during which Beijing-based Norinco exhibited the live use of the countermeasure on a controlled rocket attack. The increased focus on APS underscores the widespread priority in keeping troops safe while travelling in a vehicle. Used in combination with traditional armour, APS can offer much needed supplementary support and will continue to see significant investment from research houses and specialist manufacturers.

While this technology is unlikely to replace physical armour systems in the short-term, the advancement of the technology does not appear to be in doubt and is likely to become a major component of an armoured vehicle’s protection system in the future. Likewise, the use of modular ballistic armour systems – which ranked in second with 52 per cent – will continue to fulfil a significant role in the years to come.

AMPS however dropped by a significant 16 per cent this year in spite of the continued requirement for IED and blast protection and the likelihood of these systems to receive further investment. Demand for the MRAP – with its ultra-heavy frame – has steadily receded and new methods of blast protection are needed on the large number of light or tracked vehicles rolling (back) into service. A number of companies are in the midst of trialling or marketing ground-breaking solutions in this field, including Advanced Blast & Ballistic Systems Limited (ABBS) – which received UK government funding to advance its AMPS project towards new tests in 2016 – and TenCate Armor’s Active Blast Counter Measures System (ABDS).

Interoperable communications, vehicle information integration and situational awareness all dropped marginally on last year when it comes to their future impact on performance or survivability.
10. Analysis of armoured vehicle challenges through 2027

To what extent do armoured vehicle manufacturers in your region of interest find the following a challenge?

- **Budget limitations**
  - 0% - 10%: Not a challenge
  - 10% - 20%: Somewhat of a challenge
  - 20% - 90%: Very challenging
  - 90% - 100%: Insurmountable

- **Getting a foothold in new and emerging markets**

- **Understanding the future theatre of operations and requirements**

- **Working with government**

- **Working with suppliers**

While few respondents identified anything on the list as an ‘insurmountable’ challenge, 13 per cent of respondents believe an understanding of the future theatre of operations and requirements is one problem that cannot be overcome. This suggests a marginal increase in those concerned about the unpredictability of the current and future operating environment, perhaps in the belief that the world currently sits on the threshold of multiple potential conflicts, both large and small in scale.

Overall, money remains the ‘most challenging’ factor, with budget limitations accounting for 54 per cent of strong concern among respondents. This figure has however dropped by 9 per cent, presumably alleviated by the continued rebound of defence budgets throughout much of Europe and other areas of the world.

As in the last study, working with suppliers is seen as a less challenging endeavour than working with governments.
11. Overview of global military perception of armoured vehicle fleet potency

*In ten years time do you foresee your armoured vehicle fleet to...*

Faith in future vehicle fleets continue to prove sturdy as 71 per cent of respondents believe their home nation capabilities will be more potent within the next decade. This represents only a 1 per cent drop on last year’s figure.

There is however a need to remain attentive to these statistics as those who felt fleets would be ‘less potent’ rose by 10 per cent, perhaps indicating a growing anticipation of capability shortfall in the long-term.

Overall, 83 per cent of respondents believe future armoured vehicles will be at least as potent in the battlefield as they are today, consistent with the resurgent strength of the market.
12. Analysis of capability satisfaction in current armoured vehicle fleets

Thinking about your armoured vehicle fleets, how satisfied are you with the following capabilities?

<table>
<thead>
<tr>
<th>Capability</th>
<th>Inadequate</th>
<th>Good enough</th>
<th>Very good</th>
<th>Exceptional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lethality</td>
<td>41%</td>
<td>29%</td>
<td>24%</td>
<td>6%</td>
</tr>
<tr>
<td>Survivability</td>
<td>41%</td>
<td>36%</td>
<td>18%</td>
<td>5%</td>
</tr>
<tr>
<td>Mobility</td>
<td>19%</td>
<td>56%</td>
<td>25%</td>
<td>0%</td>
</tr>
<tr>
<td>Scope for modernisation</td>
<td>48%</td>
<td>29%</td>
<td>17%</td>
<td>6%</td>
</tr>
<tr>
<td>Communications</td>
<td>47%</td>
<td>43%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Flexibility (for foreign conflict and homeland security operations)</td>
<td>35%</td>
<td>59%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Speed</td>
<td>12%</td>
<td>58%</td>
<td>29%</td>
<td>1%</td>
</tr>
<tr>
<td>Value for money</td>
<td>24%</td>
<td>53%</td>
<td>18%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Figure 12 gives an overview of current levels of satisfaction within the military community regarding their armoured vehicle fleets.

There was a sharp increase in the amount of capabilities considered inadequate compared to last year’s results. In fact, only speed and value for money marked any improvements and these were both marginal changes. Scope for modernisation registered as the most inadequate capability in current vehicles, with almost half (48 per cent) of respondents underscoring this issue. Many nations are in the process of overhauling outdated equipment, particularly Soviet-era type platforms that are no longer fit for purpose.

Overall, all listed capabilities fell into the category of inadequate or merely ‘good enough’, showing general satisfaction to have markedly decreased in the past 12 months. This is not surprising given that the longer current platforms remain active, the less likely they are to fulfil current and emerging requirements. It will remain in the hands of individual armed forces to ensure they modernise their fleets efficiently and with an eye towards anticipating both the pressures and possibilities of the future battlespace.
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REGIONAL DEVELOPMENTS
Nato’s eastern and southern ‘flanks’ remain precarious. With continued ISIS activity in the Middle East and lingering military build up on the Russian border, there remains a continued threat of both high-end conflict and asymmetric warfare in Europe. An increased Russian presence in the Arctic region also presents an emerging risk on the northern front. Meanwhile, numerous terrorist attacks have marred public reassurance in the region’s security and intelligence forces. Humanitarian operations, primarily in the Middle East and Africa, also place demand on (over-stretched) European resources.

The European Union (EU) is dealing with its own security re-evaluation. As of June 2017, members had agreed upon a new weapons fund, shared financing for battlegroups and a coalition of the willing to conduct more missions abroad. The EU will allocate $1.71bn (€1.5bn) a year for its defence fund, intended to develop and buy new platforms. Some politicians are calling for a consolidated ‘EU Army’ to be formed.

Where armoured vehicles are concerned, there remains a need for both military and law enforcement to ensure that the most capable and protected inventory remains available, be it for urban operations or for the prospect of conventional land engagements. Many militaries nations have taken definitive action on overhauling their armoured vehicle fleets in this post-Afghanistan era to meet a very different and complex range of threats, while others have been hampered significantly by the economic turmoil of the 2010s, continuing to pursue ambitions of modernisation through a financially restrictive corridor. However, all efforts to introduce new military hardware take time – a fact that is hard to swallow when the continent collectively faces a more sophisticated opposition, a more advanced and lethal weaponry, and those potential adversaries operating armoured fleets with comparable capabilities.

From Nato’s perspective, a campaign of renewed collaboration and support has been expanding, particularly when it comes to the provision of more permanent US equipment stationed on European soil. For example, US Army Europe has been establishing a base in north-west Germany to store tanks and other combat-ready equipment, in response to the sustained military build up of Russian forces across the Ukrainian divide. This builds on a previous establishment of a persistent rotational presence of forces and equipment – coined the ‘European Activity Set’ (EAS) – that sees the Alliance outfitted with a readied US armoured brigade in Europe. ‘Army Prepositioned Stock’ (APS) will continue to be hosted at installations including Estonia, Latvia, Lithuania, Poland, Romania and Bulgaria with the intention to “reduce force deployment times and enable a rapid response to potential contingencies”.

The Ukrainian government and Russia-backed separatists agreed in June 2017 on a new ceasefire in the country’s war-torn east, but repeated violations of the previous ceasefire raise doubts over how secure this agreement will make the region.

Confidence in the European armoured vehicles market has climbed. According to Defence IQ’s research, the past year has seen buoyant confidence in regional business market, building back against the uncertainties of the past three years.

With the EU allocating $1.71bn a year to defence, some politicians are calling for the formation of an ‘EU Army’

The latest SIPRI report (April 2017) showed that Western Europe had seen a second consecutive year of rising military expenditure, up by 2.6 per cent in 2016, and Central Europe notching up the largest relative increases. Much of this has been driven in part by ‘the perception of Russia posing a greater threat’, in spite of
rumoured projections for Russia to reduce its defence expenditure.

President Petro Poroshenko raised **Ukraine** defence spending in 2017 to 5.2 per cent of GDP (equating to $5.172bn). This represents a 0.2 per cent rise on the previous year but more than a quadrupling of investment since 2014.

The Ukrainian military has also increased its size to roughly 280,000 soldiers, making it one of the largest military forces in Europe. Concerted efforts have been made to speed up procurement processes while removing inefficiencies. Monthly upgrade targets have been set, alongside the introduction of new legislative amendments, logistical refinements and training initiatives. By 2020, the Ukrainian Armed Forces (UAF) aim to have renewed and modernised enough to ensure a high-level of protection of its state territory. It is understood to have received 15 new equipment types in 2015, including APCs and light armoured vehicles. Support has of course come from other nations, including the UK provision of 55 used Saxon AT-105 APCs and the US offering up over 200 unneeded Humvees. 316 tanks and 251 BMPs and BTRs have also been taken out of long-term storage for integration into active service.

In mid-2016, the UAF took delivery of the first ten of a batch of Dozor-B armoured vehicles, developed by Kharkiv Morozov Machine Building Design Bureau (KMDB). The special operations vehicle is a 4x4 APC capable of carrying ten personnel and offering protection against armour-piercing bullets, shrapnel and mines, and CBRN attacks. It is fitted with the BPU-12.7 machine gun, night vision equipment, and the NSVT 12.7 machine gun with optical monocular periscope sight.

Also reportedly tested was the 4x4 Triton light APC from Kiev-based Leninska Kuznya, of which 62 units have been ordered by the Ukrainian Border Guard. At a combat weight of 10 tons, the Triton carries reconnaissance and observation equipment, and a remote control turret (also from Leninska Kuznya) that integrates a 12.7-mm machine gun and a UAG-40 grenade launcher.

Around the same time, the Ukrainian government signed a contract with Textron Systems to become the launch customer for three Survivable Combat Tactical Vehicles (SCTVs). The vehicles will augment a fleet of 230 High-Mobility Multi-Wheeled Vehicles (HMMWs) provided by the US in a non-lethal aid support agreement.

In December 2016, Ukrainian state-owned defence industrial holding group Ukroboronprom announced that its Kiev Armoured Plant subsidiary has completed the development of a new production centre to permit the construction of bodies for BTR-3 APCs. 50 units of this vehicle were delivered to the Ukrainian Army within the following weeks. The total net income of the enterprises that comprise the Ukroboronprom organisation increased in 2016 by 31.2 per cent compared to the previous year, equating to UAH 28.3 billion.

**Russia** has been doing its utmost to keep its military expansion and modernisation efforts rolling in the face of European sanctions and economic woes. Recent years have seen the highest post-Soviet budgets emerge in the country’s history. A 7.5 per cent hike on defence spending in 2015 took the budget to $66.4bn but 2016 finally saw shrinkage of 5 per cent, knocking the country out of the top three global military spenders (Saudi Arabia has taken its spot). Further budget cuts in 2017 has seen a 7 per cent reduction, taking the defence budget from 3.07 trillion RUB to 2.84 trillion RUB.

What has not dissipated is the visibility of Russian military might. Summer 2016 saw new reports of Russian tanks moving into occupied territory in Crimea, with footage emerging of armoured trucks and troop
transporters mobilising. Outbreaks of violence in the area have also been consistently reported in spite of the official ceasefire. Approximately 40,000 Russian troops were reported to have amassed along the Ukrainian border between June and August 2016, prompting widespread concern. The subsequent ‘Kavkaz 2016’ war game involving thousands of troops in Crimea was no doubt intended as a show of strength.

In Syria, Russian forces have been deploying armoured vehicles in support of President Bashar al-Assad’s government, including the first operational use of the BMPT-72 (‘Terminator-2’) AFV, designed to protect tanks from rocket attacks in an urban environment.

Moscow remains in the process of overhauling its ageing armoured vehicle fleet, replacing Soviet technology with equipment to match or exceed the capabilities seen in Western Europe and North America. New vehicles that have been showcased to the public include the Armata family of tracked vehicles (Universal Combat Platform/BMP-T-15) – set to replace Soviet-era heavy armour. UralVagonZavod (UVZ) Research and Production Corporation is the prime contractor for the T-14 MBT, of which the first test consignment of over 100 units has now been ordered by the Russian Ministry of Defence and a unit price agreed. The T-14 is armed with an externally mounted 125 mm smoothbore gun with 32 rounds of ammunition in the autoloader, and is said to operate a firing rate of 10–12 rounds per minute with a maximum effective-penetration range of 8 km. Programme managers have claimed the fifth generation tank is “invisible” to radar, but many analysts believe these claims to be overstated. The army plans to acquire 2,300 T-14s to replace the T-72M3 and T-90 MBT fleets. Likewise, the T-15 heavy infantry fighting vehicle (IFV), Kurganets-25 IFV and APC, and Boomerang 8x8 will all be moving in to replace the BMP and BTR vehicle series. In addition, the 2S35 Koalitsiya-SV (Coalition-SV) self-propelled artillery (SPA) system will replace the 2S19 MSTA-S SPA currently in service with Russian Ground Forces.

Russian state-owned technology conglomerate Rostec has taken over UVC following a decree from President Vladimir Putin in December 2016 in what is thought to be preparation for the formation of an integrated armoured vehicle business likely to include other enterprises including infantry fighting vehicles producer Kurganmashzavod.

IHS Jane’s International Defence Review wrote in August 2016 of Russia’s development of a slat armour system designed for tracked and wheeled AFVs for enhanced survivability against anti-tank weapons fitted with a single high-explosive anti-tank (HEAT) warhead. It is understood this armour can be fitted to several vehicle families in Russian service, including BTR-60/70/80 APCs and BMP-1/2 IFVs.

April 2016 saw Russia order an additional 20 BTR-82A 8x8 APCs from the Arzamas Machinery Plant of Russia’s Military-Industrial Company (MIC). The ground forces and navy already operate over 2,000 vehicles in the BTR-80 family, many of which are being modernised (and re-designated as BTR-82AM). Full delivery of this order was scheduled for completion before 2017. The long-term replacement of the BTR-80s comprise the steel-hulled ‘Bumerang’ family, of which trials have been underway in recent months on the first batch of six vehicles ahead of the Military Industrial Corporation’s (MIC) initial production order.

Activity in the Arctic region is also seeing armoured vehicle activity, with reports emerging in May 2016 that Russia could be trialling Toros tracked AFVs to mobilise personnel in the tundra while also being prepared for combat. Traditional BMP-2/3 IFVs and BTR-80 /82A APCs are said to have lacked the resilience for Arctic operations. Toros, produced by Russia’s OAO Muromteplovoz, is based on the MT-LBu armoured tracked towing unit, specially modified for Arctic use and with a service life of 30 years. The vehicle has a road speed of 60 km/h and can traverse water at 4-6 km/h thanks to a YaMZ-238BL-1
(310 hp) diesel engine. 20 new BTR-82As are also rumoured to have been delivered in a special Arctic configuration.

According to footage from Russian state media, defence contractor VPK LLC has developed a driverless, semi-autonomous version of the GAZ Tigr, featuring a remote controlled 30mm gun with the ability to identify and track targets.

Russian vehicle exports have remained predictably active with the T-90, for example, proving popular overseas – Iraq is to acquire 73 and Egypt is to receive a licence for domestic production.

The United Kingdom has seen notable activity in the past year as it continues its ‘out with the old; in with the new’ approach. Changes to the ‘Army 2020’ structural review of the British Army have occurred in 2015-2016 and the new plan is now known as ‘Army 2020 Refine’. This entails a new approach to policy, modernisation, operations at the brigade level and budget allocation. ‘Readiness’ has become the operative word.

According to Lt. Gen Paul Jacques, chief of land materiel at the UK MoD’s DE&S (Defence Equipment & Support), British Forces are currently undertaking work on over 5000 vehicles, all within the same five-year period. This includes upgrades and extension programmes on existing platforms to the development and delivery of all-new vehicles. The pressure to meet these deadlines – and in many cases to reduce them – has been immense, but Jacques stated that leaders are ‘much more confident that they were two years ago’ when it comes to hitting their targets.

The initial restructure concept was aimed at saving the UK MoD almost $9bn. Following changes at Divisional, Brigade and Unit level – including implementation of a mid-life upgrade to 643 Warrior infantry fighting vehicles in a project known as the Warrior Capability Sustainment Programme (WCSP) – the ambition is to streamline the vehicle fleet with fewer but high-end solutions.

The government is maintaining its pledge to Nato defence spending to 2 per cent of GDP, as required under Alliance guidelines. However, following the country’s referendum to part from the EU, questions have emerged over the potential of a $940m (£700m) ‘black hole’ resulting in part from a drop in the strength of the pound.

The nation is moving forward with the Ajax fleet development programme – previously known as General Dynamics’ Scout Specialist Vehicles (SV) fleet – following a $5.46bn deal announced in 2014 for the purchase of 589 vehicles. The contract will run until 2024. In 2016, Ajax received the first production standard 40 CTAS (Cased Telescoped Armament System) 40mm weapon system from CTA International, a joint venture between BAE Systems and Nexter Systems. The weapon system will arm Lockheed Martin-developed turrets for the 245 Ajax vehicles. A total of 515 gun systems from CTAI are contracted to be delivered over the next six years.

While Lockheed Martin UK is also the prime contractor for the WCSP, overseeing the upgrade of at least 380 armoured fighting vehicles for the Army, December 2016 saw rivals BAE Systems and Rheinmetall awarded the Challenger 2 Life Extension Project contract ($59m). The upgrades are said to be crucial for the delivery of a modern ground manoeuvre warfighting capability as part of ‘Joint Force 2025’, and the intention of keeping the MBTs in service until 2035. However, the MoD has since decided to scrap one of its three Challenger 2 regiments in favour of Ajax.

Controversy surrounds the UK’s intended Military Infantry Vehicles (MIV) programme, worth a possible $4bn. Rheinmetall’s Boxer was understood to be in a strong position to become the platform of choice but
Manufacturers have protested the award of such a large single-source contract to an overseas company without competitive tender. The MoD has yet to make final decision on the contract despite pressure from generals to commit funding.

The Army is also set to acquire around 2,747 of the US-made Oshkosh Joint Light Tactical Vehicle (JLTV) to fulfil part of its Multi-Role Vehicle Protected (MRV-P) requirement. The director of Land Equipment at Defence Equipment and Support (DE&S) confirmed in early 2017 that a Foreign Military Sale (FMS) letter of request had been submitted to the United States. The State Department has since approved this possible transaction. Previously, the MoD had been open with the industry about its testing of the platform and its competitive price point. Group 2 of the MRV-P requirement, which seeks a larger 6x6 solution, is still likely to see competitive tender.

Controversy surrounds the UK's intended Military Infantry Vehicles (MIV) programme, worth a possible $4bn

Ireland’s Defence Forces took delivery of two more MAN HX 60 4x4 armoured trucks in August 2016, fitted with Marshall Aerospace and Defence Group’s armoured shelter for their EOD units. These vehicles will augment those already in service, supporting Ireland’s UN missions operating in the Middle East. EOD teams deploy in armoured vehicles as part of route clearance operations and to handle unexploded ordnance uncovered by other UN forces operating in the area.

France continues to move forward with its landmark $929m SCORPION (Synergie du COntact Renforcé par la Polyvalence et l'Infovalorisation) army modernisation programme providing a new generation of wheeled combat. The deal will see development and acquisition, maintenance and training equipment provided for the 6x6 Véhicule Blindé MultiRole (VBMR, or ‘Griffon’) and 6x6 Engin Blindé de Reconnaissance et de Combat (EBRC, or ‘Jaguar’). Griffon will replace the 4x4 VAB light armoured transport vehicle (from 2018), while Jaguar will replace a range of other wheeled combat vehicles in service, such as the ERC90 Sagaie and the AMX 10RC. The vehicles are being developed by an all-French consortium comprised of Nexter Systems, Renault Trucks Défense (RTD) and Thales Communication and Security.

The Army is to receive Jaguar by the end of 2020. In total, 110 of these vehicles will be inducted through 2025 as part of Step One of SCORPION, and the remaining units during Step Two, with deliveries to be completed in 2032. The main system of this vehicle is the T40M two-man lightweight modular protected compact stealth turret being developed by Nexter in cooperation with other suppliers, the DGA and the Army’s Technical Section, the STAT (Section Technique de l’Armée de Terre).

In April 2017, the DGA placed the first production order for 319 Griffon Multi-Role Armoured Vehicles (VBMRs) and 20 Jaguar vehicles.

Details emerged in 2016 of the modernisation of Army’s Leclerc MBT. Nexter Systems is working on the development of an enhanced configuration of the tank, which will see two prototypes completed in late 2018 for trials by DGA and the STAT. The two prototypes will be followed by an initial serial production modernised vehicle to be delivered in 2020, with the last scheduled to be inducted by the French Army in 2028. A contract worth approximately $366 million to modernise 200 of the main battle tanks and 18 existing DCL (Dépanneur de Chars Leclerc) armoured recovery vehicles to Leclerc Rénové (XLR) and DCL Rénové (DCLR) standards respectively was awarded on 5 March 2015. France is also considering the feasibility of modernising additional MBTs. Modernising the current Leclerc simulation systems installed at the Saumur military school is also being considered.

Of the 406 MBTs received since 2007, 346 units are currently in active service. 200 are in service with the 501e Régiment de Chars de Combat in Mourmelon (501e RCC); 1er Régiment de Chasseurs (1er RCh) in Verdun; and the 12e Régiment de Cuirassiers (12e RC) in Olivet. The remaining vehicles are used for different purposes including for training in Mourmelon and Canjuers military training camps.

This modernisation is intended to provide the vehicle with additional capability to intervene in urban scenarios, face future threats and deliver increased fire power. The upgrade will provide the vehicle with
capabilities to integrate SCOPRION battle groups, increase its capability to intervene in urban scenarios and high intensity scenarios, deliver improved protection and increased fire power. It also reduces support costs and maintains the vehicle to high standards for MBTs.

The Armed Forces of Belgium have phased out tracked vehicles to go completely wheeled, with an inventory that includes the Piranha 8x8. In 2016, Belgium ordered 108 Fox 4x4 Rapid Reaction Vehicles (RRVs) from Jankel, an upgraded military version of the 79 Series Toyota Land Cruiser. The Fox is expected to replace Belgium’s ageing Volkswagen Iltis light 4x4s used by the special forces. Alongside the order, Belgium is acquiring 38 removable protection kits for the vehicles and ring mounts for mounting 12.7 mm heavy machine guns (MGs) or 40 mm automatic grenade launchers on 60 of the vehicles. All 108 can mount 7.62 mm MGs.

In the country’s largest land forces procurement deal, Belgium approved the procurement of 60 Jaguar AFVs and 417 Griffon light combat vehicles (to replace the Piranha and Dingo following their possible upgrade programmes) currently under development in France. The €1.23bn (€1.1bn) procurement ties Belgium and France to a partnership of training and logistical support. The new vehicles will enter service between 2025 and 2030. The Griffon is to be procured in APC, medical, and reconnaissance variants, while the Jaguar will be armed with a 40 mm cased telescopied cannon-armed turret, two MBDA MMP anti-tank missiles, and a remote weapon station.

Belgium raised its national security alert status after the high-profile arrest of terrorist suspects in 2015. The country has since adopted a new Strategic Defence Plan for 2030, which intends to see the defence budget rise from 0.9 per cent of GDP to 1.3 per cent (below the rumoured 1.6 per cent discussed in 2015), but will be accompanied by a reduction of personnel numbers. Under the proposals for new investment into all services, the army is earmarked to receive new wheeled vehicles, alongside 155mm artillery, communications systems and smart combat gear.

In spite of a wider European trend to hike defence budgets, Italy’s budget continued to dip in 2016/17 and is expected to drop marginally again in 2017/18 as the national economic slump continues. 2016 procurement funding allocated $2.5bn from the Defence Ministry and $2.9bn from the Industry Ministry, down on 2015’s $5.59 total. The overall defence budget is estimated to have sat at around $18.4bn in 2016 (1.1 per cent GDP).

Recent efforts to purchase up to 381 Freccia 8x8 multirole armoured vehicles from the Iveco-Oto Melara (Finmeccanica) consortium had been set to cost around $3bn, with acquisitions spread over the coming years until 2024. However, reports in 2016 suggest that the plan to build a second brigade on the basis of the Freccia received only $23.58m in funding, prompting concerns that rate of production could be drawn out for far longer than the 2024 deadline. These new vehicles are being introduced to provide the Italian Army with greater mobility and digitization, capable of a range of roles including combat, anti-tank, mortar, command post and exploration.

$180m is understood to have been earmarked for the new Centauro II wheeled tank programme – an upgrade to the existing Italian tank and benefiting from a 120mm gun and 720hp engine – being developed by a consortium of Italy’s Iveco and Leonardo. Up to 150 of these vehicles may eventually be ordered. The Army received the prototype in 2016, with tests running throughout 2017. However approval for a $582m first tranche order is still to be approved. Around 200 export orders would be needed for the MoD to recoup its investment.

Although high-end tanks present a current gap in the Army (should Italy be required to engage in a land campaign in the near future), medium vehicles have been considered the ‘key element’ in terms of providing the flexibility and digitisation required of the modern Italian fleet. Previously announced armoured vehicle priorities include the completion of upgrades to the Ariete MBTs and the Dardo IFVs to urgently upgrade IED protection. UGVs are also being closely considered for future Italian procurement as the technology matures and new innovations enter the market. On the export side, the Italian government recently donated 54 military trucks to the Somali National Army (SNA) as part of assistance in rebuilding the army of the war-ravaged nation.

Spain rebounded back into positive defence investment in 2015 after years of downturn and austerity. 2017 saw its annual defence budget grow to $8.1bn. In one of its most significant new efforts,
the Spanish Army awarded a contract to a temporary consortium designated ‘UTE VCR 8x8’ (Unión Temporal de Empresas Vehículo de Combate sobre Ruedas 8x8) – formed by the Spanish companies General Dynamics European Land Systems-Santa Bárbara Sistemas (GDELS-SBS), Indra Sistemas and SAPA Operaciones – to develop its future 8x8 AFV. The new vehicle, which aims to be particularly suite to low-intensity operations, intends to gradually replace Spain’s Pegaso BMR M1 (Blindado Medio de Ruedas) 6x6.

A risk reduction effort is in place to develop six different technological projects related to several latest generation systems aimed to integrate the final vehicle. The $96.4m contract covers research, development and the production of prototype vehicles being trialled between 2016 and 2018 as part of the ‘Vehículo de Combate sobre Ruedas’ (VCR) programme. Up to 400 vehicles in different variants are expected to be ordered with the GDELS-Mowag Piranha 5 multi-role design serving as the base platform. Spanish Navy Marines have already fielded Piranha 3 8x8 amphibious IFVs. A total of 348 Piranha 5 vehicles are expected to be acquired initially, while up to 1,000 could be inducted overall in what is estimated to be a $4bn programme at present.

Of companies involved in the VCR 8x8, SAPA Placencia is understood to have been in talks to supply engine installation and subsystems including automatic transmission and driveline. Indra Sistemas is set to be providing electronics and command and control systems. Spanish entities including Navantia Sistemas, Airbus Defence and Space, Amper, Mecanizados Escríbano, EXPAL, GMV and OTO Melara Ibérica could also be competing as local sub-contractors.

The Spanish Army also expects to begin qualification trials of its Pizarro armoured engineering vehicle (AEV) by February 2019. Delivery of the final tranche of 36 engineering and recovery versions (VCZAP) of 119 of the vehicles are due in 2019-2021. The original order was placed in 2006 but faced budget cutbacks and rescheduling.

Portugal approved its 12-year military programming law in 2015 with the Ministry of National Defence expected to spend $1.08bn (€960m) in armament programmes up to 2018. The annual budget hit $2.34bn in 2017. The nation aims to stimulate local industry and improve technical co-operation with Portuguese-speaking nations.

Priority army programmes include the procurement of 202 4x4 light armoured vehicles for the army’s Rapid Reaction Brigade (BrigRR). These are intended to answer two requirements.

The first is for 167 of the vehicles to help fulfil the VTLB (Viatura Tática Ligeira Blindada) project, which integrate the army’s Light Forces Capability programme. 106 base vehicles, 29 anti-tank missile carriers with launchers for MILAN or TOW 2 missiles, 13 ambulance vehicles, 12 special operations vehicles and seven command post vehicles worth EUR60.8 million are planned for delivery between 2017-2020.

The second effort oversee the procurement of 35 4x4 medium protected vehicles to provide mobility and protection for the force’s SIC-T (Sistema de Informação e Comunicações Tático) tactical information and communications system. The fleet will accommodate a standard signal shelter system. This effort is worth a maximum EUR13.3 million and will be run until 2023, integrating with the army’s Ground Command and Control Capability programme. This contract amount also includes the procurement of twelve unarmoured medium tactical vehicles capable of lifting signal shelters.

Acquisition efforts are being executed through sales agreements between the service’s Logistics Command (Comando da Logística, or CmdLog) and the Nato Support Procurement Agency (NSPA), with the latter responsible for carrying out procurement activity. The country recently received a contingent of 166 Pandur II 8x8 armoured vehicles and the army’s

A Portuguese Pandur 8x8 on an recent exercise Image: Allied Joint Force Command Brunssum
Intervention Brigade (BrigInt) completed delivery of 22 more vehicles in June 2016 as part of a deal agreed in October 2014 between Portugal and General Dynamics European Land Systems (GDELS), taking the total number to 188.

The first covers the acquisition of 167 4x4 light tactical armoured vehicles as part of the VTLB (Viatura Tática Ligeira Blindada) project, which integrate the army’s Light Forces Capability programme. 106 base vehicles, 29 anti-tank missile carriers with launchers for MILAN or TOW 2 missiles, 13 ambulance vehicles, 12 special operations vehicles and seven command post vehicles worth EUR60.8 million are planned for delivery in 2017-2020. The project oversees a vehicle with a maximum gross weight of 9t. PRC-525 digital tactical radios from the Portuguese communications specialist EID will be installed as government-furnished equipment, except for the ambulances which will have only EID ICC-251 compact intercom systems.

The second effort oversee the procurement of 35 4x4 medium protected vehicles to provide mobility and protection for the force’s SIC-T (Sistema de Informação e Comunicações Tático) tactical information and communications system. The fleet will accommodate a standard signal shelter system. This effort is worth a maximum of $15.1m and will be run until 2023, integrating with the army’s Ground Command and Control Capability programme. This contract amount also includes the procurement of twelve unarmoured medium tactical vehicles capable of lifting signal shelters.

The Portuguese Army is currently equipped with 4x4 wheeled protected vehicles such as the VBL Ultrav M11, Chaimite V200 and V600, Commando V150S, M1025A2 APK, M1151A1 w/B1 and M1152A1 w/B2.

The Netherlands committed to increasing defence spending to $9.9bn in 2017, with a priority being improvement of basic readiness by 2021. Attention to military and security spending has rose sharply after the 2014 downing of Flight MH17 over East Ukraine.

2016 saw the Royal Netherlands Army (RNLA) complete delivery of the first batch of Boxer vehicles, including (NLAMB) ambulance versions, Command Post versions, (GNGP) Engineering vehicles and Cargo variants. Boxer is produced by ARTEC industrial group (Krauss Maffei Wegmann; Rheinmetall Landsysteme; Rheinmetall Nederland), which is supplying hundreds of the vehicle for the Netherlands and Germany. The first deployment of these vehicles took place in July 2017 when as part of the of the German-led Enhanced Forward Presence (EFP) battlegroup in Lithuania.

After the Netherlands identified a need for additional engineer vehicles instead of cargo and command post vehicles, ARTEC signed a new contract with the Organisation for Joint Armament Cooperation (OCCAR) in May 2016 to supply further Boxer multirole AFVs. This contract increases the number of engineer vehicles from 39 to 92 and reduces the number of cargo vehicles from 15 to 12 and command post vehicles from 36 to 24.

Meanwhile, the RNLA is upgrading part of its CV9035NL AFV fleet in two phases: a Phase 1 upgrade of 44 vehicles to fit them with a hard-kill defensive-aid suite (DAS) overseen by BAE Systems Hägglunds; and a Phase 2 upgrade to address obsolescence issues and the installation of a new battle management system (BMS), thermal imager for the driver, and Spike medium-range anti-tank guided weapon (ATGW) system.

**Germany is preparing to adopt the Puma IFV, stepping up development and full rate production of 66 units per year, set to be achieved in 2017**

Germany is continuing with its commitment to boosting defence spending. The draft 2018 budget indicates that the government plans to increase spending by $1.4bn to reach a target of $42.2bn for the year. However, at only 1.23 per cent of GDP, this still falls short of the $74bn expected by Nato standards. As part of its modernisation, Germany is preparing to adopt the Puma IFV with Projekt System and Management (PSM) stepping up development and full rate production of 66 units per year set to be achieved in 2017. 350 units will be supplied to the German Army by 2020 (reduced from an initial order of 405), with 78 having been delivered as of August 2016. Sources say there remains the prospect of an additional order of...
between 100 and 200 units. Development of the Puma over the course of the programme has seen the power pack, suspension and remote-controlled turret all modified ahead of delivery.

Germany-based Rheinmetall unveiled its Lynx tracked IFV in June 2016, describing it as ‘agile, hard-hitting and highly protected’ for every engagement from peace enforcement to high-intensity combat. The company is also, along with Krauss-Maffei Wegmann (KMW) group, manufacturing a total of 88 Boxer 8x8 IFVs (as joint venture ARTEC) for the Lithuanian military under a $435m contract. Deliveries of the Boxer vehicles will be completed in 2019 and will equip the ‘Iron Wolf’ mechanized brigade.

July 2017 also saw ARTEC awarded a $107m contract to modernise 246 Boxers between 2018 and 2023.

Work will include installation of a new satellite communication system, improved command and control equipment, and a remote weapon station, among other upgrades.

September 2017 saw Rheinmetall awarded $138m for work to upgrade 104 German Leopard 2 MBTs to the latest Leopard 2A7V configuration. 68 Leopard 2A4s will be upgraded with the most recent L55A1 120 mm smoothbore main gun.

Austria ordered 32 BvS10 articulated all-terrain vehicles from BAE Systems in July 2016 at a cost of $95m. The vehicle, a bigger and amphibious evolution of the unarmoured Bv206, is intended for the army’s alpine operations and deliveries are currently scheduled from late 2017 to late 2019. The deal includes weapons and additional equipment. Existing operators include the UK, the Netherlands, Sweden and France.

The Austrian Army plans to field a common remote weapon station (RWS) across a significant part of its AFV fleet

Toward the end of 2015, the army took delivery of six Husar light multi-role 4x4 vehicles from Iveco for policing and reconnaissance patrol duties. They were the first of an order of 150 vehicles ordered, intended to replace Austria’s Horseman patrol vehicle fleet at a cost of $121m. The Husar offers a remote weapons station and light armour for protection against gunfire, mines and shrapnel.

Prior to this, Austria modernised its Pandur 6x6 wheeled armoured transport vehicles ahead of its 2015 peacekeeping mission to Kosovo, primarily to help enhance crew protection with mine-, IED- and ballistic protection and to integrate a 360° electrically-powered remotely-operated weapon station.

In 2017, it was announced at Defence IQ's International Armoured Vehicles event that the Austrian Army plans to field a common remote weapon station (RWS) across a significant part of its AFV fleet.

Authorities have found critical use in armoured vehicles on Austrian soil in recent years, deploying them to get supplies to civilians trapped in their homes after severe ice storms cut off large areas of the country.

The Hungarian government recently announced that it will increase total defence spending to two per cent of GDP as early as 2024 as it brought 2017 spending up to $1.27bn (0.94 per cent of GDP). The country is preparing to enact its ‘Zrínyi 2026’ defence spending plan to boost local industry and national security.

In October 2015, Hungary unveiled a new – and domestically-developed – RDO Komondor light armoured vehicles family from the Gamma Technical Corporation and the Hungarian Defence Industry Association, for use by military, counter-terror and
police forces, disaster relief services and border protection authorities. The vehicle is the first indigenous armoured vehicle to emerge in four decades. Variants include a 4×4 ambulance and a 6×6 base vehicle. Ninety different Hungarian companies were said to be involved in building the prototypes, with features ranging from radar to modular add-on armour.

In May 2016, the Hungarian Defence Minister promised to increase military aid for Peshmerga forces fighting in Kurdistan. Hungarian tanks and other armoured vehicles have meanwhile been mobilising soldiers in response to the migration of refugees on the Hungarian borders of Croatia, Serbia and Romania. In response to the December 2016 terror attack in Berlin, Hungarian armoured vehicles appeared on the streets of Budapest in a display of deterrence.

The Czech Republic has been seriously readdressing its military policy since Moscow’s annexation of Crimea, with the government proposing an increase in defence spending to 1.4 per cent of GDP by 2020. In 2015, the country updated the Security Strategy and Foreign Policy Strategy and adopted a new, long-term acquisition plan leading up to 2030.

Further to its purchase of 58 surplus T-72s from Hungary in 2014, the Czech Ministry of Defence is looking to procure 210 tracked armoured vehicles for the army in order to replace its current fleet of obsolete Russian-designed BMP-2 tracked IFVs and APCs. Once the contract – worth $2bn – is signed, deliveries are anticipated to begin in 2019 and take place over the ensuing ten years. Among the expected bidders are Zetor Tractors, a manufacturer of tractors and other agricultural machinery, which has developed a new tracked IFV for military-use in the form of the ‘Wolfdog’.

January 2017 saw the Ministry of Defence award a $82m contract to Tatra Defence Vehicle for the procurement of 20 specialised versions of the Steyr Pandur II 8x8 for the Army. Later reports confirmed that plans will also proceed with a $1.9bn ‘urgent requirements’ deal on 200 new AFVs to replace over 200 ageing Soviet-era BVPs. Live-demonstration industry days scheduled for mid-2017 will be open to both domestic and foreign manufacturers, and the aim is to award a contract in 2019 for deliveries to begin in 2020.

Czech-based VOP CZ is understood to be collaborating with Emirati company NIMR on armoured cabins for the NIMR AJBAN 440A and are being contracted by BAE Systems to provide parts manufacturing work for the BvS10 all-terrain vehicle.

The Czechs have been pooling resources with Slovakia in order to achieve joint modernisation aims and bolster manufacturing industries across both countries. GDELS signed a partnership with Czech firm Excalibur Army in 2015 to market the Steyr Pandur II armoured vehicle in Eastern Europe and Asia. That same year, the Czech MoD confirmed the Army will be procuring 20 Pandur IIs to compliment the existing 107-strong fleet of Pandur 8x8s.

In late July 2016, Slovakia cancelled the procurement of up to 66 Polish Rosomak 8x8 vehicles

Slovakia’s vehicle procurement initiatives and domestic vehicle manufacturing programmes have been particularly active in recent years. Among them, a $1.3bn purchase for a range of new armoured transport vehicles to replace Soviet-era OT-64 legacy platforms was approved in 2017. The contract accounts for $467m on 81 8x8 wheeled vehicles and $877 m
on 4x4 light armoured cars or tactical vehicles, all to be delivered in 2018-2029. Logistics and maintenance support, related infrastructure and ammunition are included in the cost.

In late July 2016, Slovakia cancelled the procurement of up to 66 Polish Rosomak ('Scipio IFV') 8x8 vehicles, for which a letter of intent had been signed in 2015. That programme held an estimated value of $83m (€75m). However, the Rosomak APC – a variant of the Patria AMV – is now understood to be a contender for a new Slovak 8x8 requirement, alongside the Austrian-made Steyr Pandur II. Platforms in contention for the 4x4 may include the Denel RG32M which already has a small footprint within the Slovak armed forces.

Unlike some of its neighbours, Slovakia's relationship with Russia is much less frosty, allowing for defence business to continue with Moscow. As such, Russia's Military Industrial Company (VPK) delivered a batch of Tigr multipurpose infantry mobility vehicles to Slovakia (and other countries) in 2016. These vehicles have been manufactured at the Arzamas Machine-Building Enterprise in Russia's Nizhny Novgorod region since 2005.

Latvia on the other hand is wary of Russia's shadow. It raised its defence expenditure to 1.4 per cent of GDP in 2016, then to 1.7 per cent for FY 2017 ($9.5bn). The plan is to expand this to the 2 per cent Nato threshold by 2018 or 2019.

July 2016 saw Canada commit around 450 troops and armoured vehicles to Latvia for long-term deployment, with Canada taking command of a 1,000-strong multinational force in the country. Germany, the United States and Britain are leading similar forces in Lithuania, Poland and Estonia. In 2015, Latvia took delivery of an initial batch of 123 overhauled and upgraded Scimitar Combat Vehicle Reconnaissance Tracked (CVRT) vehicles from the UK for training and familiarisation in a deal worth $53.6m. The Scimitars are being outfitted with Spike anti-tank and anti-personnel missiles. The Latvian Army has also been purchasing surplus armoured vehicles from the UK, over 40 of which have already been delivered out of a total of 123.

Latvia, Lithuania and Estonia have all raised their defence expenditure and are considering the establishment a joint medium-range air-defence system to protect their collective airspace. Lithuania has reintroduced conscription and Latvia had been considering the same measure (in March 2017, the State Secretary stated that it would be financially unwise to enact such a plan for at least the next five years).

The Lithuanian State Defence Council approved negotiations with Germany's ARTEC for the purchase of 88 GTK Boxer 8x8 modular AFVs. The Ministry of National Defence recommended this vehicle as the ‘preferred' option to meet the Baltic Nato nation's land force requirements. Lithuania hopes to equip its future fleet with UT-30 Mk1 or Mk2 remote-controlled weapon stations of Elbit Systems Land and C4I-Tadiran, which includes the Orbital ATK Mk 44 Bushmaster 30mm automatic cannon, FN Herstal MAG58 7.62mm machine gun, and Rafael Advanced Defense Systems Spike LR long range anti-tank missile. The first vehicles are expected to be received in 2017, with delivery expected to complete by 2019.

Existing Lithuanian inventory consists primarily of the M113A1G and M1064A4 tracked vehicles, M1114 4x4 vehicles, and SISU ETP 8x8 logistics protected trucks. In addition to a number of howitzers purchased in September 2015, Lithuania has invested in 26 BAE Systems M577A2 tracked command post vehicles, and six Rheinmetall Defence Bergepanzer 2 armoured recovery vehicles, based on the Leopard 1 main battle tank chassis.

Elbit Systems Land and C4I completed the upgrade of M1064A3 120mm tracked armoured mortar carriers of Mechanized Infantry Brigade 'Iron Wolf' with new barrel and digital automated fire control system. A new Mechanized Infantry Brigade was created with its headquarters to be implemented in Klaipėda in 2016.

Estonia’s Defence Minister announced plans at the start of 2016 to spend around $916m on the acquisition of new weapons and equipment by 2020. The 2016 budget of around $503m came to 2.07 per cent of the GDP. 2017 saw it pass 2.17 per cent, including extra spending for hosting Nato troops on rotation as a response to Russia's activities.

The country has purchased 35 extra CV90 AFV hulls from Norway for $674m, complementing the existing 44 CV9035NL IFVs bought from the Netherlands in 2014. Estonia is planning to convert the additional hulls domestically into combat support (CS) and combat service support (CSS) vehicle variants. Esterline’s Racial...
Acoustics RA7000 Elite Hearing Protection System has been selected as the hearing protection and communication system for the Estonian CV90.

The Estonian Armed Forces are also looking to capitalise on the force-multiplying possibilities of autonomous systems through its Digital Infantry Battalion Solution (DIBS) programme. Under the initiative, Estonian UGV manufacturer MILREM and the Estonian National Defence College are developing CONOPS for the deployment of UGVs in support of battalion-level infantry missions. MILREM’s Tracked Hybrid Modular Infantry System (THeMIS) UGV has been built with a modular architecture in order to keep its payload and mission set as versatile as possible. Among the options available, the developers are keen to outfit the platform with an RWS for an anti-tank role, an ISR suite, a CBRN suite, and (more traditional) EOD capabilities.

Rheinmetall is manufacturing a 6x6 light armoured reconnaissance vehicle with hopes of replacing the Polish BRDM-2 4x4 amphibious vehicle.

Aside to Estonia’s own fleet, ten more US tanks, four Bradley vehicles and several armoured support vehicles were set to be stationed in the country in 2017, along with 120 more US personnel, as Nato continues its rotation efforts in response to “Russian aggression”. The first of hundreds of UK military vehicles arrived in Estonia in March 2017 to support the UK’s enhanced Forward Presence battlegroup based in Tapa, one of the largest ever Nato deployments to Eastern Europe.

Poland, particularly spurred into action by the threat of recent Russian military activity, is planning to spend $21.6bn on new military equipment in the near future, significantly modernising all services. This includes a budget of $9.58bn for 2017, pushing military spending to 2.01 per cent of GDP.

The Polish Ministry of National Defence (MND) announced in 2017 that it is relocating two of its newest Leopard 2A5 MBT battalions to the 1st Tank Brigade, taking them from the country’s western border to strengthen units stationed in the east. This relocation is expected to be completed in 2018. Supporting infrastructure and repair facilities will also be built within two to three years. Poland’s T-72s are to remain in service until 2021, and the PT-91s (Polish variants of the T-72M1) until 2032. They will be replaced by new MBTs and IFVs produced under the ‘Borsuk’ programme aimed at replacing the country’s BWP-1s.

Rheinmetall was awarded an upgrade contract for Poland’s Leopard 2 MBT and is pitching its AMPV on the country’s Pegasus 4x4 competition – against the likes of the GDELS Eagle V, the AMZ Kutno Tur V and the Thales Hawkei – which will outfit the Polish Special Forces. Rheinmetall is also manufacturing a 6x6 light armoured reconnaissance vehicle (LOTR) with Poland’s Obrum with hopes of replacing the Polish BRDM-2 4x4 amphibious vehicle fleet. A prototype is expected in 2017.

Obrum (with BAE Systems) has been developing the futuristic-looking PL-01, a light tank boasting multi-layer ceramic-aramid armour and a 105 or 120 mm calibre gun in an unmanned turret. A prototype has been estimated for completion in 2016, with mass production presently scheduled to begin in 2018 at the earliest. Obrum also displayed its Universal Modular Tracked Platform (UMTP) prototype in September 2016, boasting Spike LR anti-tank missiles and a 30mm turret, with which the company hopes demonstrate to the MND as a potential ‘future solution’.
Polska Grupa Zbrojeniowa (PGZ), the state-run defence group, has a strategy to triple its revenues by 2030, with an increasing eye towards raising its profile for exports and foreign partnerships. Its subsidiary Rosomak SA (formerly WZM), is currently producing Poland’s 8x8 AMV fleet made under license from Finland’s Patria. Many of these vehicles carry the Mk44 30mm cannon, but are now also being modified to fire 40mm. A new Rosomak-2 variant is said to be in the pipeline.

Romania increased defence spending to the 2 per cent threshold in 2017, as outlined in its National Political Agreement. This marks a 0.5 per cent rise on the 2016 budget. Expenditure is being focused not just on armed forces modernisation but also peacekeeping missions, joint operations and border control measures. Romania’s state defence contractor Romarm announced a cooperation proposal in May with Italian-American group Fiat Chrysler Automobiles to produce the military 4×4 Jeep J8 in Romania.

Budgetary priorities follow the guidelines of a Programme concerning the transformation, development and procurement of the Romanian Armed Forces by 2027 and beyond, which includes 28.8 per cent of the budget allocated solely for procurement purposes. Among key equipment to receive investment will be the purchase and modernisation of armoured combat vehicles. This will ensure readiness of both a permanent combat service and rapid reaction force.

This was demonstrated early in 2017 with the order of a new (fifth) batch of 12 Piranha III 8x8s from General Dynamics European Land Systems (GDELS), worth RON187.8 million (USD44.8 million). Variants of the vehicle will cover mobile command posts, medevac vehicles, CBRN, recovery, and mortar carrier vehicles. According to GDELS, this is the fifth batch of the vehicles ordered by Romania.

Bulgaria wants to boost its defence budget-to-GDP ratio – currently at approximately 1.3 per cent at around $769m – to 2 per cent eventually, but the exact timing is under debate. In June 2017, Bulgaria’s defence ministry announced plans to spend $2.02bn on rearmament programmes over the next 12 years, including significant procurement on land equipment. However, reports suggest Bulgaria’s spending on defence in 2017 will actually fall to around $585m – below the 2015 and well under NATO’s 2 per cent threshold – in contrast to the trend among most other Allied nations.

In May 2016, the Defence Ministry halted two procurements to deliver 13 US M1117 Guardian ASVs and six Israeli Sand Cat 4x4 armoured vehicles to the Bulgarian Armed Forces, claiming the tenders were not managed efficiently or transparently enough.

Belarus has continued to be involved in bilateral military exercises with Russia, including 2015’s ‘Union Shield’ sessions that emphasised rapid reaction and the “smaller than expected” ‘West-201’ exercise, the latter reportedly half the size of its 2009 iteration.

However, despite the apparent cooperation between the two nations, Belarus is less willing to rattle the sabre in fear of stoking a hybrid conflict and remains in communication with Ukraine. Minsk targeted a slight increase to the defence budget in 2017, but with a lack of public resources the government will need to raise additional funds through the selling of obsolete military equipment. Modernisation of the armed forces is well overdue, with Soviet-era equipment still forming bulk of the country’s hardware. Personnel numbers are also low. Further to this, President Lukashenko has been emphasising a focus on hybrid warfare training and independent exercises without Russian involvement.

In August 2016, the State Military Industrial Committee of Belarus announced that the first half of the year saw national defence enterprises earn a net profit of $80m, exceeding the assigned export plans by a quarter despite Moscow continuing its December 2015 policy of restricting access to Russian markets for Belarusian defence firms. These restrictions are said to be having a negative impact on bilateral relations and the economic health of Belarus.

In March 2016, Belarusian truck manufacturer MAZ signed an agreement on establishing a production line of trucks in Ukraine’s Cherkasy with the Ukrainian corporation Bohdan for both civilian and military use. In vehicle-specific developments, the Belarusian engineering company Volat (OAO Minsk Wheel Tractor Plant) presented a model of the lightly armoured automobile V-1 in the summer of 2016.
cooperation has been a concern to Nato, while the EU is unlikely to admit Serbia as a member unless it pushes back on Russian integration and influence. The country has expressed intentions to inject nearly 10 per cent of 480 million euros ($515.95 million) in budget savings into defence.

In 2015, Serbia announced that it will begin serial production of the Lazar 2 8x8 multirole family of vehicles. Designed in 2013, the mine-protected platform can be customised to roles including APC and IFV, with options of additional composite armour and a Remote-Controlled Weapons Station (RWS) with armament ranging from 12.7mm to 30mm. Manufacturer YugoImport-SDPR unveiled a version to the public in July 2015. While having 15 on order for Serbia, there are high hopes for export.

At IDEX 2017, the International Defence Exhibition in Abu Dhabi (UAE), Serbian state defence company Yugoimport unveiled the Milosh, a new 4x4 armoured vehicle personnel carrier fully designed and developed domestically. The vehicle is based on a monocoque hull with the engine at the front, the crew in the middle and the troop compartment at the rear. Armament consists of one remotely operated weapon station armed with a 12.7mm machine gun and six 82mm smoke grenade launchers.

Serbian state defence company Yugoimport unveiled the Milosh, a new 4x4 armoured vehicle personnel carrier fully designed and developed domestically

That same year, the country displayed a number of its newly adopted armoured vehicles. These included four variants of the Patria AMV – medical, logistical, command and APC – as well as 212 MRAP vehicles donated by the US – comprising the Navistar MaxxPro, the Oshkosh M-ATV, and the BAE Systems RG33 Heavy Armoured Ground Ambulance (HAGA). Croatia had previously acquired Iveco Light Multirole Vehicles (LMVs) and ex-US Humvees to help round out its military police and training requirements. Subsystem integration difficulties had caused delays to the acquisition of the 126 AMVs but the full contingent is expected to be in active service by the end of 2016 unless postponement is announced. Eight of these will be equipped with a 30mm armed weapon station. Several of the MRAPs have been absorbed into the Croatian Special Forces Command (SFCOM), with others also going to the Support Command, Military Police Regiment and the Croatian Army.

Slavic Brotherhood has been a particular worry for Croatia, which has been investing in Patria 8x8 AMVs, as well as Kiowa helicopters and howitzers. However, Croatia has been battling an ailing economy and governmental unrest, a situation that led to defence spending cuts being proposed in March 2016. However, with 2017 comes new commitments on defence and the budget has risen by HRK400m ($57m), marking a nine per cent hike. Within the 2017 procurement plan, the Defence Ministry aims to purchase engineering equipment, military trucks and water tanks, MRAP vehicle parts and M-84 tank upgrades, among a range of other platforms and systems.

Nordic defence cooperation is increasing, partly due to Russia’s military activity. Focus on increasing common capability, bilateral security and patrol services, and cost sharing on major programmes continue to be part of the regional plan. For example, a pact between Sweden and Finland agreed in 2014 has aimed to acquire equipment for both countries that is compatible with Nato systems.

Finland is also understood to be concluding a defence cooperation agreement with the United States following Russian activity around the Baltic and Nordic regions. This would include incorporating joint military training, information sharing and research. Both Finland and Sweden have already signed a pact with Nato that allows Nato to provide the two nations with military assistance in emergency cases. An increase to the defence budget in 2016-2020 is also expected to continue in order to address an extensive reform centred on issues relating to operational costs, obsolete equipment and a reduction in conscript size.

Finland plans to increase military troop levels by about 20 per cent to 280,000 from 2017. With the latest defence budget at around 2.9 bn euros (1.4 per cent...
of GDP), the government now wants to increase annual defence spending by 150 mn euros (USD 163 mn) from 2021 onwards, funneling an additional 55 mn euros into troop readiness from 2018.

A delivery of 20 surplus Leopard 2A6 MBTs from the Netherlands is expected to be completed in 2019 in a $221m investment into Finland's long-term strike force. Meanwhile, Finland-based Patria’s delivery of 71 renovated XA-180 6x6 APCs for the Finnish Defence Forces – involving the installation of new seating and electric systems, and repairs to engines, transmission, and axles – is scheduled for completion in 2017, with the possibility of 210 more vehicles contracted for refurbishment.

In terms of export developments, Patria is selling the 8x8 AMV (armoured modular vehicles) to the UAE armed forces. Patria, which is majority state-owned, has not confirmed the value of the contract or how many vehicles are included in the order. However, reports indicate that 40 vehicles are to be delivered and are being manufactured in Poland. Patria's Polish partner has been producing AMVs for more than a decade under the name ‘Rosomak’. The AMV 8x8 has also, as of August 2016, been submitted for a Qatari requirement.

Denmark recently placed an order for 309 Piranha 5 vehicles in a deal worth $651m, with deliveries scheduled to take place in 2018-2023. The first seven pre-production models had been delivered by May 2017. The new fleet will replace the M113 series tracked armoured vehicles of the Royal Danish Army. The service also currently fields several Piranha IIIIs. The vehicle was selected over GDELS-SBS ASCOD 2, BAE Systems Hägglunds Armadillo, Flensburger Fahrzeugbau Gesellschaft mbH (FFG) PMMC G5 and Nexter Systems VBCI. It offers a gross vehicle weight of 30t with built-in growth potential rating 33t, payload of 13t, 8m overall length, height over hull of 2.3m, 2.99m overall width, maximum road speed of 100km/h and top range of 550km.

Also now on order for the army are an initial 36 GDELS-Mowag Eagle V 4x4 high-mobility protected patrol vehicles, which won out over the GDELS Ocelot in the final stage of competition. The contract has options for further variants including electronic warfare, logistics and reconnaissance vehicles. Deliveries will be complete in April 2019, with pre-serial vehicles to be delivered in April 2018. A contract for an initial 15-year sustainment package was also signed. The army already fields 77 of the previous generation Eagle IV 4x4.

Denmark has ordered the Mowag Eagle
Image: Clément Dominik

Norway is acquiring new CV90s, having been pleased with the performance of the BAE Systems Hägglunds vehicles

Norway released its ‘Long Term Defence Plan’ in June 2016 and added $230m to its 2017 defence budget, taking the total for the year to $6.1bn. Around one fifth of this was set to be spent on procurement.

Norway’s sale of used CV9030N hulls to Estonia will go towards providing greater defence of the Baltic region as a whole. However Norway is itself acquiring new CV90s and upgrading existing ones, having been pleased with the performance of the BAE Systems Hägglunds vehicles. It was announced in September 2016 that the first 12 (of 144) of these upgraded vehicles have been delivered.

When it comes to high-tech solutions, the Norwegian Army is undertaking interesting research in the
potential use of augmented reality (AR) technology to improve situational awareness and the utility of armoured vehicle command, control, and information systems. Norwegian combat vehicles are integrating battlefield management systems into the platform architecture.

According to the Government of Sweden’s Defence Policy 2016-2020, the defence budget for the years 2016 to 2020 will increase overall by $1.18bn, largely in response to Russia’s military resurgence. 2017 saw a $55.7m rise on the annual 2016 budget, taking its total to around $5bn for the year. Sweden also voted to reintroduce conscription by mid-2017.

The army has ordered upgrades to 350 of its Leopard 2 MBTs and CV90 IFVs at a cost of $300m, with Battlefield Management and Tactical Command and Control Systems being replaced aside to weapons systems, sensors, software, chassis and other features. Work on the MBTs is due for completion in 2023, and IFVs between 2018-2020. Sweden’s Special Operations Task Group has also been taking delivery of a number of 4x4 Bastion Tactical and Reconnaissance Vehicles from Renault Trucks Defense.

Even though the financial situation in Greece remains troubled, Greece spent around 2.4 per cent of its GDP on defence for 2015, a 0.1 per cent increase in spending over 2014. The previous year, the country’s debt as percentage of GDP was at 1.75 per cent, while its economy contracted by 3.3 per cent. Greek officials offered $220m more in defence cuts in talks with creditors, but the response was a demand instead for $440m. Going into 2017, the defence budget stood at around $2.7bn.

The chunk of the current budget goes towards the upkeep of the Hellenic Army’s vast armoured vehicles fleet, which includes 460 M113s adopted from the US
The Middle-East accounts for over 15 per cent of the world’s armoured vehicle fleet, with active procurement programmes in Bahrain, Iraq, Israel, Libya, Qatar, Saudi Arabia and the United Arab Emirates (UAE), as well as increased spending on forecast into the 2020s.

Despite the incremental successes that have been achieved by the international community in Iraq and Syria, the Middle East remains highly volatile. 2017 has seen a diplomatic rift within the Gulf Cooperation Council (GCC), with several member states cutting ties to Qatar in 2017 over alleged ties to terrorist funding. This barrier to security cooperation, along with failing oil and gas prices, has increased the risk of long-term regional conflict beyond the historic areas of concern, such as the struggle between Israel and Palestine.

The civil war in Syria has, since 2011, seen the involvement of all major regional states, including Turkey, Iran, Saudi Arabia and Jordan. Although ISIS forces lost their ‘headquarters’ in Mosul, Iraq, in July 2017, the involvement of the Russian and US governments and faltering ceasefire agreements suggest the Syrian situation is unlikely to be resolved within the coming year. Although ISIS is viewed as the ‘common enemy’, there are many complex factors influencing the outcome of the conflict. Assad, the anti-governmental rebels and the Kurds all remain fundamental sources of disagreement among the anti-ISIS factions, indicating an inevitable continuation of conflicts, claims and coups for years to come.

While the international community has withdrawn most of its troops, the situation in Afghanistan remains unsettled. The Taliban launched their offensive ‘Operation Omari’ in April 2016 and fighting has since intensified. The conflict has even seen Taliban and ISIS fighters join forces to carry out attacks, as has been witnessed in the northern Sar-e-Pul province. According to UN figures, more than 1,662 civilians were killed in the first half of 2017. Despite the frequent attacks and the widespread violence, a re-involvement of the international coalition in the country is unlikely as it would likely face strong opposition among the public.

Like their counterparts in Afghanistan, Iraqi forces have also struggled against the Islamist insurgency. Victory in Mosul provides confidence that the country has reached a turning point, but many dangerous pockets of resistance remain. The severe impact on the civilian population and the state of cities and infrastructure has left an indelible scar.

Violence in Yemen has also flared wider international tensions. There is a high risk of a power vacuum forming in the country, which may strengthen the power of AQAD and ISIS and potentially lead to a Syria-scale scenario in the future. Despite the remote geographical position and the country’s lesser strategic importance, Yemen has become the stage of a proxy war between the two giants of the region: Iran and Saudi Arabia. The involvement of these external actors in the country has arguably exacerbated the violence, resulting in a need for major security provisions in 2018 and beyond.

When it comes to the armoured vehicles market, the Middle East remains fragmented

When it comes to the armoured vehicles market, the Middle East remains fragmented. Stronger economic powers in the region continue to modernise their inventories and expand their capabilities. Inversely, war-torn countries in the region do not contribute much to the overall regional market demand or supply, instead seeing a great deal of armoured fighting vehicle activity but not actively shaping commercial trends.

The Kingdom of Saudi Arabia is the second biggest arms importer in the world (after India), having consistently raised its defence budget in the last five years and becoming a leading customer for US exports. Defying concerns over the economy, budget rose again in 2017 by 6.6 per cent, putting annual expenditure at $47.8bn. At the same time, the Saudi government has initiated its ‘National Industrial Clusters Development Programme’ with a goal to double the manufacturing
The forthcoming Saudi Arabian Military Industries (SAMI) will include a branch dedicated to the manufacture and repair of military vehicles.

Saudi armed forces also have an immediate demand for modern armoured vehicles, particularly in the wake of reported IED ambushes by Houthi rebels targeting military personnel. Saudi arms imports have however become a contentious issue on the international scene, particularly in the wake of the country's involvement in Yemen and reports of its deployment of Canadian-made LAVs to enforce civil authority.

In 2016, it was announced that Saudi Arabia had placed an order for 200 armoured vehicles from France (Renault Trucks Defense), consisting of 100 VAB Mk3 6x6 APCs and 100 Sherpa Light tactical vehicles. The order was part of a $3bn package of French defence equipment that Saudi Arabia pledged in 2013 to provide to the Lebanese Armed Forces, but this was suspended in February 2016 citing a political disagreement with the Lebanese government. Saudi Arabia was obliged to honour the contract with Renault and has therefore decided to adopt the vehicles internally.

In more positive news for the state, a $1.15bn potential sale of military equipment was approved by the US State Department in August 2016, including conversion work for 133 M1A2S Abrams tanks and 20 battle damage replacements for the existing fleet. Saudi Arabia is also seeking to obtain M88A1/A2 Heavy Equipment Recovery Combat Utility Lift Evacuation Systems (Hercules), and armoured recovery vehicles (ARVs) for the Royal Saudi Land Forces (RSLF).

With Qatar facing diplomatic isolation within the GCC, security cooperation in the region has faltered, if temporarily. Cooperation with other international forces however continues to show promise, with joint exercises having taken place in 2017 with the US and Turkey. The country operates with a defence budget of around $1.9bn at a time when it is involved in fighting Houthi rebels in Yemen – one of its largest-ever military engagements.

Reports emerged in April 2017 that the Qatar Armed Forces and Police had received their first batch of 35 Amazon 4x4 armoured vehicles from Turkish manufacturer BMC. The total contract will see 1,500 of the vehicles delivered within two years. The Amazon – which is designed for urban operations – offers an automatic fire extinguishing system, central tire inflation system, run flat tire inserts, rear view camera, blackout and camouflage lighting. Launched in 2016, almost half of BMC is understood to be owned by a Qatari company.

Qatar is modernising its armoured forces and is in the process of taking delivery of 62 Leopard 2A7+ tanks and 24 155 mm PzH 2000 self-propelled howitzers. As part of this modernisation, Patria Land Systems submitted its 8x8 AMV for a ‘significant’ Qatari requirement in August 2016 but no further procurement information has been released to the public.

Turkey increased its defence and security budgets by 20 per cent in 2016 and again by 11.4 per cent in 2017, taking the annual total to almost $20bn. The country’s actual spend is also likely to be far higher than the publicly listed figures. Between the conflict in Syria and the serious political divide within Turkey that led to an attempted government coup, Ankara is looking to
dissuade enemies and push for greater support among its people. However, a hard-line approach to political prisoners and the recent strengthening of ties with Russia have caused great concern in the West.

**BMC has so far exported around 300 MRAPs to foreign services, including Pakistan, Tunisia and Turkmenistan**

August 2017 saw the Turkish Undersecretariat for Defence Industries – SSM (Savunma Sanayii Müsteşarlığı) – award Turkish manufacturer BMC Otomotiv ve Savunma Sanayi a $350 million contract for 529 tactical wheeled armoured vehicles and an enhanced variant of the 4x4 BMC Kirpi MRAP (Yeni Kirpi) to outfit the Turkish Armed Forces. The contract was issued under the Tactical Wheeled Vehicles-2 (TTA-2) programme, initially designed to support local industries and indigenising defence supply sources. BMC has so far exported around 300 MRAPs to foreign services, including Pakistan, Tunisia and Turkmenistan, and has partnered with Malaysia’s Etika and Germany’s Rheinmetall to form a vendor of armoured solutions for Asia and the Middle East.

The Kirpi MRAP platform incorporates a steel hull that can protect against 7.62×51 mm rounds and a chassis that can sustain blasts from grenades and land mines to STANAG 4569 Level 3B. Powered by a 370 hp engine, the vehicle has a top speed of 100 km/h and range of 800 km. It can transport 15 fully-armed soldiers and utilize a remote-controlled weapon station.

In July 2016, domestic vehicle giant Otokar was contracted to supply COBRA II 4x4 tactical wheeled armoured vehicles to Turkish security forces at a cost of $126m, including maintenance and support systems. Otokar revealed that the COBRA II had successfully passed desert and amphibious terrain and hot climatic condition tests. Otokar also announced in August that it had submitted its final offer to SSM to begin serial production of the Altay MBT for the Turkish Land Forces Command (TLFC), including features ranging from a 120mm/L55 calibre smoothbore gun, a power pack consisting of 1500 hp diesel engine, and a situational awareness system for 360° coverage. SSM has issued RFPs to Otokar, BMC and FNSS Savunma Sistemleri for serial production of the initial Altay MBTs.

SSM is scheduled to select the winner by mid-2018, while the initial production phase, which is locally designated as Dönem II, involves the serial production of an initial batch of 250 vehicles.

Earlier that year, SSM awarded FNSS (a joint venture of Turkish conglomerate Nurol Holding and BAE Systems) a contract for the purchase of 260 self-propelled anti-tank systems. The contract will meet the requirements of the anti-tank vehicle project (Silah Taşıyıcı Araç). Under this contract, all design, development, and prototype qualification is to be completed in 2018. Serial production will then begin, with all 180 tracked and 76 wheeled armoured vehicles to be delivered to TLFC by 2020. The tracked variant will be based on the company’s Kaplan-20 platform, while the wheeled system will use the Pars 4x4 vehicle as the base carrier.

The mountains along Lebanon’s north-western frontier remain battleground with the armed forces clashing with fighters from ISIS and Tahrir al-Sham as they infiltrate the region from Syria. Border security is therefore a key security driver in Lebanon.

To assist in this effort, the US delivered 50 armoured vehicles to the Lebanese army in August 2016 – amongst other land equipment – at a value of $50m. One year later, Lebanese forces received their first batch of eight M2A2 Bradleys from a US contract that will see 32 of the vehicles delivered at a cost of more than $100mn.

The American military aid package placed Lebanon among the top five biggest per capita recipients of US military assistance. The current government is seen as vulnerable at this time and international support is seen as a necessary dam to destabilisation. However, the US State Department, under the Trump administration, is proposing funding cuts to Lebanon of more than 50 per cent in its 2018 foreign aid budget, including termination of the Foreign Military Financing programme. Such a change could see tougher times ahead for the country’s fight against extremists. Adding to its problems, 2016 saw Saudi Arabia suspend its $3bn security commitment to Lebanon over a diplomatic dispute. That deal was intended to see 200 French-made (Volvo-Renault/ODAS) armoured vehicles sent to Lebanon, including Sherpa Light 4x4 armoured tactical vehicles and VAB Mk3 APCs.

Over one million Syrian refugees have been registered in Jordan since the beginning of the Syrian Civil War,
and the country is desperately trying to balance its security measures with its aid provisions. The defence budget has struggled to increase but saw a marginal rise from 2011-2015 (0.27 per cent), with projections for further gains in subsequent years. US aid to Jordan in 2017 has been marked at $1.3bn.

The Trump administration, is proposing funding cuts to Lebanon of more than 50 per cent in 2018

Jordan’s King Abdullah II Design and Development Bureau (KADDB) has in recent months been testing its first 8x8 Almared AFV. Based on the Tatra 8x8 high-mobility chassis, Almared features a v-hull and a steel armoured body that offers ballistic protection up to at least STANAG 4569 Level 4. The first version in development has been in an APC configuration and is powered by a 420 hp diesel engine coupled to a fully automatic six-speed transmission for a maximum road speed of up to 110 km/h. KADDB has seen continued interest in its industrial capabilities from a global customer-base, including a visit from Poland’s President Andrzej Duda in November 2016 who praised the bilateral cooperation deal agreed between the countries in 2014.

In May 2016, a partnership was formed between South Africa-based Paramount Group and Jordan Manufacturing Services Solutions (JMSS) to begin local production and assembly of a bespoke version of the Mbombe 6x6 IFV for the Jordanian Armed Forces. The work, taking place at the KADDB Industrial Park, will see 50 units delivered in total. Involved in the production are Jordan Advanced Machining Company (JAMCO), manufacturing the turret and pestle mounts, and Aselsan Middle East, providing the intercom systems. The Jordanian Mbombe will be built to withstand the extreme regional climates, having undergone trials that included 50-degree Celsius desert environment operation, as well as -50-degree Celsius winter trials.

The UAE is currently involved in the air and ground operations in Yemen as part of the Saudi-led campaign. From November 2015, Yemeni forces arrived in dozens of UAE-supplied military vehicles on the front line at the battle for the city of Taez, which had been under siege for weeks by Houthi forces. Further security vehicles (non-armoured) have since been donated from the UAE to Yemen to bolster the mission. The defence budget is estimated to have reached $15.1bn in 2016 and is projected to hit $17bn in 2020.

Otokar signed a major foreign partnership deal with the UAE in 2017, establishing a joint company with the state to produce 700 8x8 tactical wheeled armoured vehicles for sale to the UAE Armed Forces in a deal worth $66mn. The company’s joint venture with Tawazun Operations Company has been named Al Jasoor, of which the UAE has a share of 51 per cent. 8x8 vehicle – called ‘Rabdan’ – will carry a total of 11 people, including driver and commander, and offer a maximum load weight of 30 tons.

NIMR Automotive – a subsidiary of Emirates Defence Industries Company and the UAE’s leading armoured vehicle producer – was also awarded a contract in February 2017 to supply more than 1,765 vehicles to the UAE Armed Forces from 2018. These include 1,500 Jais 4x4 and 6x6 infantry fighting vehicles, more than 150 Hafeet 630A artillery support vehicles and 115 Ajban 440 vehicles equipped with guided missile systems. In August 2017, deliveries of several NIMR protected ambulances had begun. At 15-tonnes, the 6x6 Hafeet 640A is designed to provide forces with a rapid cross country casualty evacuation (CASEVAC) capability and is protected against blast and ballistic threats to NATO STANAG 4569 Level 2 standard. As a result of developments in Syria, the UAE orders have been modified to include CBRN systems and improved situational awareness.

NIMR completed its one-thousandth vehicle in June

The Ajban 440A by NIMR has helped the company break new ground in UAE vehicle manufacturing

Image: NIMR
2016 at the Tawazun Industrial Park in Abu Dhabi (from its AJBAN 440A line, a lightweight armoured utility vehicle). That achievement was an important milestone in the establishment of the country’s modern production facility, which has also seen NIMR vehicles successfully deployed in theatres of operation. NIMR Automotive itself has grown over the years by investing in the creation of a new range of products and procurement of vehicle IP, such as Denel’s RG-35 ‘super MRAP’ (rebranded NIMR N35) which is now in series production.

Kuwait have purchased a fleet of Rheinmetall 2 NBC-RS ‘Spürfuchs’ reconnaissance vehicles
Image: Rheinmetall

One month after the Otokar and NIMR, deals were signed, US-based Navistar Defense announced that it had agreed to a deal with the UAE Armed Forces to upgrade 1,085 long wheel base MaxxPro MRAPs. These vehicles were acquired as US Excess Articles part of a 2014 agreement worth an approximate $2.5bn. Delivery of the upgraded surplus vehicles is to be completed in 2018.

Towards the start of 2016, it was confirmed that the UAE had agreed to the sale of a fleet of 8x8 AMV (armoured modular vehicles) from Finland-based Patria. While the number of vehicles being produced (in the Poland facility, rather than in Finland) and delivered was not confirmed, it is believed to be in the range of 40, and will join the small number of AMVs already in UAE possession since 2008.

Following Kuwait’s 2016 announcement that it will be spending an extra $1bn on defence and security each year for the next decade, the government has reportedly held a meeting with the Kuwaiti National Guard (KNG) to discuss requirements, including plans to buy new military vehicles. In October 2015, Prime Minister Sheikh Jaber Al-Mubarak Al-Hamad Al-Sabah attended a three-day visit in France resulting in a contract for a package worth $2.8bn, which includes light armoured vehicles (all-terrain Sherpa trucks offering 360-degree firepower, IED blast protection and the ability to carry up to four people) and maintenance of its patrol vehicles. An agreement has been reached on cooperation between Kuwaiti financial institutions and the French public investment bank Bpifrance regarding joint investments of $510.6m in French technology companies.

Prior to this, Kuwait contracted Rheinmetall to supply 12 state-of-the-art armoured NBC reconnaissance vehicles (the 2 NBC-RS ‘Spürfuchs’). That order also included comprehensive support in the form of training, service and spare parts. Delivery of the NBC-RS vehicles was due to commence in 2017.

In December 2016, the US approved a $1.7bn foreign military sale to Kuwait for the recapitalisation of M1A2 Abrams MBTs. Kuwait also requested the incorporation of cooling / thermal management systems; common remotely operated weapons station (CROWS) II, low profile stabilised weapon stations; special armour; 120mm gun tubes; second-generation forward-looking infrared (FLIR) sights; embedded diagnostics; gunner’s primary sights; counter sniper; and anti-materiel mount (CSAMM) hardware. The sale would cover upgrade and maintenance of engines and transmissions, support, spare parts and training equipment.

The US approved a $1.7bn foreign military sale to Kuwait for the recapitalisation of M1A2 Abrams MBTs

As of 2016, Israel is enacting the Israeli Defense Forces’ (IDF) multi-year Gideon Plan aimed at both modernising and streamlining the service. Almost 40 per cent of the project’s estimated $21bn budget will go towards upgrading combined arms manoeuvring capabilities and combat readiness of dismounted soldiers and ground forces. However, the plan will also see the country’s reservists being cut by around

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100,000 and overall reductions in defence spending. Meanwhile, Israel continues to experience rocket attacks from the Gaza region, alongside volatile activity on the Egyptian and Syrian borders, comprising accidental or deliberate artillery, rocket and mortar fire.

In 2016, the Israeli Defense Ministry unveiled its new APC – ‘Eitan’ – offering an upgrade in terms of protection and sophistication. It is capable of seating up to 12 soldiers and, with a 750 hp engine, can reach speeds of up to 90 km p/h. The vehicle will be introduced to operations alongside the IDF’s Namer (‘Leopard’) APCs and will be equipped with an active interception defence system capable of intercepting incoming anti-tank missiles, similar to the Trophy system already employed on selected IDF tanks. An upgraded version was unveiled in August 2017, fitted for the first time with a 30mm turret designed for urban combat. Israel plans to use the vehicle to gradually replace all of its ageing M-113s. In spite of its advanced features, the Defense Ministry has expressed concerns that its wheeled configuration may be more susceptible to missiles than a tracked option.

Elbit unveiled IronVision, its helmet-mounted system designed to allow APC and tank crews the ability to ‘see through’ their vehicles’ armour

Ever on the cutting-edge, Israel’s key vehicle developments have been in enhancing vehicle crew and passenger survivability, with technology that provides improved situational awareness and visibility without exposing troops. This is a particularly vital capability when it comes to the urban combat environment, within which Israeli troops often find themselves (such as in Operation Protective Edge, 2014). These advances have emerged from Elbit Systems, including the Dragon advanced firing system being installed on IDF Achzarit APCs and Puma armoured engineering vehicles. Using external cameras and radar, Dragon identifies distant targets at day or night, under various weather and battle conditions, and delivers short bursts of accurate fire at an effective range of 1,500m.

The IDF is also upgrading its Segev UGVs that have since 2015 patrolled borders and at-risk sites while operating a remote weapon station and an autonomous navigation capability. The Elbit-owned UGVs, built to replace the Guardium UGV, were produced by an IAI-Elbit joint venture called G-NIUS (since discontinued). Segev has a manual, semi-automatic and fully-automatic mode.

Iran remains engaged in the Syrian conflict as a major backer of President Bashar al-Assad, alongside Russia. The nation’s forces have also been intervening in Iraq against ISIS forces since 2014. Meanwhile, despite diplomatic talks with the US seeing apparent progress on nuclear downsizing, relations have soured again under the Trump administration with the terms of the deal at risk of being discarded.

A spokesperson for President Hassan Rouhani’s government announced in early 2017 that Iran’s defence and security budget increased by 86 per cent between 2013 and 2016 – from $4.9bn to $11.2bn – and that a plan was in place for to raise this to 128 per
cent over the next five years. The 2017 military budget is estimated at $11.7bn. Recent government approvals on military spending have defied international sanctions, including an increase in the ballistic missile budget.

Iran publically unveiled a raft of new vehicles in 2016, including its new Tiam MBT, which appears to be an amalgamation of US and Chinese parts – the hull of a M47M tank (produced in Iran from the 1970s) and a 105mm gun mounted on a turret found on Type 59.69 Chinese tanks.

Also unveiled was a nuclear, biological, and chemical detection (NBC) vehicle called the Shahram – a BTR-60 APC fitted with NBC sensors and protection systems – several refurbished Shir vehicles (an Iranian version of the Chieftain) and T-62 tanks. The event did not showcase Iran’s rumoured Karrar tank, an in-the-works, domestically-built vehicle intended to ‘rival’ the T-90 for capability. A tank fitting this description appeared briefly on Iranian television footage several months later.

The Iranian Shahram is fitted with NBC sensors and protection systems Image: YouTube

At time of writing, Iraq continues to press hard on its war on terrorism. 2017 saw the Army launch the Western Nineveh and Tal Afar offensives and recapture the city of Mosul, which had been established as the centre of ISIS operations. ISIS has reportedly been deploying ‘home made’ armoured cars, largely comprised of metal panels welded around a commercial vehicle. With pockets of resistance spread across the country, the struggle is expected to continue into 2018.

Between 2006-2015, Iraq boasted the largest defence budget increase in the world at a growth of 536 per cent. This was a result of a drive heavily supported by the US under efforts to rebuild the nation’s post-coalition armed forces. With pressure to withstand both ISIS and Taliban insurgents at a time of declining oil prices, around one fifth of the government’s 2016 budget went towards military and security spending.

With Iraq benefiting from support from a number of international forces, its armoured vehicle procurement options are diverse. In August 2017, it was announced that Russia had concluded a major contract with Iraq for the supply of an undisclosed number and type of armoured vehicles. Russia’s UVC Corporation is believed to have been implementing a contract for the delivery of around 73 T-90S/SC tanks.

Among notable 2016 procurements, Iraq made a $66m deal in April with the US DoD to receive 60 Textron Commando Select APCs. This includes 54 APCs with 40/50 turrets, each armed with a 40 mm automatic grenade launcher and a .50 calibre machine gun; four command variants with 40/50 turrets; and two APCs without turrets.

Iraqi Special Operation Forces (ISOF) – also known as the Counter-Terrorism Service (CTS) – were seen with new vehicles during operations in Mosul in June 2016, consisting of black-painted Oshkosh M-ATVs (not previously seen in Iraqi service), fitted with remote weapon stations armed with heavy machine guns, automatic grenade launchers, mast-mounted surveillance cameras and antennas possibly for use as IED jammers. Also seen were a number of Caiman MRAPs with additional armoured plates. Meanwhile, the Iraqi Army has been employing M1A1 tanks and M109 self-propelled howitzers in its fight against ISIS militants.

Interestingly, the Baghdad Post reported that year that Iraqi security forces were preparing to deploy at least one robotic unmanned vehicles equipped with an automatic machine gun to better their chances amid the Mosul offensive. The UGV was said to have been equipped with four cameras and a launcher for on-board Russian-made Katyusha rockets.

The defence expenditure of Kazakhstan in 2012-2016 suffered a marginal decrease from $1.8bn to $1.73bn, but the national market is expected to grow in the coming years, driven by needs for military modernisation and increasing threats from domestic
Forces in Kazakhstan received the first allocation of its new Arlan multipurpose armoured vehicle in August 2016. These vehicles are being produced by Kazakhstan Paramount Engineering (KPE) – a joint venture between South Africa’s Paramount Group and state-owned Kazakhstan Engineering – and is based on Paramount’s Marauder MRAP. Designed to carry ten military personnel, the vehicle can perform a wide range of functions, including fire-fighting missions. As per the company’s pioneering work in blast protection, these vehicles can withstand 50kg of explosives from the side, 8kg under the vehicle, and 14kg under the wheels. Having been adapted to the hot regional climate, agreements have been reached with Jordan and Azerbaijan to receive deliveries of the Arlan, with the latter having bought at least 70-75 Marauders since 2011 through a joint production deal with Azerbaijan MDI.

KPE also unveiled its ‘Barys’ variation on Paramount’s Mbombe 8x8 which are now being produced at the 15,000sqm assembly plant that was set up in 2015 in the Kazakh capital of Astana. The version of Barys displayed at KADEX 2016 was fitted with the Russian AU-220M stabilized, remotely controlled turret mounting a 57mm automatic cannon.

By mid-2017, the security situation in Afghanistan was forecast to deteriorate towards the latter half of the year, with national forces facing an intensifying, two-pronged challenge from Taliban and ISIS insurgents. Major bombings in Kabul and Helmand Province have highlighted the continued need for IED protection and intelligence. However, US President Donald Trump announced in August 2017 a new US strategy for the country, involving sending thousands of troops back into the conflict, has been welcomed by Afghan leaders despite causing outrage and concern in the US.
While some African countries have experienced a high level of economic growth and prosperity in the past year, Africa remains an unstable region with many nations experiencing some of the world’s most intense security threats, primarily owing to the surge in Islamist insurgency. After a period of seeing Africa arm itself faster than any other continent with the greatest collective increase in military budgets worldwide, the regional market has retracted. Military spending in Africa fell by 5.3 per cent after 11 years of steady increase, according to SIPRI’s latest report. In spite of its size and the multitude of nations involved, the African market also accounts for just two per cent of the global military market.

Africa’s complicated security situation still presents fertile ground for armoured vehicles sales. Demand for infantry mobile vehicles (IMV) and IFVs is likely to increase in response to the aforementioned conflicts and counterinsurgency operations. However the market for AFVs cannot be proportionally translated in sales as western intervention strategies in this area usually consist of the deployment of these vehicles to support operations.

There is a heightened belief among African governments that they can take a more proactive and sustainable approach to their involvement in the defence market

While conflict is no stranger to Africa, it is just as important to recognise the positive progress that is being made continent-wide, with more democratic governments beginning to take shape and many economies seeing growth. Where armoured vehicles are concerned, local industry is fledgling but no longer confined to South Africa and Northern Sahara. Nigeria and Uganda, for example, have made independent steps into domestic assembly and production. As Defence IQ has reported, African states will continue to come to the realisation that they need increased strategic capability. At the same time, there is a heightened belief among African governments that they can take a more proactive and sustainable approach to their involvement in the defence market. This includes a predicted expansion for regional companies, such as Denel and Paramount Group, who believe African nations will be increasingly more attracted to African brands and the benefits they claim to offer to the total regional market.

Foreign equipment imports are of note here. China is now the third biggest global arms exporter and within Africa, Sudan is one of its main clients. Tanzania, Morocco and Algeria have also become customers of Chinese equipment in the past five years – as has Namibia and Cameroon in smaller number – all purchasing relatively low-end technology. Russia has long been an important supplier to a range of African states and Ukraine has found business in providing second hand equipment. Indian vehicle manufacturer Tata Motors has supplied 585 military vehicles to a variety of African countries for use in the United Nation’s Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) mission in Mali. Meanwhile, US donations and sales have been targeted chiefly at strengthening nations fighting Islamist insurgencies.

Among the most notable of developments is that Mali has doubled its defence budget since 2013, following the ongoing conflict between rebels and French-led forces. The presence of various rebel groups and Islamist terrorist organisations has resulted in a significant increase in violence and deterioration in security, and there is always a concrete risk that violence could spill over borders. The EU has raised its contribution to the Mali mission to provide $21.2m in its 2016 budget allocation, which will be used for training and new security provisions for staff. Meanwhile, China and Germany have recently announced further commitments to peacekeeping operations, with Canada on the verge of initiating a new mission.

The Malian military currently operates Acmat VLRA and PVP vehicles from Renault Trucks Defense, alongside a fleet of 4x4 vehicles that include units armed with
14.5 mm ZPU-2 guns and .50 heavy machine guns. In September 2015 the US Department of Defence ordered 62 Bastions for five African countries via Mack Defense.

In March 2016, Mali’s armed forces took delivery of a number of Bastion armoured vehicles from France’s Acmat. Troops were trained by Italian personnel serving with the United Nations mission (MINUSMA) at the request of the Malian Chief of Staff, including lessons on the detection and avoidance of IEDs. Based on the VLRA TDN-TDE platform, the 12-tonne APC is configured for troop transport, with the range featuring STANAG 4569 protection and the capacity to carry 10-12 passengers.

**Nigeria** remains involved in a serious struggle with Boko Haram (aka the Islamic State West Africa Province), which continues to control most of the North-Eastern territories and areas within Niger, Chad and Cameroon. Suppressing this insurgency is therefore becoming an increasingly important step towards maintaining control of much of West Africa and preventing a much larger-scale conflict. Several Nigerian soldiers have recently been killed by roadside IEDs while on patrol duties, with armoured tanks and patrol vans also being destroyed in the blasts. August 2016 saw five suspects arrested for emplacing similar explosive hazards.

Multiple military and police security operations were launched in Nigeria between 2015-2016 – including Lafiya Dole, Delta Safe, Gama Aiki and Awatse – with various goals ranging from the protection of vital assets and communities to hostage rescue and the clearance of embedded fighters from specific areas, usually with military vehicles forming the core of the taskforce. Operation Maximum Safety, for example, launched in August 2016 to target bandits and kidnappers along the Abuja-Kaduna highway, comprises 510 anti-riot policemen, backed by 40 patrol vehicles and APCs.

A number of international partners are doing their part in assisting Nigeria. The US signed off a delivery of 24 MRAPs to the Nigerian military in early 2016, worth a total of $11m. The vehicles were donated at the Ikeja Cantonment in Lagos.

Meanwhile, Nigerian media reported that the country’s state-owned Defence Industry Corporation of Nigeria (DICON) launched a new Public-Private Partnerships (PPP) unit in May 2016 with a new joint venture with local armoured vehicle manufacturer Proforce Limited. The development should see the design and manufacture of new APCs for the Nigerian military. A prototype vehicle was scheduled to be ready in September with first production vehicles expected by the end of 2016. Proforce was founded in 2008 and now specialises in armoured tactical vehicles and APC for military and police use, aside to armoured private

The Nigerian military received the first 25 of 177 Streit Group 4x4 armoured vehicles in June 2017.

The Nigerian military received the first 25 of 177 Streit Group 4x4 armoured vehicles in June 2017. These vehicles were manufactured in 2016 by Streit at its UAE facility. Streit has also partnered with the Nigerian Armed Forces to develop the Igingi, a new armoured 4x4 based on the Spartan platform (Ford F-150 chassis).

September 2017 also saw Nigeria receive 200 armoured fighting vehicles donated by Jordan. Jordan will also supply helicopters to support Nigerian forces in their fight against insurgency.

The Typhoon MRAP forms part of Nigeria’s 177 4x4 vehicle purchase from Streit Group - Image: Streit Group
and commercial passenger vehicles. DICON – the only legal small arms and light weapons manufacturer in Nigeria – has a Special Vehicle Plant that is currently carrying out the refurbishment and upgrade of Scorpion light tanks, Steyr tracked APCs and MOWAG APCs.

Libya is currently the stage of a high-intensity conflict between the UN-approved government, the international community, and ISIS militants. Although recent successes have been made in curbing the insurgency, the country is not likely to settle in the near future and remains at risk of falling back into civil war if an authority cannot be established post-conflict. The city of Sirte is currently seen as the final fortification for ISIS forces within the country, but seizing the city is proving difficult.

Given the uncertainty over the country’s future, shipments of armoured vehicles to Libya in recent months have been deeply controversial. A December 2015 shipment of 16 Streit Group Typhoon 4x4 MRAPs, along with a number of armoured cars, were temporarily seized by Greece before the UN ruled their transfer was legal once the newly recognized government laid claim to the shipment. However, the UN subsequently criticised Streit for the “illicit transfer” of 131 Typhoons and Spartan patrol vehicles to Libya in 2012, causing a diplomatic storm for Canada, where Streit is registered. The investigation is ongoing.

South Africa’s defence budget has shrunk in real terms with just $3bn allocated for fiscal year 2016/17 – a slight reduction on the back of more than a 6 per cent rate of inflation – compared to $3.8bn on 5 per cent in 2015. Hopes of increasing the budget in the near-term have yet to come to pass. The chief of the army announced in 2015 that the nation’s soldiers are “well prepared to defend the nation and to carry out international missions envisaged by government,” including the pledge of an African Capacity for Immediate Response to Crisis (ACIRIC). Peace across the continent is viewed as a catalyst for economic development, encouraging South Africa to ready for immediate intervention to hotspots in other African states. However, amid the budget restrictions, there remains scepticism that the SANDF can meet these requirements, having already been stretched to – and perhaps even beyond – capacity.

On the positive side, domestic business has seen some strong results. July 2016 saw state arms manufacturer Denel Vehicle Systems ship its first batch of RG31 MRAPs to the UAE Armed Forces. The RG31 is a Mobile Mortar Platform (MMP) boasting 4x4 capabilities, high-level mobility and enhanced protection in the face of explosive devices. While the size of the order has not been revealed, 73 Denel vehicles are already in UAE service and a second batch was under testing at time of writing. The company was required to make around 30 improvements to the performance and reliability aspects of the vehicle based on assessments in the Middle East’s hot and dry operational environment. With a range of 800km at a speed of 80 m/h, the RG31 is widely used by UN peacekeeping forces.

Pretoria-based SVI Engineering has completed development of its Max APC

Around the same time, the country’s Paramount Group unveiled its 8x8 Mbombe 8 infantry combat vehicle, based on its previous Mbombe 6. This new vehicle has a gross weight of 28 tonnes, a kerb weight of 19 tonnes, and a payload of nine tonnes, which covers the weapon system, ammunition, crew and supplies. Eight dismounts can be accommodated in addition to three crewmembers, with the capability to integrate a wide range of turrets and weapon stations. The first advanced prototype of the Mbombe 8 has been
undergoing mobility trials while production could take place in South Africa or Kazakhstan.

As of May 2017, Pretoria-based SVI Engineering has completed development of its Max APC, offering specialist features that include a single-piece curved windscreen, large windows for greater situational awareness, and a unique five-door layout. The vehicle uses an Axletech suspension system, Allison automatic gearbox with six forward and one reverse gear and Cummins engine developing 177kW, providing a top speed of 110km/h. It also features Stanag 4569 AEP 55 Level 3A/3B landmine protection using a V-shaped hull, and ballistic protection to Stanag Level 1 with options to upgrade. Max seats seven people in addition to the driver.

African Union armoured vehicles welcome an Ethiopian peacekeeping contingent to Somalia - Image: AMISOM

With Boko Haram spilling into Cameroon, the country is seeking new methods and resources to deal with insurgents. The start of the year saw the government forced to close some of its borders with Nigeria to prevent militants from crossing over. Several dozen people have died from recent suicide bombings and the country had incurred human and material loses from landmine emplacement.

The United States is offering assistance by training the Cameroon military in techniques of detecting and countering IEDs, but protective vehicles are necessary for troop transport. The US therefore ordered 15 Acmat Bastion armoured vehicles from France for Cameroon in 2015. In addition, the US DoD has signed a $378m contract with Oshkosh Defence for the supply of 1,543 armoured vehicles from the company's Family of Medium Tactical Vehicles (FMTV) to Cameroon, Somalia and Iraq.

Cameroon's Rapid Intervention Battalion (BIR) acquired its first batch of South African-made Ratel IFVs from December 2015, with at least 12 in service – some armed with 20 mm guns – among light intervention units deployed to the Far North province. The Ratels are reportedly being employed as engineering vehicles for mine-clearance and EOD operations.

Cameroon deploys around 24 LAV-150 Commando IFVs, five Type-07 APCs, six Type-07P/VN-1 IFVs, 12 WMA-301 Assaulter armoured fire support vehicles, 30 AML-90s, six AMX-10RCs, 12 Ferrets, eight M-8s and half a dozen VBLs. The country is also operating the Israeli Saymar Musketeer in its Presidential Guard Reconnaissance and Support Group, the first known use of the vehicle. Based on a Toyota Land Cruiser chassis, the six-seat vehicle is fitted with a remotely operated weapon station with a 7.62 mm FN MAG machinegun.

Following the removal of al-Shabaab from its major strongholds in Somalia by African Union force (AMISOM) in 2011, the group has carried out several attacks in Kenya, including attempts to ambush military convoys. Kenya's 2016/2017 defence and security budget therefore allocated a $2.64bn to its services and agencies, marking an increase on the $2.2bn provided in the 2015/2016 financial year.

In 2016, the Kenyan police commissioned 30 Chinese-made Norinco VN4 light armoured vehicles – some armed with a version of the 7.62 mm FN MAG machine gun – for use in the paramilitary General Service Unit (GSU) for anti-terrorism, international peacekeeping, and local police missions. At least six of these vehicles were known to be deployed to Boni Forest and Lamu in March.

July 2017 saw the Kenyan Police Service take delivery of at least six additional Jino riot control vehicles

July 2017 saw the Kenyan Police Service take delivery of at least six additional Jino riot control vehicles in anticipation public protests around the August general elections.
Also of note, Inspector-General released a statement in July 2015 ordering anyone in the country in possession of an armoured vehicle to declare it and obtain mandatory approval. All armoured vehicles must now meet the requirements of the newly enacted Security Laws (Amendment) Act 2014 which states that such vehicles must have special certificates from the government.

Egypt is hoping to purchase 50 GAZ Tigr 4x4 armoured vehicles from Russia

Egypt’s security forces received an initial shipment of MRAPs from the US in May, with a total of 762 vehicles scheduled to be transferred throughout the year. Originally designed for US military operations in Afghanistan, the vehicles form part of the DoD’s Excess Defense Articles grant programme, in which the vehicles are being transferred at no-cost to the government of Egypt to combat terrorism.

In its fight against terrorism in North Sinai, hundreds of Egyptian security personnel have been killed by roadside bombs, including a May 2017 incident that killed a senior officer. However, Egypt has refused to take part in the Saudi-led operations in Syria. On the opposite side of the country, there are rumours that Egypt could intervene militarily in Libya to safeguard its own security, which would include ground-force operations and the securing of Libya’s ports. Like the US, other international states see Egypt as a pivotal role in restoring stability in the MENA region.

Reports in August 2017 suggest that Egypt is hoping to purchase 50 GAZ Tigr 4x4 armoured vehicles from Russia in order to outfit police forces with higher-grade protection, situational awareness and mobility in all-terrain environments.

Africa’s falling expenditure can mainly be attributed to the huge cut in budget by Angola, which has long been the largest defence spender in sub-Saharan Africa. Falling oil prices have forced Angola’s hand, following a 176 per cent increase in military spending between 2004-2014 and a record (for an African state) annual budget of $10.4bn in 2015. Had oil not dropped, analysts had been forecasting a rise to $13bn by 2019, a figure now – apparently – far from achievable.

Since 2016, Angola has been operating Chinese-made Norinco WMA301 tank destroyers – also in service in Cameroon, Chad, Djibouti, and Senegal – and the command-post variant of the WZ551 APC. A number have been seen in service with the 50th Motorised Infantry Brigade of the Angolan Army’s 5th Division.

In 2014, Germany-based Rheinmetall and project developer Ferrostaal industrial group were due to sign a deal with Algeria for 980 Fuchs 2 armoured personnel carriers and a vehicle factory. The deal is part of a wider arms package between Germany and Algeria, valued at around 10bn euros. Cooperation between the two nations has seen Algeria at the top of Germany’s arms export customers in 2013, shifting equipment from tank parts to SUVs at a value of well over $1 bn.

Algeria has also formed a partnership with the UAE to jointly produce NIMR vehicles for its military, police and peacekeeping forces. These are designed to not only be a modular, flexible option but also specifically integrated with a high grade cooling system to cope in excessively hot climates.

In 2012, Algeria began an order of 300 T-90 tanks from Russia to compliment its 325 existing T-72s, as well as 150 T-62s, and 270 T-54/55 tanks that are reaching the end of their usability. In 2016, Algeria reportedly ordered around 300 BMPT Terminator II tank support vehicles from Russia’s UVZ, with deliveries to begin in the first quarter of 2018, with deliveries continuing until the end of 2019. The BMPT comprises the T-72-based with a choice of 840 or 1 000 hp engines, with traditionally two 30 mm 2A42 cannons, two 30 mm AG-17D automatic grenade launchers, a 7.62-mm PKT machinegun, and four launchers for 9M120 Ataka guided missiles.

Ghana’s defence expenditure will increase by 2.56 per cent year-on-year, taking it from $177m (2016) to $213.8m by 2021. Total armed forces spending is likely to rise to $1.1bn across this same period. Ghanaian forces are juggling operations from counterinsurgency to counter-piracy, on top of its regular peacekeeping duties. This upswing has not been difficult to justify considering the encroaching presence of ISIS threatening its borders. Most of the country’s advanced...
platforms, including its latest armoured vehicles, are imported.

The army is expected to receive almost a quarter of the defence budget and, at present, Ghana has a requirement for new wheeled armoured vehicles to upgrade its mobile warfare capability across five infantry battalions.

Legal restrictions under the Foreign Direct Investment (FDI) rulings mean that foreign defence equipment manufacturers are only allowed to enter the Ghanaian market by making direct sales but many companies and nations have taken advantage of these opportunities. China is expected to supply nearly 44 per cent of defence imports over the next five years, with Russia, Germany and Spain also seeing good market share.

Following Tunisia’s political revolution, a transition has occurred in civil-military relations, as not only have the country’s armed forces become more decentralised, they have been seen as playing an important role in the nation’s young democracy. Budget increased to $14.5bn in 2016, with post-revolution governments investing in new equipment to counter serious security threats still facing the country and wider economic growth being forecast.

In efforts to ensure democracy continues, international governments have also been quick to provide support to Tunisia’s military power, including several donations of vehicles. In May 2016, the US provided 48 jeeps among a package worth around $20m. More recently, Germany announced plans to give Tunisia (and Jordan) funds to buy armoured vehicles to help combat ISIS. The exact figure was not revealed but the “double-digit million” sum will come from a 100m euro crisis prevention fund to strengthen partner states south of the European Union. Military equipment was also pledged by Russia in March 2016 after Tunis requested Moscow’s assistance in preventing militants from crossing the border from Libya.

Uganda is facing an internal crisis of widespread unemployment amidst constrained growth, with trade imbalances further aggravating the situation. In 2015, the country’s defence budget rose by 10.8 per cent with the bulk of expenditure financing operations of the UPDF peace keeping mission in Somalia (Amisom – offering the largest African Union contingent to the mission), as well as building up land forces and special equipment. Like Tunisia, the UPDF has taken armoured vehicle donations from the US, including a delivery of bullet-proof Land Cruiser SUVs, a dozen MRAPs, and three training vehicles. However, Uganda’s military chief has stated that ‘frustrations’ with international partners and disagreements over training efforts will see Uganda withdraw its troops from Somalia by the end of 2017. In September 2017, Uganda received a contingent of Acmat Bastion APCs from the US to serve in Amisom in an arrangement that included spare parts and maintenance team trainers. Amisom troops have been operating at 40 per cent capacity, partly due to losing many vehicles to IED attacks.

Somalia’s forces are upgrading their own equipment, with a fleet of new tactical vehicles unveiled by the National Army

In industry developments, the UPDF has established its own facility to refurbish and reassemble APCs and other vehicles at its Magamaga army barracks. Developments in local assembly are emerging hand-in-hand with development of the country’s metal works industry and efforts to adopt or train skilled engineers.

Somalia’s forces are upgrading their own equipment, with a fleet of new tactical vehicles unveiled by the Somali National Army in September 2017. These consist of around a dozen Chinese-built Shaanxi Baoji Special Vehicles Company Tiger 4x4 light armoured vehicles, which are believed to have been donated as secondhand equipment by the Chinese government. Equipped with a heavy machine gun and a 200hp Cummins diesel engine, up to 10 people can travel in the vehicle, including the driver. Somalia is also understood to stock 14 ACMAT Bastion APCs, 50 AT105 Saxon APCs, ten Reva III MRAPs, and six RG-31 MRAPs among its armoured vehicle inventory.

Senegal is equipping its armed forces under the ‘Armees Horizon 2025’ project, which is aimed at enhancing personnel and equipment for the Defence Forces amid a “proliferation of threats”. The military operates around 50 AML-60/90s, ten M-8s, 12 M-3 Panhards, ten M-3 half-tracks, eight Casspirs, 25 Ratel-20s and a number of M-20s. In April 2016, Senegal unveiled its Norinco WMA301 6x6 Assaulter armoured vehicle.
fire support vehicles, alongside a WZ551 command vehicle and Israeli Ram Mk III armoured vehicles, during its independence day parade. It is understood the IAI Rams are being used on behalf of the UN operation in Côte d’Ivoire (UNOC). The Artillery Battalion also paraded a number of KrAZ trucks outfitted as shelter vehicles. Meanwhile, 2017 saw delivery of Oncilla armoured vehicles, a variant of the Ukrainian Dozor-B 4x4 light armoured vehicle.

A cash-strapped Zimbabwe government signed off a $380m defence budget in 2015 – up from $356m – with around $50m intended for the procurement of 633 armoured vehicles, including all-terrain troop-transport trucks, along with water cannon and anti-riot equipment for its military and police forces. However, severe socio-economic pressures on the population have left the government fearing an Arab Spring-style uprising. September 2016 saw government announce that it will issue bond notes that will be traded one-for-one for US dollars and will be backed by an international loan. This announcement has sparked fears of hyperinflation’s return and set off public protests. With unemployment now at around 90 per cent and President Robert Mugabe’s grip weakening, transition in the country seems inevitable in the near future.

Namibia, with a projected $700m budget for 2018, has received eight 9.5-tonne RG32M MRAPs from South Africa’s Denel Vehicle Systems. The units have been outfitted with right-hand drive and a different internal layout to previous models. Around 700 RG32Ms have been exported to date worldwide.

Last year, South Sudan, Africa’s newest nation, was said to have arranged an $850m budget – around 15 per cent of its GDP – in order to suppress rebellion shortly after the country’s insurgency gave rise to civil war in 2013. A peace deal signed in 2015 was intended to end five-years of post-Independence conflict, but with violence flaring in July 2016, and despite the implementation of a ceasefire, the peace agreement is in danger of falling apart. The presence of other factions, such as the Lord’s Resistance Army (LRA), have exacerbated the violence. Members of the Ugandan People Defence Forces (UPDF) have remained operating in the country, particularly within the Western Equatoria State, undertaking operations against these belligerents and prepared to return to Juba if the crisis flares again.

Various, smaller developments have been taking place among other nations, including those involved in conflict and those operating in a ‘peacetime’ or peacekeeping environment. Security forces in Mozambique, for example, deployed this past year on the streets of the capital Maputo after rumours of planned anti-government demonstrations circulated on social media. Although no open civil unrest occurred, the use of armoured vehicles to dissuade demonstrations illustrates the current tensions with state authorities. The Mozambican Armed Forces
(FADM) has been combating Renamo rebels in spite of reports that less than 10 per cent of its armoured vehicle fleet was not fit for service as of 2014. **Mauritania** acquired at least a dozen Turkish-made Otokar Cobra armoured vehicles in 2016 as forces joined the UN mission in the Central African Republic (MINUSCA). Some of these are armed with a Chinese-made 12.7 mm W85 heavy and PK-pattern 7.62 mm machine guns, while at least one is configured as a recovery vehicle. **Ethiopia** retains a powerful military force that boasts hundreds of T-72 and T-55 tanks in spite of a sliding defence budget. Local industry has developed the ability to manufacture and refurbish its Soviet-era armoured vehicles and the armed forces have acted on a strategic front-foot, aggressively policing its borders and pre-emptively attacking threats. In 2015, 3,000 Ethiopian armoured units were said to have crossed into Somalia to attack al-Shabab militants, and new confidence in the process towards peace has since been expressed.
Attempts to expand land and maritime territory and the emergence of stronger military capabilities in the Asia-Pacific region makes for a difficult security landscape. Overall the military expenditure of the region in the appears to be slowing after several years of steady growth. However, widespread political unrest and the presence of various insurgent groups show no signs of slowing, with 2017 witness to particularly intense talks of conflict on the Korean peninsula.

The Democratic People’s Republic of Korea, under leader Kim Jong Un, has been persistent in flouting demands to stop testing ballistic missiles in an overt display of aggression towards the Republic of Korea, Japan and the United States. This has included July 2017’s first successful test-fire of an intercontinental ballistic missile and the August 2017 firing of a missile over Hokkaido. These provocations have resulted in the UN Security Council to toughen sanctions, as well as hawkish rhetoric from Washington and trade embargoes from China. A large-scale engagement, involving air and land offensives, remains a worrying possibility.

**Despite the slowdown in military expenditure, demand for AFVs in Asia may well increase**

Although its domestic situation is quite stable, China is viewed as both a threat and a stabilising power when it comes to the wider security of the region. China meanwhile perceives many of its regional neighbours to be a threat to its own sovereign claims but sees little benefit in sparking a military conflict when it can impose its position through economic muscle. Areas of the South China Sea remain hotly disputed between the likes of Japan, Vietnam, Brunei and Malaysia. In 2016, Beijing rejected the decision of an international tribunal which ruled in favour of the Philippines over one such territorial claim. This has enflamed tensions, imparting a sense of urgency when it comes to military training exercises and procurement plans across the region.

Despite the slowdown in military expenditure, demand for AFVs in Asia may well increase. Aside to China's large military deployment along its borders and the influence this is having on the military capabilities of surrounding states, both Taiwan and South Korea remain attractive markets for western military exports. India remains the principal growth market thanks to its surging economy, and tensions along its borders with Pakistan and China may well lead to a further increase in the demand for armoured vehicles for years to come. Due to the typical terrain across much of the region and the asymmetric nature of modern conflicts, light armoured vehicles (LAVs) and 8x8 APCs will be the key types of vehicles under contract in the Asian market, but precautionary border security measures and the need to appear prepared for conventional warfare should also stimulate demand for heavy armour.

With China the key defence influencer within the Asia-Pacific region, Beijing has been vocal in its displeasure at the presence of US forces operating in the region, as well as at the high volume of defence systems sold by the US to Taiwan that includes a new $1.42bn military equipment proposal. China has strengthened its presence on the territory to reassert its sovereignty claims. Likewise, its long-running animosity with Japan has not been helped by an expansion of Japanese security activity and partnerships with the West. Beyond the maritime areas, a significant short-term stand-off occurred with India in mid-2017 on the Himalayan border following a dispute with China attempting to extend a road at Doklam. Overall, China was estimated to be earmarking a mere seven per cent increase in military spending in 2017, taking its total budget to around $148bn.

China North Industries Corporation (Norinco) has been ramping up production and sales for domestically-made armoured vehicles. In 2016, the company developed a 6x6 VN2C mine-resistant vehicle – similar to its earlier WMZ-551 APC – and armed with a 12.7 mm and 7.62 mm machine gun, eight electrically operated grenade launchers, and space for additional turrets. In 2017, Norinco demonstrated a new
generation 30-ton tracked IFV known as the VN-17, which looks similar to the company’s VT-5 light tank. The VN-17 offers a remote turret with two multi-lens electro-optical and infrared sensors, a 35mm cannon, and a 7.62mm machine gun or medium-range HJ-12 anti-tank missile launcher. The vehicle sports reactive armour on the lower front hull and side-skirt armour along its tracks. Another (unnamed) IFV set to be adopted by the People’s Liberation Army (PLA) is set to offer an unmanned turret, augmented displays for crew helmets and a hybrid-electrical engine for fuel efficiency and stealth.

China has also recently displayed a hard-kill active protection system (APS) for the export market called the GL-5. Comprised of four radars and fixed projectile launchers on the turret, the system offers 360-degree coverage against incoming munitions at a range of 33-39 feet. An even more advanced APS is likely to be employed on China’s own vehicles. One of the recipients of this technology may be the country’s long-running ZTZ-59 tank having received an upgrade to a heavy IFV (HIFV) variant with tactically arranged armour and engine placements. Meanwhile, Chinese media sources in late 2015 stated the military had finally retired its fleet of Type 89 (PTZ89) tank destroyers, around 100 of which had been in service since 1989. 25 years of modernisation has allowed the country to acquire significant advancement with tanks when it comes to armour, protection and large-calibre guns, eliminating the need for thinly protected and specialised tank destroyers.

June 2017 saw further details released on the efforts of The North China Institute of Vehicle Research to develop the world’s fastest amphibious armoured vehicle. With a top speed of 50km/h in calm waters, the experimental vehicle would outmatch current US Marine Corps vehicles, thanks to a V-hull, compact pumpjets and retracting wheels that are all designed to reduce water drag to a minimum.

International exports of Chinese armoured vehicles continue to progress as far afield as Africa and Latin America. For example, 2016 saw Senegal unveil its newly delivered batch of 12 Norinco WMA301 Assaulter armoured fire-support vehicles. That same year, Bolivia took ownership of 27 Chinese Tiger 4x4 combat vehicles from Shaanxi Baoji Special Vehicles Manufacturing and four riot response vehicles in a $7.7m contract that falls under a bilateral cooperation agreement. The vehicles have been developed and built by Shaanxi Baoji Special Vehicles Company. The China Tiger is a high-mobility, all-weather vehicle that can carry up to nine fully equipped infantrymen and a crew of two.

The Republic of Korea (ROK) budgeted $36.49bn for its 2017 defence budget, marking a near-4 per cent increase on 2016 and a record high for the country’s history. It is looking to up this further in 2018 by increasing the budget to $38.7bn.

The nation of course remains in a tense diplomatic gulf with the DPRK and a strong military is unlikely to fall off the nation’s priority list, thereby justifying expenditure on defence modernisation, procurement and research and development.

A programme of mass-production of indigenous armoured vehicles began in June 2016 under the oversight of the ROK’s Defence Acquisition Programme Administration (DAPA), aiming at improving mobility and operability of infantry troops. 100 6x6 KW1 (K806) and 500 8x8 (K808) wheeled armoured vehicles are to be produced by 2023. This renews the initiative first launched in December 2012, with work being
undertaken by Hyundai Rotem. 16 low-rate initial production vehicles are to be delivered to the Republic of Korea Army (RoKA) for field trials scheduled to last till the end of 2017. Production will commence thereafter from 2018.

While the 16-tonne K806 and 20-tonne K808 share similar features – such as a 420 hp Hyundai Motor Company diesel engine and a two-person crew with space for up to nine fully equipped troops – the K806 is conceived as an escort-type protective vehicle for convoys and facilities or reconnaissance while the K808 is designed to integrate with other combat vehicles for high-intensity operations over difficult terrain. DAPA believes the new wheeled armoured vehicles, equipped with cutting-edge technologies, can move swiftly on the ground as well as cross water obstacles, carry heavy firepower and protect the troops inside from enemy machine gun attacks that will enormously increase infantry units’ operability. The vehicles will also compete on the export market if they prove to offer a cost-advantageous option over alternatives.

The RoKA has also been testing newly developed Humvee-based tactical vehicles. Five types of indigenous multipurpose wheeled vehicles were delivered to forward-deployed units from January 2017 and deployed on a four-month test run before entering mass production. The vehicles are designed to replace the military’s aged K-131 and K-311A1 vehicles, offering a maximum speed of 135km per hour and enhanced mobility over mountainous terrain.

RoKA has been testing newly developed Humvee-based tactical vehicles

Having approved its largest ever defence budget in 2016/17 at $44bn (largely in response to Chinese maritime claims), Japan has proposed a marginal increase for 2018 to $48bn. Most of this increase is said to be intended for missile defence capabilities. Recent developments have seen the country sign in new laws to ease long-running restrictions on Japanese military personnel from operating outside of national borders. Aside to shaking off many of the constraints of its post-war constitution, Japan is extending this new freedom to benefit from international defence markets. In producing high-end indigenous military technology, it stands to see many opportunities to support the economy. At the same time, the significant capability of the Japan Self-Defence Forces (JSDF) is now likely to join other major military powers in international operations.

Japan’s Ministry of Defence unveiled a prototype 8x8 APC – the Wheeled Armoured Vehicle (Improved) – at the start of 2017, as the basis for replacing its Type 96 APCs currently in use by the Japan Ground Self-Defense Force. Built by Tokyo-based Komatsu, the 20-ton vehicle offers enhanced IED protection, a more powerful engine and more robust suspension. In its basic variant, it can carry up to 11 people including three crew members.

As part of the new framework, Mitsubishi Heavy Industries (MHI) has been working with the US on an armoured vehicle development partnership for the United States and possibly other foreign customers. According to analysts, building a defence system for an export customer could give MHI more control of its intellectual property and simplify the approval process to sell more of its products overseas in the future.

Latest output has seen MHI design a new suspension for the Bradley Fighting Vehicle, which, if accepted, would mark the first Japanese component designed specifically for a foreign military to be exported in seventy years. MHI already produces Japan’s main battle tanks and its vehicles are highly regarded for their heavy-duty tank engines, gear technology and water jet propulsion systems.

In early 2016, Japan’s Ministry of Defence awarded BAE Systems a $149m contract for 30 new AAV7A1 assault amphibious vehicles (AAVs). These vehicles will be AAV7A1 Reliability, Availability, and Maintainability/
Rebuild to Standard (RAM/RS) variants which provide a more powerful engine and drive train, as well as an upgraded suspension system, allowing the new vehicles to meet or exceed original AAV7A1 performance. Production reportedly began in August 2016 and final vehicles deliveries expected by the end of 2017. The contract includes tools and test equipment as well as training aids.

**ST Kinetics is expanding exports of the Terrex 8x8 IFV**
Image: ST Engineering

**Singapore** announced a modest 1.6 per cent defence budget increase in 2017 to around $10bn, following an increase in 2016 of 6.4 per cent – the fastest rate of growth seen in the country for five years.

These increases have helped the Singapore Armed Forces (SAF) to commit to the development of its next generation AFV by 2019, which will replace the ageing M113A2 Ultra fleet and operate alongside the SAF’s existing tracked Bionix IFV. The new vehicle will offer a larger calibre gun and enhanced firepower and protection. Development of the new vehicle began in 2006 through collaboration of the SAF, the Defence Science Technology Agency, and Singapore Technologies (ST) Kinetics (the land systems division of state-affiliated defence prime ST Engineering).

According to the Ministry of Defence (MINDEF), the new 29-tonne yet-to-be-named AFV will carry up to 11 personnel – including a driver, gunner and vehicle commander – and travel up to 70km per hour up to distances of 500km on one tank of fuel. Prototypes were unveiled to the public in May 2017, featuring a remote weapon station (RWS) armed with an Orbital ATK Armament Systems MK44 30mm calibre main gun, coaxial 7.62mm machine gun and eight 76mm smoke grenade launchers. The vehicle will be powered by a 710 hp MTU 8V-199 TE20 diesel coupled to a Kinetics Drive Solution (KDS) HMX3000, offering a power-to-weight ratio of 24.5 hp/tonnes. An ‘advanced protection suite’ can be added for an even higher level of protection.

ST Kinetics is also hoping to expand exports of its Terrex 8x8 IFV family, which now includes three distinct platforms with gross vehicle weight ratings ranging from 24-35 tonnes. The company has indicated that interest has been shown from countries in the Middle East, North America (specifically, the US Marine Corps’ Amphibious Combat Vehicle Phase 1 Increment 1 programme), Latin America, and by those involved in the Australian Army Project Land 400 Phase 2. Design and engineering capabilities are said to support in-country manufacturing to help manage cost and risk for the customer. ST aims to build on its foreign experience in providing technical advice and consultancy services to Thailand’s Defence Technical Institute’s (DTI’s) indigenous 24-tonne 8x8 Black Widow Spider armoured vehicle development for the Royal Thai Army (RTA). Following a licensing disagreement, 9 of the SAF’s Terrex vehicles were impounded in Hong Kong during transit between 2016 and 2017 before diplomatic talks saw them released to Singapore.

**Japan’s Ministry of Defence awarded BAE Systems a $149m contract for 30 new AAV7A1 assault amphibious vehicles (AAVs)**

Meanwhile, ST’s 4x4 Protected Combat Support Vehicle (PCSV) – scheduled to be commissioned by 2017 – is also set to provide the SAF’s motorised infantry with improved firepower and protection. The 20-tonne platform is based on the Paramount Marauder MRAP from South Africa, is operated by a crew of two seated in a protected cabin, and offers a payload capacity of 4,000 kg or up to eight dismounts. The modular design of the rear compartment enables the vehicle to be configured for a range of missions, with mortar, battlefield casualty evacuation, and resupply variants being planned. The PCSV will replace the soft-skin MAN military utility trucks currently involved in logistics.
operations. When equipped with the SAP’s Army Battlefield Internet (ABI) network, the vehicle will be able to integrate with the Terrex IFV.

In developing news, ST announced in April 2017 that it will develop a small range of autonomous commercial vehicles in its first major non-defence venture. While these vehicles may prove significant on the export market in the near-term, the technology and experience may eventually be incorporated into the company’s defence portfolio.

Malaysia’s economic anxieties resulted in a 12 per cent cut to its 2017 defence budget to $3.6bn – the second year of decrease since the ambitious 10 per cent hike witnessed in 2014-15. The timing is difficult for the government as security crises have been plentiful in recent years, including Chinese incursions into Malaysian waters, a 2013 invasion of Filipino insurgents and the 2014 disappearance of Malaysian Airlines flight MH 370, which many have attributed to terrorism.

In spite of the cuts, the country is seeking to upgrade its AFVs to extend their operational life, while augmenting its fleet with the delivery of 257 AV8 8x8 vehicles under production with Malaysian company DRB-HICOM Defence Technologies (DefTech). South Africa’s Denel, which is supplying the integrated turret systems, flagged delays in the delivery of the programme owing to economic pressures in Malaysia and DefTech’s ability to respond, resulting in contract execution extended from two years to nine years.

Other anticipated upgrades of the existing inventory have included plans for the Alvis Vehicles Scorpion 90 light AFVs and Rheinmetall MAN Military Vehicles Condor 4x4 APCs (turning part of the fleet into a transport for the country’s Aludra UAV), but it is not known whether these will also be delayed. A prototype of the 4x4 – offering a flatbed logistics support conversion – was unveiled at an Independence Day parade on August 31.

Thailand has proposed an increased defence budget for 2018, having previously raised its spending in 2017 by 3 per cent to around $6bn. The latest proposal seeks a 5 per cent hike to $6.5bn, much of which will support forces fighting insurgency in the southern region of the country. Recent undertakings for Thai defence have included broader international cooperation as well as domestic vehicle development. For example, Ukraine and Thailand signed an agreement at the end of 2015 on joint production of BTR-3 AFVs. The agreement provided for the localisation of production of the vehicles in Thailand and was said to be a blow to Russia’s Rosoboronexport which was expecting to clinch a similar deal for its BMP-3 AFVs.

Initial testing of the re-engineered Cadillac Gage V-150 Commando 4x4 light armoured vehicle was completed by the Royal Thai Navy.

Initial testing of the re-engineered and upgraded Cadillac Gage V-150 Commando 4x4 light armoured vehicle (HMV-150) was completed by the Royal Thai Navy (RTN) in June 2017. An IED-damaged donor platform was rebuilt with reinforced armour by Thailand’s Panus Assembly over an eight-month period before being handed over to the service for test and evaluation. If the results are agreeable, Panus will upgrade the rest of the RTN’s 24 V-150s. Most of the prototype HMV-150’s new armour is understood to be based around a double layer hull with 12 mm thick steel on the sides and roof and 16 mm on the underside.

The Royal Thai Army (RTA) has been spending even
more on its vehicles, having ordered 34 8x8 VN-1 armoured cars from China in March 2017 for around $1.6m. The vehicles are the export version of the NORINCO ZBL-09 Snow Leopard APC, similar in structure to Ukraine’s BTR-3E1. The RTA is aiming for a 2020 delivery of the full battalion.

In late 2015, Thai Defence Technology Institute (DTI) introduced the first ‘Black Widow Spider’ 8x8 amphibious armoured car. The vehicle was jointly developed by DTI researchers, the National Metal and Materials Technology Centre and private organisations with expertise in automotive safety. The Spider is resistant to small arms fire and .57 calibre machine gun fire, while being capable of transporting 12 people and equipped with its own 30mm machine gun.

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**Taiwan is targeting a major 50 per cent increase in defence spending for 2018**

Also notable is that Bangkok-based Chaiser, a defence land systems specialist with almost 50 years of experience in customising and repairing military vehicles, has developed its own APC. Named First Win, the 4x4 vehicle has been designed specifically to offer high protection against IED blasts. The Royal Thai Army made an initial order of 21 units in 2012 and was rumoured to be considering a contract for 15 more. The Thai Ministry of Justice Department of Special Investigation has also taken delivery of 18 of the vehicles, while the Thai Police have a requirement for a variant with a smaller engine. Chaiser has signed an agreement with Malaysia’s DefTech under which the First Win is being offered to meet the future operational requirements of the Royal Malaysian Army with the local name of AV4.

**Taiwan** is targeting a major 50 per cent increase in defence spending for 2018, bringing the budget to $10.95bn – 3 per cent of GDP – and making the Ministry of National Defence the largest recipient of government spending. The hike is significant in its apparent reorientation of foreign policy, with China at first being treated with renewed diplomatic outreach to once more being treated as a national threat. Bi-lateral relations were strained again in January 2017 when authorities in Hong Kong impounded nine Singaporean armoured APCs in transit, reportedly because they had been involved in a Taiwanese military drill. However, almost half of the 2018 budget is expected to go towards replenishing personnel and morale, while budget for new equipment and upgrades will decrease by 6 per cent against the 2017 allocation.

The country is remaining active on the international scene, having taken part in a US military training exercise in Hawaii in June 2016 that featured one of its mechanized infantry platoons observing operation and deployment of eight-wheeled armoured combat vehicles on terrain similar to its own. May 2017 saw Taiwanese forces conduct its annual Han Kuang war games which involve repelling a simulated invasion by the PLA from land, sea and air.

In one of the blackest periods for the country’s defence industry, the tail end of 2015 saw a number of Taiwanese officials and contractors charged over a procurement scandal involving locally produced 8x8 CM-32 Yunpao (“Clouded Leopard”) APCs. A $243.9m manufacturing contract was awarded to Chung Hsin Electric and Machinery Manufacturing (CHEM) only for a number of irregularities to be exposed. Those indicted were accused of using Chinese-made spare parts and not holding proper certifications to fulfil the contract, resulting in a “significant number” of vehicle breakdowns. However, the CM-32s will continue to provide coverage to the Army, with Taiwan allocating $175m for new research and development into home-grown weapon systems, including those that can be integrated into these vehicles.

**Indonesia** submitted a revised defence budget in 2017 with a 1.2 per cent increase to $8.17bn. Part of the increase will help the country support its commitment to the United Nations MINUSCA peacekeeping operation in the Central African Republic, aside to meeting the goals of the ‘Minimum Essential Force’ readiness concept aimed at improving border security and the local defence industry. In terms of national security threats, Beijing’s unilaterally claimed ‘nine-dash line’ demarcation intersects with Indonesia’s exclusive economic zone near the Natuna islands and this has caused friction to what are otherwise positive relations.

Indonesia’s Marine Corps introduced five BTR-4M APCs in 2017, having taken delivery from Ukraine’s SpetsTechnoExport. The vehicles were produced at Ukroboronprom’s Kharkiv Morozov Machine Building Design Bureau following the 2014 contract. The country submitted a revised defence budget in 2017 with a 1.2 per cent increase to $8.17bn. Part of the increase will help the country support its commitment to the United Nations MINUSCA peacekeeping operation in the Central African Republic, aside to meeting the goals of the ‘Minimum Essential Force’ readiness concept aimed at improving border security and the local defence industry. In terms of national security threats, Beijing’s unilaterally claimed ‘nine-dash line’ demarcation intersects with Indonesia’s exclusive economic zone near the Natuna islands and this has caused friction to what are otherwise positive relations.
also began delivery in September 2016 of the first 24 of 61 Leopard 2 RI MBTs ordered from Rheinmetall Defence in 2012. These tanks form part of a $280m contract that comprises the Leopard 2 RIs, plus 42 Leopard 2+ MBTs (standard Leopard 2 A4s configured with a bustle-mounted air conditioning system), 42 upgraded Marder 1A3 IFVs, and 11 armoured recovery and engineering vehicles offloaded as surplus by the German Army. Indonesia also completed delivery of a fleet of customized Black Fox 6x6 vehicles from South Korea’s Hanwha Defense Systems in 2013, which were lightened to suit the local terrain and augmented with amphibious capabilities and weapons systems, and had state-owned PT Pindad undertake the work on final assembly and systems integration.

The Philippines increased defence spending in 2017 to boost its fight against Islamist militants and enhance maritime security in the disputed South China Sea, equating to around $2.8bn going to the armed forces (AFP). President Rodrigo Duterte announced has since announced his intention to push a further 7.5 per cent to modernise the AFP with new weapons, surveillance, mobility and communications equipment. The country’s state-owned defence organisation, ‘The Government Arsenal’, also outlined plans in 2016 to establish a dedicated defence industrial zone to support the development of related capabilities in the country.

Forces in the Philippines currently have no tanks and have been outfitting existing military platforms with bolt-on wooden armour

The country has expanded its defence industrial base rapidly in recent years and is looking to further increase its number of export customers. One of the most prominent on paper is Pakistan, with a bilateral offer made in 2016 to formally seek sales of Indonesian equipment, including the Anoa 6x6 manufactured by one of Indonesia’s main defence companies, state-owned PT Pindad. To date, the company has produced large numbers of the Anoa- 2 6x6 APC for Indonesian forces. In Pakistan, the vehicle would find itself in direct competition with the Dragoon 4x4 APC, produced under license by Pakistan’s own Heavy Industries Taxila (HIT).

Pindad is said to be diversifying its range of AFVs. Its latest vehicle is the Badak 6x6 direct fire vehicle (DFV), which offers a different layout and is fitted with a CMI Defence two-person turret with a 90mm gun and a 7.62mm coaxial machine gun, plus a similar weapon being mounted on the roof. In January 2016, the company received an order to supply the Indonesian Army with an initial 50 units, approximated at $36m. A subsequent deal with Ireland’s Timoney will also see the Badak upgraded with a modular driveline, transfer case and steering system. Pindad’s Komodo 4x4 meanwhile provides a potential reconnaissance platform that accommodates a crew of four, or a protected troop carrier variant with a crew of two and up to 10 dismounts.

Recent and controversial comments by Duterte have indicated a desire to distance the country from its long-standing military and diplomatic ties with the United States, with threats to seek business instead with Russia or China. At time of writing, the Russian Defence Minister was planning a working visit to the Philippines in order to sign a defence industry cooperation agreement. It remains to be seen whether this new strategy will affect long-term defence trade and collaboration in the Asia-Pacific region. Such a break would mark a significant contrast to recent cooperation, with the Philippines – under former President Benigno Aquino – receiving a donation of 114 M113A2 APCS from the United States towards the end of 2015.

Indonesia has adopted several BTR-4M APCs from Ukraine
Image: wikimedia
When it comes to recent armour requirements, forces in the Philippines currently have no tanks and have, in some situations, been outfitting existing military platforms with bolt-on wooden armour as a rudimentary effort to protect vehicles from RPG attacks. In June 2017, the Army admitted to losing two of its V-150 4x4 armoured cars in combat. The government did not meet its self-imposed deadline to end a siege of Marawi City in June, instead being forced into months of continued fighting.

India’s Defence Acquisition Council approved a $375m proposal to upgrade a range of armoured vehicles with night-fighting capability and weapons accuracy.

India saw a severe deterioration in security in Jammu and Kashmir in 2016, following Indian Army operations in the region and clashes between activists and police. In spite of an increase in military presence and the mobilisation of Panthera-T6 APCs, dozens of local security personnel have been killed in a series of terrorist attacks over the past year. Meanwhile, following Chinese road construction work in Doklam in mid-2017, an Indo-Chinese border stand-off occurred, temporarily threatening a sudden conflict. After a number of non-fatal casualties, troops from both sides agreed to disengage and fresh diplomatic talks between New Delhi and Beijing were initiated. Previous months had seen Indian T-72 MBTs deployed to eastern Ladakh to dissuade ‘frequent’ Chinese incursions.

The increasing use of the military in counter-terror activity across the entire country since the 2008 Mumbai terrorist attack is said to be largely supported by the Indian public. With these issues under consideration, India’s Defence Ministry has benefited from $53.5bn budget in 2017 and plans are in place to boost defence spending by $233bn over the next 10 years. Resources will be primarily driven into the procurement of new military hardware, much of which the government hopes will be manufactured in India.

In July 2017, India’s Defence Acquisition Council approved a $375m proposal to upgrade a range of armoured vehicles with night-fighting capability and weapons accuracy. The Air Force has also approved the purchase of up to 60 new armoured vehicles for Special Force operations. A Request for Information outlined the need for these vehicles to be transportable by C-17 and C-130, suitable for all terrain, offer a 350km operating range, a speed of up to 100kmph, and six firing ports.

Of major interest to the market will be the progress of India’s recently revived Future Infantry Combat Vehicle (FICV) competition, which will award the largest ever indigenous contract at a projected value of around $15bn. Ten Indian companies have formed consortia to compete to supply 2,610 of the selected vehicle. These include Tata Motors and Bharat Forge Ltd, General Dynamics Land Systems (GDLS), L&T and Mahindra, and several other companies ranging through Tata Power SED, Reliance Defense, Rolta, Punj Lloyd, Titagarh Wagons and the public sector Ordnance Factory Board (OFB). The FICV will be an amphibious, armoured, tracked and air-transportable troop-carrier that can fire four-kilometre range anti-tank missiles and will replace the Indian Army’s Russian-made BMP II second-generation infantry fighting vehicles in use since the 1980s. Three shortlisted consortia will develop an FICV prototype, with the MoD contributing 80 per cent of the cost.

In August 2016 it was reported that Russia’s JSC Rosoboronexport and Indian railroad hardware producer Texmaco Rail and Engineering (TRI) had signed an agreement on the development and manufacturing of military hardware for the Indian Armed Forces. This will see the transfer of Russian technologies to India and licensed local production of Russian BMP-3 IFVs among other armoured vehicles and spare parts. The Indian Army subsequently placed an order for 250 Mine Protected Vehicles (MPVs), which are routinely spotted on the streets and highways of Jammu and Kashmir and states in North Eastern India. Deliveries are expected to begin in 2018 to augment the fleet of Casspir MPVs currently deployed by the Army and Central Armed Police Forces (CAPFs).

Long-running tensions with Pakistan have not been helped by tit-for-tat exchanges of fire between the two nations in the Kashmir region in the past year. Pakistan has proposed a defence budget hike of 7 per cent (to total $8.7bn), with around $1.5bn likely to be spent annually on procurement until at least 2024. However, this remains a mere fraction of expenditure compared...
Pakistan is attempting to expand both its military capabilities and its defence-related economy assets through a number of newly formed bilateral deals, including fresh agreements with Indonesia and South Africa, as well as both Russia and Ukraine. The latter saw a $600m memorandum of understanding signed in November 2016 to supply 88 Ukraine-built tank sights to Pakistan as well as to support Heavy Industries Taxila in overhauling the Pakistan Army’s T-80UD MBTs.

In terms of its indigenous ambitions, Pakistan’s Military Vehicles Research and Development Establishment (MVRDE) is now developing a light armoured vehicle called ‘Light Armed Vehicle Assault’ (LAVA). The MVRDE will also develop a medical recovery vehicle.

The main phase of Pakistan’s (terrorism counter-offensive) Operation Zarb-e-Azb concluded in 2016, resulting in the lowest number of terrorist attacks in the country since 2008. Up to 30,000 troops and armoured vehicle forces were involved in the operation, all with the aim of stifling al-Qaeda and its affiliates in the region. However, security efforts do not simply end, and as such, demand for armoured vehicles in Pakistan remains high. Owing to the Zarb-e-Azb operation, the armed forces were awarded a 10 per cent increase of a “special allowance” budget.

In recent years, the government has been averse to importing surplus vehicles, particularly from the US, but did approve a $198m foreign military sale for 160 MaxxPro MRAPs in 2014. Other recent deals under discussion have been the acquirement of General Dynamics’ Dragoon four-wheel-drive armoured fighting vehicle and the Chinese VN1 eight-wheel-drive AFV. Pakistan is also in the process of evaluating a number of tanks under its ‘Haider’ programme, envisaged as a new MBT to supplement the (Chinese-derived) al-Khalid MBT fleet. Rumoured tanks under consideration for Haider include Turkey’s new Altay vehicle, although it is likely that such a vehicle would simply augment a more diverse range of vehicles.

**Bangladesh** is an equalising power in the region and pioneered the creation of the South Asian Association for Regional Cooperation (SAARC) in the 1980s. In 2017, the country earned acclaim from the UN for contributing thousands of troops to more than 50 UN missions in around 40 countries within the past thirty years. With a $3.2bn defence and security budget (up 11 per cent year-on-year), operations will be varied. Personnel have engaged in counter-terror operations and the military has most recently been forced to manage a surge of Rohingya refugees escaping from violence in Myanmar.
current phase (Phase 2) of this programme, 225 8x8 mine-protected reconnaissance vehicles will replace Australia’s 250 ASLAV light armoured vehicles by 2020. Two contenders remain in this $5bn competition at time of writing – the AMV35 Combat Reconnaissance Vehicle by BAE Systems Australia (teaming with Finland’s and Saab Australia) and the Boxer Combat Reconnaissance Vehicle from Rheinmetall Defence (teaming with Supacat Australia and the Netherlands government). A year’s worth of rigorous testing and evaluation drew to an end in August 2017. The winner of the contract will be announced in the first half of 2018.

In tandem effort, an IFV will replace Australia’s M113AS4 from 2025. The M113AS4 LOT is expected to last as long as 2030 but its ‘fit for purpose’ suitability is decaying given current and emerging threats. It is not expected to be deployable for anything other than low intensity/low risk missions beyond 2025. The Army has given bidders the flexibility to include options such as manned or unmanned turrets and protection systems to meet the combination of survivability, mobility, and firepower required for the CRV. Successful bidders will recommend subsystems for their vehicles, but the Defence Department has the option of selecting alternative ones. This includes a contract for active protection systems (APS) and missiles, with international bids, such as Israel’s Rafael Trophy APS among the contenders.

The New Zealand government has continued with its plan to increase spending on defence by committing to a $413m injection in 2018 for new capabilities and modernisation. The previous year’s budget sat at $2.5bn for the New Zealand Defence Force (NZDF) – including $543m the Army – representing an 8.8 per cent increase. Officials have said the budget is set to remain at around 1.1 per cent of GDP for the coming years. The country announced in its June 2016 Defence White Paper that it will spend $20bn on the NZDF in a 15-year investment plan.

While there is no specific breakdown of where costs will be funnelled over this lengthy period, the plan is to assess whether existing light armoured vehicles will need to be replaced or simply modernised. The government has said that this investment policy is being launched at a time of “increasing uncertainty and instability in the international environment.”

The NZDF has been involved in high-level drills in 2017, including amphibious assault manoeuvres in May (Exercise Joint Waka), a multilateral combined exercise with Australia and the US in July (Talisman Sabre), and the major biennial exercise Southern Katipo in October.
Aside to intense debate over domestic politics over the past year, North America remains a stable region with homeland security concerns primarily focused on counterterrorism. Heated civil rights protests and rallies – on issues that range from policing to free speech – have been common, but despite the frequency of unrest, these have largely remained non-violent. It is unlikely that the military will be deployed in the US or Canada to respond to these matters.

Regional militaries must however remain able to respond to environmental disasters, incidents of which can be severe – from hurricanes around the Gulf of Mexico to earthquakes around the Pacific coast and regular blizzards in Canada.

It goes without saying that the US retains a large military presence outside the country in spite of defence cutbacks in 2016. Today, its military personnel are deployed in around 170 countries and are actively involved in the conflicts in Iraq, Syria, Libya and Yemen, as well as offering training and support to forces in the Philippines, Nigeria, the Baltics and many other areas. This international involvement cannot come without a build-up of anxiety among other major powers, and as such, the nation holds fragile diplomatic relations with the likes of Russia, Iran and China.

The Arctic is emerging as a distinct sub-region in an increasingly globalised world. The heavy presence of natural resources and the emergence of new trade routes have led the Arctic to become part of a complex framework of political and economic dynamics. At the heart of this are multilateral claims on territorial sovereignty, largely related to the economic benefits attached to these disputed areas. For now, ownership of Arctic resources has been discussed on peaceful terms but with climate and topography transforming, cooperation will become essential to ward off risks to security in this region.

Following the efforts to ‘downsize’ its Army (from 490,000 active duty personnel to 450,000), new leadership in the United States is reversing this effort to bring active numbers back up to 475,000. The Department of Defense (DOD) has also been promised a $700bn budget – $37bn more than President Trump originally sought – including $60bn for overseas combat operations in Iraq, Syria and Afghanistan. This decision may bode well for local armoured vehicle development and acquisition.

Recent deployments of US vehicles have included MRAPs, M-ATVs, and up-armoured bulldozers in Syria, where Stryker vehicles have led Kurdish reinforcements in Raqqa. A significant number of vehicles have also been delivered to forces in Afghanistan and Eastern Europe.

The recent creation of the US Excess Defence Articles programme aims to redistribute military assets that are no longer needed to partners and allies struggling to fulfil their own urgent requirements. In January 2016, for example, 24 MRAPs (valued at $11m) were donated to Nigeria to support its campaign against Boko Haram.

Foreign sales of US-made vehicles remain comparatively strong. In August 2016, the State Department approved the potential sale of more than 130 Abrams MBTs, 20 armoured recovery vehicles and other equipment to the Royal Saudi Land Force’s (RSLF), worth around $1.15bn. This coincided with the Saudi-led military action in support of Yemeni forces against Iran-allied Houthi forces. General Dynamics is the principal contractor for this sale. The Defense
Security Cooperation Agency also informed Congress in July 2017 of an intention to sell more than 2,700 new Joint Light Tactical Vehicles (JLTVs) to the UK.

The JLTV programme, worth $6.7bn, was contracted to Oshkosh Corporation's Light Combat Tactical All-Terrain Vehicle (L-ATV) in August 2015. Low-rate production will see 16,901 L-ATVs delivered to the Army and the Marines before 2020. Following this, there will be an option for the armed forces to purchase additional units at full-rate production, with expected totals of 49,100 for the Army and 5,500 for the Marines in operation by 2040. The contract is expected to be worth over $30bn in total. The company received its latest order of a $42m batch in September 2016, following a $243m order in March. Each batch includes vehicles, installed kits and related support.

The JLTV may operate in a wide range of challenging environments - Image: Sebastian Saarloos

A turretless version of the Bradley called the Armoured Multipurpose Vehicle (AMPV) is set to replace the Vietnam War-era M113 series of light armoured personnel carriers currently in use – a priority for the Army's overall restructure. A contract for the Engineering, Manufacturing, and Development (EMD) phase was awarded to BAE Systems in December 2014. The programme has been scheduled to deliver 2,897 vehicles at a total cost of $10.7bn ($3.7m per vehicle). The first AMPV prototype was rolled out in December 2016.
The M1 Abrams tank is expected to benefit from an upgrade package that will include enabling of the Advanced Multipurpose (AMP) round to offer greater lethality and an active protection system (APS). The APS is however likely to be subject to particularly stringent testing as early analysis anticipates a high level of risk to dismounted troops situated around the vehicle.

July 2016 saw US Special Operations Command (USSOCOM) award Battelle a five-year, $170m contract to build and deliver to the service a fleet of non-standard commercial vehicles (NSCVs). The contract will see Battelle build re-engineered armoured and unarmoured vehicles that keep the appearance of original equipment manufacturer for the Hilux, Land Cruiser and Ford platforms, such as providing them stronger alternators to handle extreme climates, as well as improved crew protection, enhanced suspension, and a reinforced chassis. This new contract – which includes an option for two additional years – builds on the successful completion of a previous NSCV contract awarded to the company in 2013.

The US is also looking towards the next generation of technology developments. In July 2016, UK-based Qinetiq was awarded a $2.7m grant to help develop the country’s next generation of AFVs under the US Defense Advanced Research Projects Agency (DARPA) Ground X-Vehicle Technologies (GxVT) programme. The organisation is leveraging its hub-drive technology which replaces multiple gearboxes, differentials, and drive shafts with compact, high-powered electric motors contained within the wheels themselves. The approach is said to reduce the overall weight of the vehicle, improve safety and increase performance. As a scalable solution, this could alleviate some of the burden brought on by the need for heavier armour. The contract will take the technology from concept to the build and test phase.

Canada’s status as a world-leading manufacturer continues to grow stronger with the country now placed as the second biggest exporter of armoured vehicles in the Middle East. This has not come without its controversies as incidents have been alleged of Canadian-made vehicles being used in activities that may violate human rights or sold to restricted customers without government approval.

At the same time, the country announced that it will be raising its annual defence budget by 73 per cent (from around $15bn to $25bn) over the next ten years, partly as a result of an apparent decrease in US multilateralism. This development should spur even more foreign interest in the Canadian defence market.

August 2016 saw the Canadian Army’s 5th Canadian Division (5CdnDiv) take delivery of its first six TAPV/VPBT (Tactical Armoured Patrol Vehicle) 4×4 mine protected high-mobility multipurpose vehicles from Textron Systems Canada. The fleet will be used to train operators and maintainers. In 2012, Canada’s Public Works and Government Services Canada (PWGSC) contracted the company to manufacture 500 TAPVs, including an option for an additional 100 vehicles. The purchase included 300 general utility variants and 200 reconnaissance variants to replace the Coyote 8x8 vehicle and RG-31 Mk3 Nyala 4x4 vehicles. The TAPV is based on Textron’s COMMANDO Elite design. The first vehicle was originally scheduled to be delivered to the
Canadian Army in July 2014 and the last delivery for March 2016. However, in 2014, pre-production vehicles experienced a number of technical issues. Design changes and modifications to address the problems were subsequently fixed. The last delivery is now scheduled for late 2017.

Canada awarded US-based Polaris Industries a $20m contract to deliver 78 DAGOR off-road combat vehicles to fulfil its Ultra Light Combat Vehicle (ULCV) requirement.

The Army opened a new Leopard II main battle tank maintenance facility at 5th Canadian Division Support Base Gagetown in 2016 at a cost of $6.7m.

December 2016 saw Canada award US-based Polaris Industries a $20m contract to deliver 78 DAGOR off-road combat vehicles to fulfil its Ultra Light Combat Vehicle (ULCV) requirement for the Special Forces. The first 52 were to be delivered in 2017 and the remaining batch in 2018. The programme mirrors the United States' efforts for similar weight armour and intended as a complimentary vehicle to increase mobility and response times across a spectrum of operations. These vehicles were outlined as needing to transport four passengers, small and light enough to fit inside the CC-177 Globemaster aircraft and CC-130 Hercules aircraft or in (or able to be lifted by) a CH-147 Chinook. They would also need to be air dropped with a 900 kg payload from either the Globemaster or the Hercules, and detached/offloaded from the helicopter within five minutes. The tender stipulated a requirement that the vehicle operate in extreme temperatures (-32C to +49C), handle a combination of urban and rural environments (mountainous, plains, jungle and woodland) and will be off-road 75 per cent of the time. Weapons turrets will also be installed.

While Canadian Special Operations Forces Command (CANSOF/COM) has upgraded its High Mobility Multi-Purpose Wheeled Vehicles (Humvees), the intention is to replace them soon.

Armoured vehicles are also being sought by local authorities in small measure. Police in New Brunswick and Calgary have put out calls in the past year for new light armoured vehicles and armoured rescue vehicles – each at a cost of roughly $300,000. Private security forces are employing similar vehicles to patrol critical infrastructure plants and other high-risk facilities.
Latin America has seen the biggest regional tumble in defence expenditure worldwide. Spending fell 7.8 per cent between 2015 and 2016, according to the Stockholm International Peace Research Institute (SIPRI), despite following several years of rapid growth. Diminishing oil prices and widespread political turmoil has had a far-reaching impact.

Intergovernmental arrangements aimed at improving regional security have in many cases become unstuck. For example, Brazil – until recently one of the most promising nations in the world of defence spending – has struggled to meet expectations on economic growth amid a period of civil unrest and political corruption scandals. Worse still, Venezuela’s descent into deep civil division has seen the violent suppression of anti-government protestors and places it at risk of a much greater internal conflict. A poll by Gallup’s Law and Order Index in 2016 found that residents of Latin America and the Caribbean were the least likely among global citizens to feel secure in their communities.

Even where security progress has been made, emerging threats are beginning to appear. While Colombia’s peace deal with the FARC (Revolutionary Armed Forces of Colombia) – one of the major armed groups involved in more than 50 years of internal conflict – is moving forward, coca cultivation has exploded. This is leading to a new risk of criminal gangs capitalising on the drug trade and exploiting vulnerabilities across borders of neighbouring states, including the Caribbean islands.

While domestic security issues rarely require a heavy deployment of armoured vehicles, governments in this region are increasingly attentive to issues of containment and a need for posturing in efforts to prevent quell civil violence. Most Latin American countries are also engaged in overseas peacekeeping operations and, as trends show, due to both a strategic and a political rationale, their military contribution is unlikely to change in any significant way.

Where the Latin American armoured vehicles market is concerned, demand for Light Armoured Vehicles, APCs and MRAPs, has been relatively strong in the face of shrinking expenditure. The rise of guerrilla warfare and asymmetric conflict results in national governments increasing their military presence in the territory and consequently demanding more LAVs to support their operations, but with enhanced survivability.

This trend may be reflected in the future military spending of countries such as Venezuela, which heavily cut its defence budget in the last four years (and by a staggering 56 per cent in 2016) in spite of a dramatic worsening of its security situation. A severe economic slump brought on by the drop in oil prices and unsustainable policies has led to a severe shortage of food and basic goods. The military is being tasked with trying to deliver supplies to the public while also suppressing demonstrations calling for President Nicolás Maduro to step down and the opposition party to take control. Between 2011 and 2015, Venezuela was the eighteenth largest importer of military equipment in the world (most imported from Russia) but orders have since slumped and the military has become deeply fragmented.

Demand for Light Armoured Vehicles, APCs and MRAPs, has been relatively strong in the face of shrinking expenditure

In one of its last major military acquisitions, October 2015 saw Venezuela became the first export customer for VN-16 and VN-18 tracked armoured amphibious assault vehicles from China’s Norinco. These designs translate to a 105 mm gun-armed ZTL-05 amphibious assault vehicle and the 26-tonne 30 mm gun-armed ZBD-05 amphibious IFV. The latter is armed with a HJ-7D anti-tank missile, and carries a crew of three and up to eight troops. Both vehicles can traverse water at 25 km/h. The Chinese PLA has been operating these vehicles since 2006.

The delivery followed that of an earlier consignment of 557-unit military vehicles from China, including VN-4 4x4 wheeled armoured vehicles, ABV-1 assault
breacher vehicles and WTC-1 water cannon vehicles, alongside 200 Norinco NG2629 6x6 vehicles. Plans to purchase a total of 2,106 military vehicles for ground forces between 2009 and 2019 are likely to have been scrapped.

The Brazilian Army’s Logistic Command signed a $1.8bn contract with Iveco Latin America, to receive 1,580 vehicles

Following several years of expansion and investment into vast modernisation programmes, Brazil began to reduce its defence expenditure in 2015, cutting annual investment by a quarter. The drop was a direct result of the nation’s sudden fiscal crisis, itself exasperated by political instability. 2017 saw the Ministry of Defence and Armed Forces deliver updated versions of the National Defence Policy and the National Defence Strategy, targeting further reduction in defence spending. However, think-tank Strategic Defence Intelligence (SDI) predicts Brazilian spending to grow from $19.3bn to $20.5bn by 2021 at a CAGR of 4.08 per cent. In spite of what will be a temporary decrease, Brazil plans to continue investment into new military technology to strengthen its domestic defence industry as much as its armed forces. Of course, Brazil’s security focus in recent years has been on ensuring a strong presence hosting world stage events – the 2014 FIFA World Cup and the 2016 Summer Olympic Games – which saw a series of demonstrations on the streets of Rio de Janeiro. Since then, the army has continued to fulfil a security presence on Brazilian streets amid further protests.

Since 2012, the country has been producing and delivering the Army’s VBTP-MR 6x6 Guarani amphibious medium APC, a component of the wider military modernisation programme and a replacement of the ageing Urutu Cascavel fleet. Overall, 2,044 units were originally signed off and were expected to enter service until 2030. As a requirement, at least 60 per cent of the vehicle components are originating from local industry.

The Army also wants to procure additional REMAX (REparo de Metralhadora Automatizado X) and UT30BR lightweight remote-controlled weapon stations. In 2017, the Brazilian Army’s Logistic Command signed a $1.8bn contract with Iveco Latin America, to receive 1,580 of these vehicles. This deal will take advantage to the new Sete Lagos production plant where an assembly line has been established to mass product the vehicles with Iveco engines from Argentina and the drivelines from Iveco DV plant in Italy. For the first time the agreement introduces a year by year planning system that allows for optimised production capacity of the plant and optimised budget allocations. The contract forecast the production of 800 VBTP-MR over the next 10 years. The 1,580 vehicles will be delivered in eight different configurations: 1,033 Guarani’s will be completed in three troop carrier versions (2 APC with 7.62 mm turret and 1 IFV with 30 mm UT-30 Mk-II turret) and the remaining 547 vehicles will be completed in the five special versions – 150 command post, 76 communications, 127 mortar carrier, 190 ambulance and four in NBC (these four vehicles will probably be the prototypes for a future mass production).

2016 saw the army begin its upgrade of a second batch (236) of BAE Systems M113B tracked APCs to M113A2 Mk1 standard (designated as M113BR in the Brazilian Army), due to be completed in November 2019. The first batch of 150 identical vehicles was locally upgraded by the army’s 5th Military Region’s Regional Maintenance Park (Pq R Mnt/5) in Curitiba, State of Paraná. The last vehicle was delivered in December.
2015. The Army is also receiving 34 surplus M577A2 command post vehicles, 12 M113A2 APCs, and four M88A1 recovery vehicles from the U.S. through the Excess Defense Articles (EDA) programme.

The Brazilian Navy meanwhile has been considering upgrades for its SK-105A2S Kürassier light tanks, and the purchase of 4x4 and 6x6 armoured vehicles for its Marine Corps (CFN). It is understood that concept and budget feasibility are still being analysed. The projects would integrate the Navy's multi-phase Strategic Project for Consolidation of the Marines Amphibious Brigade Programme (PROBANF), designed to enhance firepower, mobility, and protection capabilities.

Colombia was one of only two countries in Latin America to see a rise in annual military spending in 2016, at a modest eight ($120m), pushing the figure to $8.1bn. Further growth is anticipated through to 2020, where it should begin to push the $10bn ceiling. US lawmakers approved $296m (a slight decrease on 2015) in aid to Colombia in 2016 to continue its efforts to reinstate authority and security.

The Colombia peace accord with the FARC is proceeding with thousands of weapons being surrendered to the government

The Colombia peace accord with the FARC is proceeding with thousands of weapons being surrendered to the government and former fighters seeking to reintegrate into Colombian society. Given that the 50-year conflict directly impacted the lives of millions, a time of healing is underway and existing tensions will still run the risk of resurgent violence and political division in the coming years. The government also continues to pursue peace talks with a smaller insurgency, the National Liberation Army (ELN) – operating mainly in the north-east – and faces groups of demobilised paramilitary fighters reorganising into criminal gangs.

Although Colombian coca production was significantly reduced in the early 2010s, the trend has since reversed, with production growing by 50 per cent in the past year. This is believed to be largely the result of farmers growing coca to benefit from new government legislation which will incentivise growers to switch to a different crop. The FARC-controlled drug trade – which had been used to fund the insurgency – has been slowly disbanding but production is therefore at risk of being seized by traffickers. Ex-FARC fighters may also be persuaded to transition into cartels.

Alongside border infringement disputes with neighbouring Venezuela, these security tensions are driving Colombia’s defence spending decisions, including investment into MBTs, IFVs and APCs.

Recent activity has seen US-based Textron Systems awarded a $65m contract in 2016 to provide 54 Commando Select APCs with 40mm/.50 turrets as a foreign military sales contract to Colombia. Funds for the four-wheel APC will come out of the U.S. Army’s “other procurement” pool. The contract follows a 2014 delivery of 67 4x4 Textron Commando Advanced APC high mobility vehicles – 39 of which were ordered without turrets and another 28 ordered with 40/50 calibre remote turrets – at around $1.13m each.

Mexico remains in a fragile state when it comes to national security owing to the ongoing fight against organised crime. Budget allocations for the country’s defence and security are complex. According to Forecast International, “When measured in dollars, defence spending [in Mexico] declined in FY16. However, this is largely due to the rising value of the dollar compared to the peso. In terms of pesos, the FY16 Mexican budget [increased to] 1.4 per cent to MXN99, 651.9 million.” Even so, the decline in oil prices has troubled the country, undermining the source of one-third of the government’s income.

On the positive side, a defence spending spree in the preceding years – as part of the country’s ‘National Defence Sector Programme’ to strengthen all defence institutions with territorial responsibility against organised and transnational crime – saw the budget increase at a CAGR of 5.8 per cent between 2011-2015 and allowed Mexico to stockpile a range of new hardware as well as mandate new procurement programmes. In 2012-2016, Mexico’s defence imports grew by 184 per cent compared to the previous five-year period, according to SIPRI.
The Ministry of National Defence (SEDENA) launched a procurement programme in 2015 for 105 new armoured vehicles as well as a programme to upgrade its existing 119 6x6 Panhard Defense ERC 90 Lynx armoured reconnaissance vehicles. The investment would see the new vehicles bring four of its nine Armoured Reconnaissance Regiments (RBRs) to full spec. Mexico has purchased 3,335 HMMWV (Humvees) from ex-U.S. military stocks for $504m. The country has $499m earmarked for APCs and amphibious APCs, forecast at approximately $200m per programme.

More recently, SEDENCA activated the 21st Military Police (MP) battalion at Guachochi, Chihuahua, as part of the Mexican Army’s expansion of its Military Police Corps. The newly operational 4th Military Police Brigade is expected to eventually comprise 3,000 soldiers and conducts patrols in a number of vehicles including the Oshkosh Sandcat.

A September 2016 Independence Day military parade saw Mexico's Army unveil several new armoured vehicles. The Mexican Marines, for example, displayed a Mack Defense Sherpa Scout armoured patrol vehicle. Also shown were newly acquired Kitam 4x4 LAVs (currently approaching series production), and a prototype of the Cimarron APC, a design based on a Mercedes Unimog U5000 chassis that features a fully armoured cab and troop compartment.

Growth is also being driven in Mexico’s commercial armoured car industry by continued high levels of violent crime. New domestic and foreign competitors have entered this market, establishing assembly plants in Mexico and appealing most to government authorities and business owners. The rate of increase in privately-owned armoured vehicles is in fact higher in other parts of Latin America than in Mexico but a sense of insecurity continues to pervade as cartels and other crime groups spread out. The criminal threat is of serious concern to Mexico’s economic future.

According to recent studies, as much as 3% of Mexico’s GDP is lost to crime and violence each year, with most occurring from direct losses and a third spent on security and prevention. Also of concern is the extent to which criminal organisations are upscaling their own armour and equipment, including the recent emergence of so-called ‘narco tanks’ intended to combat both police, military and rival gangs on the streets.

In July 2016, Bolivia took ownership of a fleet of 31 China Tiger 4x4 light armoured vehicles and four riot response vehicles from China worth $7.7m as part of a military cooperation deal (including training and maintenance instruction). Of this order, five APCs and one crowd-control/command car will be given to the air force and another six vehicles of similar configuration will be provided to the navy, while the army will receive the remainder. The Tiger, built by Shaanxi Baoji Special Vehicles Company, offers high-mobility and all-weather capabilities, carrying up to nine fully equipped troops and a crew of two. China is also said to be donating an additional $30m in military aid to the Bolivian Armed Forces.
The Bolivian Army currently stocks 36 SK-105 Kurassier light tanks and 24 EE-9 Cascavel reconnaissance vehicles, along with APC fleets including M113s, EE-11 Urutus, M9 Half-tracks, V-150s and Mowag Rolands (used by police).

In an effort to reduce government deficits and increase infrastructure investment, Peru’s government began reductions in military spending in 2016, reducing its budget by 19.1 per cent ($2.4 billion) and proposing a further 14.2 per cent reduction in 2017. However Peru plans on pushing forward a security acquisition strategy that involves building a multi-dimensional brigade by 2030, while enhancing interoperability with military allies, such as the US and Brazil.

Although Peru is a nation ‘at peace’, threats include organised crime (built on domestic coca production) and the presence of terrorist groups like Sendero Luminoso (‘Shining Path’). Hence, internal policing will see increased investment. In August 2016, a package of reforms was outlined by the government to combat crime and corruption. Among the measures are plans for widespread police stings and $300m of upgrades to police equipment over the next five years.

Towards the beginning of 2015, Peru was reported to be acquiring 106 AFVs and 105 MBTs as part of its Army ‘Harpay Nina’ (‘Firepower’) programme. The project is part of the army’s ‘Ugarte’ modernisation plan. It is also known to be prioritising a new fleet of IFVs, but is undecided on a tracked or wheeled platform. Possibilities include the LAV III, YPR-765A1, Marder 1, BTR-80, BMP-1/2, Pandur, M113, BMR-600, BTR-80A and BMP-3.

Peru is in the midst of receiving 338 4x4 Rheinmetall MAN Military Vehicles (RMMV) in a $60m contract. RMMV is supplying the Navy with 30 TGS-MIL, and the Army with 92 TGS-MIL and 216 TGM MIL trucks. The Army’s first 10 were delivered to the 1st Cavalry Brigade in January 2017. The contract includes an option of a follow-on contract for a further 337 vehicles.

While Chile is a relatively safer country compared to many of its regional neighbours, there remains an ongoing, small-scale domestic terrorism risk, with political activists/anarchists emplacing hundreds of IEDs since 2005. Large-scale demonstrations (including some that turned violent) also occurred in 2015 – predominantly in Santiago, Valparaiso and Concepcion – where tens of thousands of students, teachers, and citizens marched for educational reforms. For several years, the country has been investing heavily into its ‘Northern Border Plan’ by increasing the presence of police and armed forces nationwide and allowing the Chilean military to provide limited support functions to local authorities without infringing on laws preventing
armed forces from being used in an internal security role.

In recent developments, relations with Bolivia have been sour over joint U.S.-Chile military exercises undertaken in August 2016 (Combined Joint Southern Star Exercise), with Bolivian President Evo Morales publically denouncing the manoeuvres. 2017 has seen efforts to arrange a programme of collaboration with Bolivia in an attempt to mend ties. Proposed ideas have included a call from the commander of the Peruvian Army to re-start bilateral military meetings between senior level officers overseeing border units. Bi-lateral army visitations have been taking place to bolster this effort.

The Chilean Army has been updating its ageing military truck fleet under Projecto Alfil (Bishop Project) with an aim to over 40 per cent of the army’s current fleet, now at 25 years old or more. The ideal standard for a Chilean vehicle age is said to be at an average maximum of 10 years. Resources to undertake the overhaul only became available in 2016. Mercedes Benz was awarded a contract to provide 330 trucks, includes a batch of MB Zetros 2733 6x6 and Unimog U 4000 4x4 vehicles. The Zetros are replacing legacy MB 1017A and the Unimog are to be added to the current stock of the same type. The priority is to replace vehicles that are deployed in the country’s ‘less hospitable’ southern areas where civilian communities depend on the army during times of severe weather and emergencies.

Aside to this, the Army has been primarily exploring acquisition in the areas of maintenance and recovery, spare parts, vision and night fighting technologies and target acquisition. The development of training centres to improve the versatility and professionalism of its fleets has also been emphasised. Aside to fleets of Leopard 2A4s and 1V MBTs, the armed forces boast Marder and YPR-765 AIFVs, M-113 A1/A2 and Piranha APCs, as well as a Marine force adopting new Scorpion light tanks and MOWAG Rowland 4x4s.

The military of Argentina is currently in a severely weakened state owing largely to the precarious state of the country’s economy, which has defaulted on its debt several times in recent years. Defence spending had been increasing at an annual rate of 27.6 per cent between 2012 and 2016, but due to high inflation, when converted to dollars, this translates to just a 1.5 per cent increase. Most of this budget also goes towards personnel upkeep.

The Argentine press has made claims that the country plans on spending billions on advanced military equipment, but the reality is that defence capabilities are set to deteriorate further as other needs take fiscal priority. The country’s current security requirements involve commitments to peacekeeping missions, and countering terrorism and illegal trafficking.

While every service has been significantly maimed by these monetary woes (and by the involvement of officers in the recent political scandal), the army has arguably fared slightly better given its historical benefit of receiving almost double the budget of the navy or the air force. It has recently taken delivery of upgraded Tanque Argentino Mediano (TAM) medium tanks and refurbished Huey helicopters, apparently to reorient itself towards low-intensity peacekeeping operations rather than conventional combat.

Despite these extreme difficulties, Argentina’s military at least retains a core of well-trained personnel and an active domestic arms industry producing these aforementioned TAM tanks, alongside aircraft and naval corvettes. The prototype for the TAM modernisation programme – which sees partnership with Israel Military Industries (IMI), Elbit, and Tadiran – was unveiled in May 2016. A prototype dubbed TAM 2C emerged in early 2013 and another in 2015 named TAM 2IP, the latter featuring additional armour.
The new design is based on IMI’s Iron Wall and can be added to any TAM unit without modification. The development includes new protection for the side turrets and chassis. Tests are currently underway on basic performance, protection levels, and the impact of the armour’s weight on the vehicle suspension.

The country also finalised an order in June 2015 for 110 8x8 VN-1 wheeled amphibious fighting vehicles from China North Industries Corporation. Designed with an operational weight of 21 tons, a single VN-1 armoured vehicle is capable of carrying 11 soldiers in full equipment and an additional three-man crew. Argentina secured license to assemble the vehicles at its Tandanor-CINAR shipyards.

Paraguay has few territorial disputes with its neighbours but its armed forces still have a big job in dealing with the country’s internal security challenges

Paraguay has few territorial disputes with its neighbours but its armed forces still have a big job in dealing with the country’s internal security challenges. Political unrest in 2017 has seen violent protests – including the storming of Congress – and the military has remained on alert. EE-9 Cascavel armoured cars have been deployed to indicate a military presence but have not, at time of writing, been directly involved in suppressing riots.

Recent senate reforms have also been passed to expand military powers in the continued (joint army-police) fight against guerrilla insurgents of the Paraguayan People’s Army (EPP) and drug traffickers. While a small force, the EPP have upped their attacks on its targets in recent years, including bombings, arson and assassinations. August 2016 saw eight troops killed in an ambush when guerrillas detonated explosives to destroy a military vehicle.

Aside to the insurgency, narco-criminal gangs operating from Brazil presents a security risk. The Primeiro Comando da Capital (PCC) gang undertook a cross-border robbery in April 2017 in Paraguay’s Ciudad del Este, in which more than 50 gang members attacked local police.

Paraguay’s armed forces operate with a budget of around $400m. The Army currently operates a fleet of 6-15 light to medium tanks, as well contingents of M-9 and EE-11 Urutu APCs and upgraded EE-9s. Paraguay’s M3 Stuart light tanks and M4 Sherman MBTs – although acquired from Brazil in 1970 and from Argentina in 1980, respectively – are to remain in service as operational trainers. However the vehicle inventory is ageing and spares and maintenance – including provisions of batteries and fuel – are desperately in need of investment. A recent report revealed that cavalry units, including the elite RC4 at the School of Cavalry, are deteriorating. Around 80 per cent of armour is believed to be non-operational.

In 2017, the Paraguayan MoD announced its intent to spend around $260,000 on six 4x4 double cab transport vehicles for its Joint Task Force security agency. The Brazilian Army has also agreed to repair a number of Paraguay’s EE-9s and EE-11s, as well as its Mercedes Benz model 1418 transport vehicles.

Uruguay, per capita, is one of the world’s leading contributors to UN peacekeeping forces and has invested in hardware to support recent missions in Haiti and the Democratic Republic of Congo. However, recent cuts of $600m to UN peacekeeping worldwide are likely to impact future deployments.

Uruguay recently introduced the Tigr GAZ-233036 SPM-2 4x4 into the domestic police service

The country operates a range of armoured vehicles, comprised of a fleet of tanks – Israeli T-55 rebuilds, (known as the Ti-67 Tiran) and Brazilian-modernised M041 Walker Bulldogs – and a force of EE-9s, on top of an APC fleet that includes 15 BMP-1s, 140 MOWAG Piranhas, 130 OT-93s, and ageing M113s and Condor 1s.

Uruguay recently introduced the Tigr GAZ-233036
SPM-2 4x4 into the domestic police service, having purchased the fleet from Russia in 2011. A recent civilian outreach programme (Operation Soldado Amigo) has seen troops transported by heavy and light vehicles to remote towns in order to help locals with construction and other community-building tasks. Meanwhile, Russian media reported in September 2016 that Moscow approved a draft of the Russian-Uruguayan intergovernmental agreement on defence cooperation to “strengthen mutual confidence, bolster international security, and step up the fight against terrorism.”

The Ecuadorian Army received 709 HOWO-series logistics support vehicles from China

Ecuador has been looking carefully at provisions for ‘new roles’ for its land forces, including peacekeeping, natural disaster relief and custom vehicles for internal security. However, unpopular government policies and reforms at home were met with demonstrations in recent years, to which security forces have occasionally responded with military mobilisation. Meanwhile, the relationship between Ecuador and the US – aside to other Western nations – has come under strain, furthering the prospect that military equipment will be purchased from rival nations, either regionally or afar. One example of this is shown in its recent procurement of Venezuelan Tiuna UR-53AR50 multipurpose military vehicles.

In 2015, the Ecuadorian Army received 709 HOWO-series logistics support vehicles from the China National Heavy Duty Truck Import and Export Corporation (CNHTC) through a package announced by the Ecuadorian government at $81m. Before the acquisition, 70 per cent of the country’s land transport fleet was reported to be obsolete and only 51 per cent operational.
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