Autonomous Vehicles Land, Water, Air 2015-2035

Description: Chief executives, business planning and marketing VPs and other interested parties such as investors need to grasp what is one market - autonomous vehicles of every type - and how they have so many components and systems in common. They wish to benchmark best practice and identify trends and this report is the first to pull it all together.

Uniquely, it covers the whole topic of autonomous vehicles on-road, off-road, on water, underwater and in the air, whether carrying passengers or not. Indeed, those that are only occasionally autonomous during use and those that are only weakly autonomous are identified and discussed, not least because most of them are headed to be fully autonomous in due course. Autonomous cars are dealt with soberly in the context of greater successes.

Only this report is up to date and global in reach, being based on interviews, events and data analysis almost entirely in 2015 and 2014. It is not an academic treatise nor is it simply a consolidation of what is on the web. A high proportion of the tables and figures are original and the jargon is fully explained. There are slides from recent conferences across the world. It is not evangelism: it is analysis, so the negatives are also presented.

The emphasis is on lessons of success and failure and what comes next particularly focussed on business success, with lead indicators of such success. Timelines to 2040 of market, technology and allied advances are given and detailed forecasts of sales of autonomous vehicles from 2015-2025 particularly concentrate on numbers, unit value and total market value.

Because by far the most autonomous vehicles are and will be electrically driven, there is particular detail on forecasting these vehicles by land, water and air and identifying which of these will have a substantially autonomous content in future. 30 minutes of free consultancy comes with each report purchase to fill in the gaps.

The Executive Summary and Conclusions is sufficient for those with little time to get a good grasp of the subject. It covers definitions, the spectrum of partial to total autonomy and highly automated to fully automated vehicles. The benefits and paybacks, relative degree of difficulty, hype curve for 10 families of autonomous vehicles, technology and market sizes and timelines are clearly presented in totally original new analysis.

Many thought leaders and analysts are quoted. The Introduction then looks at more definitions, purposes, arguments for and against, drive train technology, control and navigation technology, autonomy without infrastructure and a profusion of military and non-military examples with technology summarised.

Other chapters variously detail personal, industrial, commercial and military autonomous land vehicles now and in future, marine vehicles particularly the very successful Autonomous Underwater Vehicles (AUV). Then come Unmanned Aerial Vehicles that are or will be autonomous particularly examining the burgeoning Small Unmanned Aerial Vehicles (SUAV) and their increasingly varied uses plus the technology making this possible. That includes collaborative swarming and Wireless Sensor (mesh) Networks (WSN).

Contents:
1. EXECUTIVE SUMMARY
   1.1. Definition
   1.2. Timeline
   1.3. Sophistication vs continuity
   1.4. Highly automated and fully automated
   1.5. Benefits and paybacks
   1.6. Degree of difficulty
   1.7. Why go autonomous?
   1.8. Hype curve for autonomous vehicles land, water, air
   1.9. Technology
   1.10. Market size
8.1.2. ReVolt unmanned zero emission short sea ship of the future

9. AUTONOMOUS UNDERWATER VEHICLES (AUVS)
9.1. Introduction
9.2. Large AUVs
9.3. Small AUVs
9.4. Swimmers vs gliders
9.4.1. Definitions
9.4.2. Demand
9.4.3. Woods Hole Oceanographic Institution USA
9.4.4. Monterey Bay Aquarium Ocean Research Institute USA
9.4.5. Florida Atlantic University USA
9.4.6. OceanServer Technology USA
9.4.7. Kongsberg Norway
9.4.8. Teledyne USA, Iceland
9.4.9. Autosub6000 UK
9.4.10. a.r.s Technologies GmbH Germany
9.4.11. DRDO India
9.4.12. JAMSTEC Japan
9.4.13. NASA USA
9.5. Deploying AUVs Canada
9.6. Wave and sun powered sea gliders
9.6.1. Virginia Institute of Marine Science USA
9.6.2. Falmouth Scientific Inc USA
9.6.3. Liquid Robotics USA
9.7. Network of unmanned undersea platforms assist manned vessels
9.8. Biomimetic unmanned underwater craft
9.8.1. Robot jellyfish USA and Germany

10. UNMANNED AERIAL VEHICLES (UAVS)
10.1.1. Definitions and scope
10.2. Needs
10.2.1. Diving UAV
10.3. Small unmanned aerial vehicles
10.3.1. Introduction
10.3.2. Airbus becomes a quadcopter user in 2014
10.3.3. UAR postal delivery
10.3.4. AeroVironment Raven, Puma, Hummingbird
10.3.5. AirShip Technologies Group
10.3.6. Hirobo Japan
10.3.7. Lockheed Martin seeds
10.3.8. Robot insects USA
10.3.9. University of Michigan bat, solar plane USA
10.3.10. Lite Machines Corporation USA
10.3.11. NRL launch an unmanned aerial vehicle from a submerged submarine
10.3.12. Quadcopter piloted by smartphone: Vienna University of Technology
10.4. Some new uses of small UAVs 2014-5
10.4.1. Mini helicopters tracking weeds Australia
10.4.2. Drones learn how diseases spread Malaysia
10.4.3. Drones monitor killer whales Canada
10.4.4. NMSU tests unmanned aircraft over active mine USA
10.5. Swarming, self-healing networks of UAVs USA
10.6. Swarming 3D eye-bots in Germany
10.7. Large electrical UAVs
10.8. Planetary exploration
10.9. DOD upper atmosphere dirigible USA
10.9.2. VESPAS Europe
10.9.3. AeroVironment Helios and Global Observer
10.10. Aurora Flight Sciences USA
10.11. Lockheed Martin USA
10.11.1. Airbus HAPS solar plane
10.11.2. Facebook vs Google
10.11.3. Boeing and Versa USA, QinetiQ & Newcastle University UK
10.11.4. Japanese solar sail to Venus
10.11.5. NASA testing electric propulsion
10.12. UAV payload market
10.12.1. Amazon drone delivery
10.12.2. UAVs can recharge their batteries by perching on power lines

Ordering:
Order Online - http://www.researchandmarkets.com/reports/3251116/
Order by Fax - using the form below
Order by Post - print the order form below and send to

Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct and select the format(s) you require.

Product Name: Autonomous Vehicles Land, Water, Air 2015-2035
Web Address: http://www.researchandmarkets.com/reports/3251116/
Office Code: SCPL9RN1

Product Formats
Please select the product formats and quantity you require:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic (PDF) - 1 - 5 Users</td>
<td>USD 5077</td>
</tr>
<tr>
<td>Electronic and Hard Copy (PDF) - 1 - 5 Users</td>
<td>USD 5383 + USD 57 Shipping/Handling</td>
</tr>
<tr>
<td>Electronic (PDF) - 1 - 10 Users</td>
<td>USD 7618</td>
</tr>
<tr>
<td>Electronic and Hard Copy (PDF) - 1 - 10 Users</td>
<td>USD 7924 + USD 57 Shipping/Handling</td>
</tr>
</tbody>
</table>

* Shipping/Handling is only charged once per order.

Contact Information
Please enter all the information below in BLOCK CAPITALS

Title:  
Mr  [ ]  Mrs  [ ]  Dr  [ ]  Miss  [ ]  Ms  [ ]  Prof  [ ]

First Name: ___________________________________________  Last Name: ________________________________
Email Address: * ______________________________________
Job Title: ____________________________________________
Organisation: _________________________________________
Address: _____________________________________________
City: _________________________________________________
Postal / Zip Code: ____________________________________
Country: _____________________________________________
Phone Number: ________________________________________
Fax Number: __________________________________________

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:

Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer: Please transfer funds to:

- Account number: 833 130 83
- Sort code: 98-53-30
- Swift code: ULSBIE2D
- IBAN number: IE78ULSB98533083313083
- Bank Address: Ulster Bank,
    27-35 Main Street,
    Blackrock,
    Co. Dublin,
    Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: ______________________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:

(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World