
The European Drone Industry

Drone Industry Barometer 2018

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BUZZ IN THE DRONE SECTOR

Increasing numbers of companies are becoming active in the drone sector. The last few years have seen the development of a real market that provides a diverse range of platforms with specific applications. And the sector is constantly becoming more professional. While projects initially focused primarily on the film and photographic sectors, applications are increasingly making inroads into the particular technologies. The trend of the last few years is clear – a constantly growing number of companies have established themselves on the drone market as manufacturers or professional users. Other companies are continually entering the sector and becoming active as manufacturers of hardware and software solutions, for example, or as professional users with drone services.

The market offering encompasses the manufacture (of hardware and software) and use of drones as an efficient tool for specific applications, end-to-end solutions and services such as drone-as-a-service. These all harness the multitude of possibilities offered by drone technology to generate genuine added economic value for customers. Surveying and building inspections, for example, can thus be performed quickly, easily and cost-effectively, because scaffolding, building climbers and the intensive deployment of personnel on site for days on end are no longer required, unlike in conventional processes. The density of the data captured is also far greater, while the outlay is lower overall. What's more, drones can now do all this in a much shorter timeframe.

However, the market still has huge potential. At the present time, this doesn't so much apply to the drone platform itself but rather the growing application options made possible by larger loads and longer flying times. As a result, for instance, more sensors can be used on drones, gathering even more data and even more precise data.

Many potential customers who could use drone technologies to make their workflows much more efficient still have no precise idea about the wide range of possibilities offered by the drone market for the actual working environment.

However, there are also challenges. The regulatory framework still does not reflect what has long been technologically possible using drones. Among other things, flying out of sight is not permitted. Companies are often put off by the complex ordering procedures. Orders where drones are to be used at very short notice often fail due to the weeks taken to process applications for flight permits from the relevant authority. Nevertheless, within the means available, the sector is implementing an increasing number of projects in which drones play a key role.

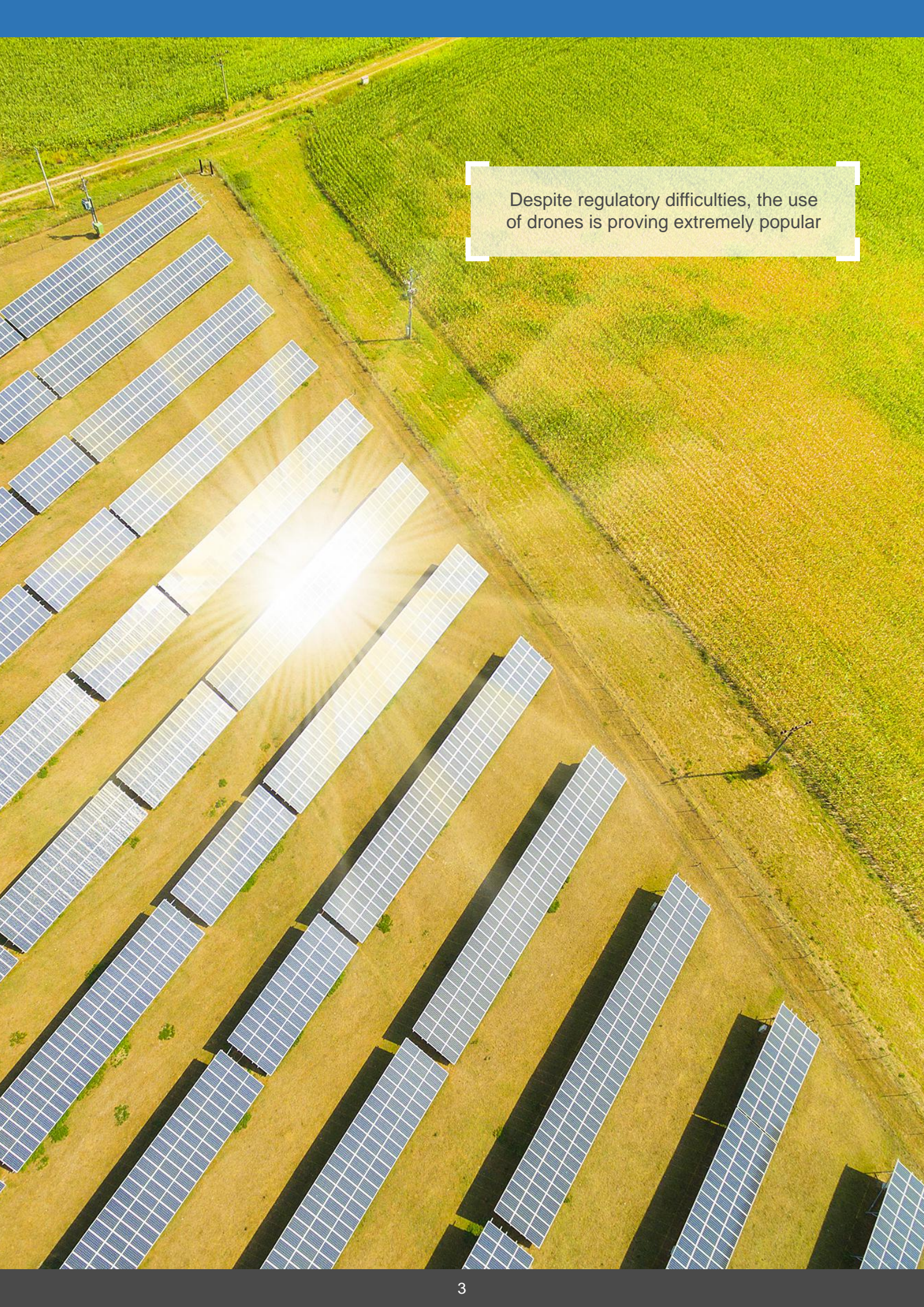
Yet the image of drones among the general public often differs. Apart from being perceived as a toy, they often only make the headlines as a threat to air traffic or as a pizza delivery service. But the reality of professional drone use is completely different and occurs mostly beyond the public gaze. A recent industry survey gives an insight into the commercial market for unmanned flights: The industry barometer was carried out using the explor¹ survey platform on behalf of INTERAERIAL SOLUTIONS and sheds real light on the drone market and the issues of those involved. It highlights challenges but also a very clear trend towards growth and professionalization.

The survey in the first quarter of 2018 canvassed 350 companies, 43% of which are commercial drone users and 38% drone manufacturers. The remaining 19% are universities, research institutes, students, developers, manufacturers of accessories or lawyers.



63.4% of the 350 responses were collected from Germany, 36.6% from other EU member states.

¹ This survey was run by Explori, London, from 13-27 February 2018



Despite regulatory difficulties, the use of drones is proving extremely popular

THE INDUSTRY BAROMETER SURVEY

The potential applications of drones are many and varied. With the ongoing technological advances in aircraft and their components, new applications are constantly being added. It is therefore very interesting to look at commercial users' actual reasons for using drones. At present, 5% of drones are used for

transport and logistics, 19% for trades, emergency services or other unspecified purposes. The figure for data measuring such as pollutants, temperatures or air pressure is slightly lower. One in three drone flights is for monitoring or surveillance, while somewhat more flights involve photo & filming from the air.

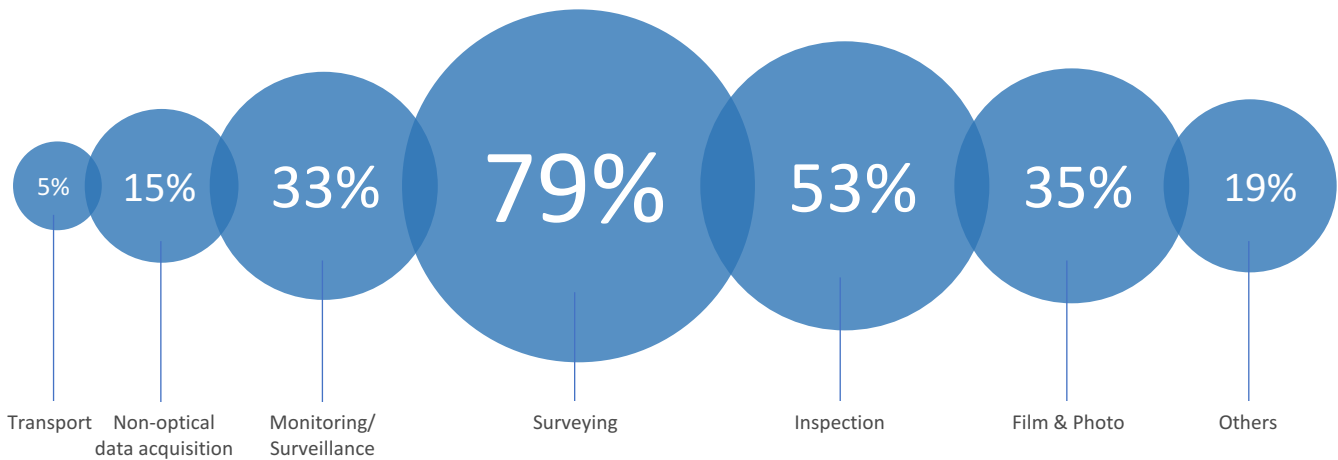


Fig. 1: Use of drones by commercial users

One in two drones operated by the companies participating in the survey are used for inspections. Over half of respondents stated they specifically use drones to inspect and document buildings or infrastructure. And what has already become apparent with the types of commercial users can also be seen

in the specific purposes for using drones – 79% of all drones are used for surveying and cartography.

Commercial surveying users are thus not only the largest group, they also currently fly the most drones by far – eight out of ten – for this purpose alone.

Eight in ten drones are currently used
for surveying jobs



PROFESSIONAL DRONES GAIN IN IMPORTANCE

The increasing importance of applications for professional drones is clearly reflected in the expected growth rates for the next 12 months. From the overall perspective of users and manufacturers, the four key areas of application with the greatest growth rates are police and emergency services, construction, inspecting energy and water installations, and agriculture. Also high up in the rankings are inspecting buildings and surveying. Surveying is way out in front with expected growth of 63%, followed by inspection and agriculture at around half that level. Logistics outside buildings is expected to grow by 10%. Intralogistics – that is to say, the use of drones inside

enclosed buildings – is only 5% at present. A detailed analysis of users and manufacturers produces a very similar picture.

The figures in the various areas of application differ significantly in some cases, but also show similarities. For example, users see a 67% growth rate in surveying, whereas for drone manufacturers this figure is only 62%. In agriculture, the difference is far greater and reveals the biggest gap, with users expecting 24% growth in this area, contrasting with 38% for manufacturers. The situation for inspecting energy and water installations is very similar – users said 27%, manufacturers 34%.

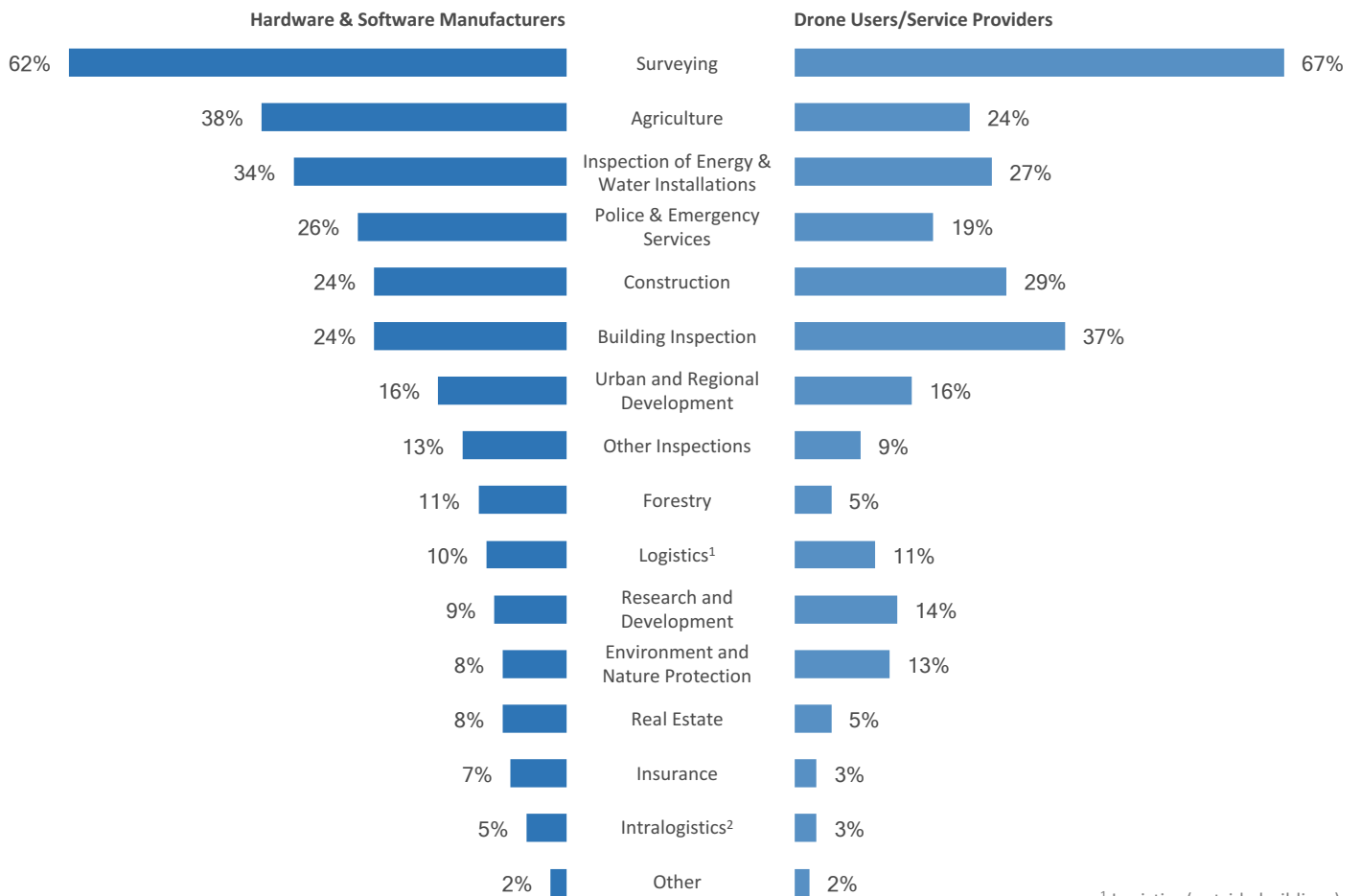


Fig. 2: Areas of application with the greatest growth in the next 12 month

¹ Logistics (outside buildings)
² Intralogistics (inside buildings and building complexes)

The area of application rated higher among users than manufacturers is by far the inspection of buildings. At 13%, this is where assessments of growth rates differ most markedly. drone manufacturers see the greatest potential in areas of agriculture – while users see only 24% growth in this segment, manufacturers rate it much higher at 38%.

There is no doubt that drones will become established in the day-to-day work of surveyors and inspectors. They are the optimum tool for gathering large volumes of highly precise data. It is now up to manufacturers to take on the challenges of data handling, assist with the integration of procedures and offer appropriate packages on the market.

RESOURCES AND PRIORITIES IN THE SECTOR

The key players in the sector are tailoring their activities on the basis of the expected development of the market. The companies surveyed gave responses relating to priorities for using resources in the next 12 months. The survey distinguished between users of drone solutions and their manufacturers. The key areas are software product development,

marketing & sales, hardware product development, staff development, and the finance/funding of companies. The three main factors given very high priority are software product development, marketing & sales, and hardware product development. The companies gave lower rankings to staff development, finance/funding and other areas.

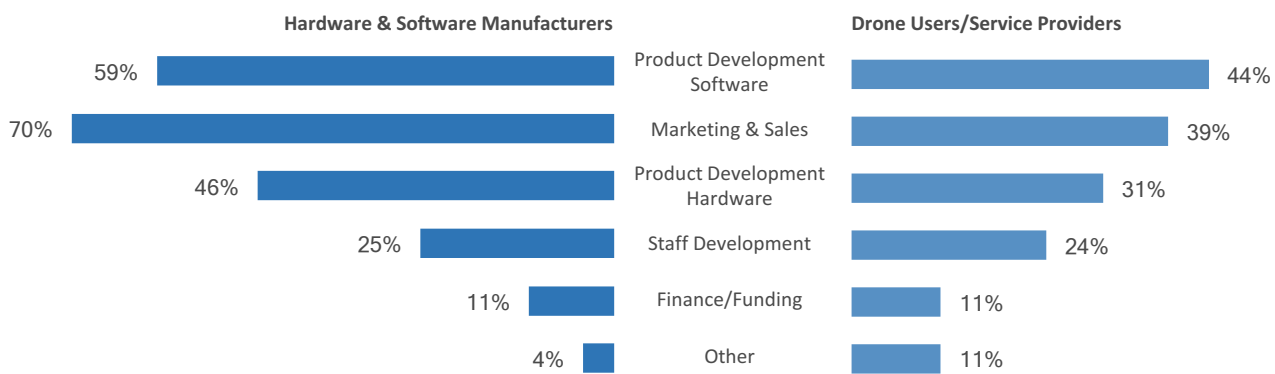



Fig. 3: Priorities for using resources in the next 12 month

While manufacturers and users fundamentally agree on priorities regarding the use of resources, there are significant differences in emphasis.

Some 70% of manufacturers overall see marketing & sales as the highest priority, but the figure for users is only 39%. Software product development was the highest priority for 44% of users, while manufacturers rated this area much higher at 59%.

Users and manufacturers placed hardware product development third, with 31% of users and 46% of manufacturers seeing their priorities in this area in the next 12 months.

Finance and funding were cited by 11% of both manufacturers and users, with around one in ten of each group seeing the need to use resources in this area in the next 12 months

A low-angle photograph of a wind turbine tower against a clear blue sky. A worker wearing a white hard hat and a high-visibility yellow safety vest is seen from the back, looking up at the tower. A small drone is flying in the sky to the right of the tower. The sun is low on the horizon, creating a bright lens flare effect behind the worker's head. In the background, other wind turbines are visible on a flat landscape.

Make or buy? Drone-as-a-Service providers are in great demand.

MARKET DEVELOPMENT

Perceived market development of the last 12 month

Manufacturers and commercial users assessed the development of the market in the last 12 months on an index

with a maximum of ten possible points. The average from the manufacturers surveyed was 6.8 points, and 6.4 points for users. Users and manufacturers rate market development for the next 12 months as much better than for the last 12 months.

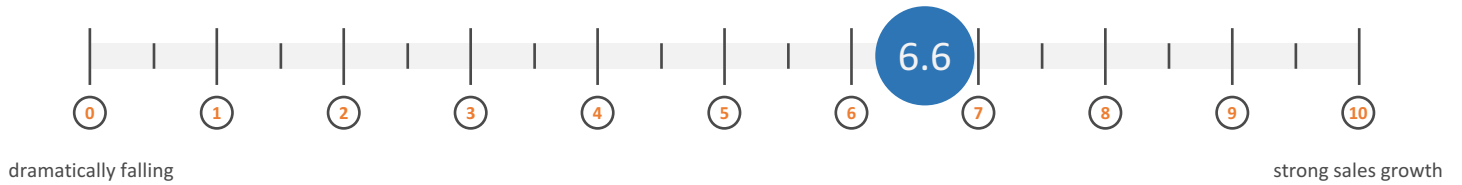


Fig. 4: Assessment of the market development in the last 12 month (Average value. Drone Manufacturer: 6.4, Drone User/Service Provider: 6.8)

Expected market development in the next 12 month

All the respondents are optimistic about the development of the market in the next 12 months. The overall average of their

rankings was 7.3 out of a maximum ten points, with manufacturers of drone solutions rating market development at 7.4 points, 0.2 points higher than users. The assessment by all other market players was even higher at 7.5 points.

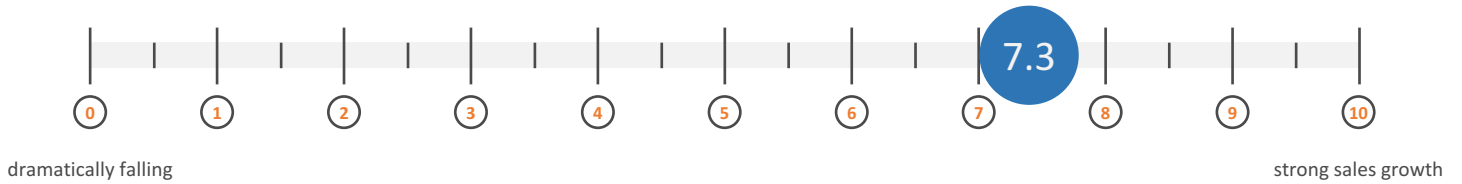


Fig. 5: Expected market development in the last 12 month (Average value. Drone Manufacturer: 7.4, Drone User/Service Provider: 7.2)

Most important market-driving roles

According to respondents, the key drivers in commercially used drones are providers of drone industry solutions (52%) and

drone manufacturers (47%). Software manufacturers offering data evaluation solutions scored 42%, operators/drone-as-a-service 30%, all providers of safety concepts for drones, such as detect & avoid and UTM systems, 17%.

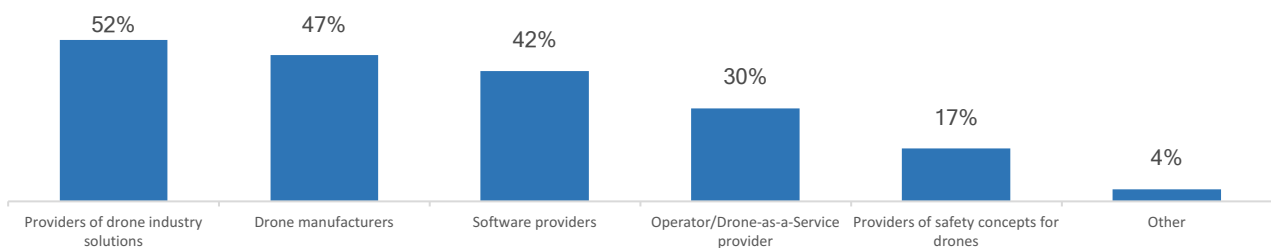


Fig. 6: Key drivers in commercially used drones

SUMMARY


The survey highlights a variety of challenges in using drones, with the difficult legal requirements being mentioned in particular. These range from differing interpretations by regional authorities in Germany and the lack of uniform regulation in Europe to the difficulty in applying directly on the spot for flight permits in different locations.

Above all, the drone industry barometer highlights the trend that surveying shows the highest growth rates and that this is expected to continue in the next 12 months. The main reason for this is that the industry can offer surveying companies optimum, proven and efficient solutions. A great many surveying and inspection jobs also only make any sense if drones are used and offer measurable added economic value.

As the survey shows, all market players foresee significant market growth for commercial drone applications. Manufacturers of special industry solutions identify themselves as key drivers. The focus has thus long ceased to be on technological developments themselves and is instead on the specific applications for customers.

The participating companies also mentioned very concrete goals for the future. Despite the success of drones in surveying, their use in this area is far from being accepted and a matter of course. On this point, the industry needs to show practicable solutions and ask what role digitalization plays for individual surveyors and vice versa and how this changes surveyors' business. This is accompanied by the call to promote the technology as a tool that is part of digitalization in Germany.

Overall, the market players that took part in the survey feel that drones should be presented as a tool for digitalization that is not an isolated solution. They argue that appropriate end-to-end solutions are also necessary, along with industry solutions for special applications. It needs to be possible to automate workflows, particularly the evaluation and processing of the captured data.



In spite of the challenging regulations it still possible to implement sustainable drone operation today.

Drone Industry Insights is a market research and analytics company based in Hamburg, Germany. We provide insights, competitive intelligence and market data for the commercial drone industry. Our consulting services range from operational issues up to cooperate strategy solutions.

INTERAERIAL SOLUTIONS, consisting of an exhibition, forum & Flight Zone, is Europe's leading platform for unmanned aerial systems. It is held in a different location in Germany every year, as part of INTERGEO. The forum deals with current issues from politics, administration, science and industry. The outdoor Flight Zone offers live demonstrations of the various flight systems and thus delivers an all-round experience of products and the market. Next event: Frankfurt/M. October 16th-18th, 2018

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