

April 2016

## Aviation strategy — Remotely Piloted Aircraft Systems

*Impact Assessment (SWD (2015) 262, SWD (2015) 263 (summary)) of a Commission proposal for a Regulation of the European Parliament and of the Council on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and repealing Regulation (EC) No 216/2008 (COM (2015)613)*

### Background

This note seeks to provide an initial analysis of the strengths and weaknesses of the European Commission's [Impact Assessment](#) on Safe Development of Drone<sup>1</sup> Operations. This is one of the two impact assessments accompanying the [proposal](#) on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency (EASA), and repealing Regulation 216/2008<sup>2</sup>. The other impact assessment, which is on the Review of Regulation (EC) 216/2008, was dealt with in a separate briefing [Aviation strategy — European Union Aviation Safety Agency](#).

The proposal was adopted on 7 December 2015 and was referred to the Parliament's Committee on Transport and Tourism. It is part of a wider strategy for aviation adopted by the Commission on the same date. This broader strategy, which spans the period 2015 to 2018, includes planned revisions of certain regulations and implementing acts, guidance documents, fitness checks and studies and evaluations, which cover various areas such as aviation safety, global competitiveness of European airlines and airports, air traffic management, passenger rights and aviation agreements with third countries. The present impact assessment is accompanied by the [Riga Declaration](#) on Remotely Piloted Aircraft<sup>3</sup>, which sets out basic principles for a European regulatory framework for drones.

Drones are also known as Remotely Piloted Aircraft Systems (RPAS), Unmanned Aerial Vehicles (UAVs), and Unmanned Aircraft Systems (UAS)<sup>4</sup>. The use of RPAS has increased in recent years, beyond their initial use by the military, due to technological progress<sup>5</sup> (for example, lighter and stronger materials, software development, data processing and miniaturisation (IA, p. 4)). Drone applications are used in, for example, agriculture, the television and movie industry, and aerial services such as inspections of pipelines, railway lines or electric lines. According to the IA, 'the market for small (civil) drones is expected to evolve rapidly with robust figures in the coming years, estimated between a few hundreds of millions to billions per year' (IA, p. 48). By 2022 Europe will constitute about 25% of the world market of drones. 'More than 400 drone developments across 20 European countries had been identified in 2012 involving companies of all sizes, from global aerospace and defence industries producing large systems for military and state applications to start-ups and SMEs developing small systems for commercial or corporate applications' (IA, p. 102).

In its own-initiative [Report](#) on safe use of Remotely Piloted Aircraft Systems (RPAS), commonly known as unmanned aerial vehicles (UAVs), in the field of civil aviation<sup>6</sup>, the EP called on the Commission 'to ensure that in the

<sup>1</sup> Referred to as unmanned aircraft in the proposal.

<sup>2</sup> Regulation (EU) No 216/2008 of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC.

<sup>3</sup> Adopted in Riga on 6 March 2015.

<sup>4</sup> For more background details on drones (types, regulation on global and EU level, etc.) see EPRS briefing of October 2015 on [Civil drones in the European Union](#).

<sup>5</sup> For more details on the use of drones see EPRS at a glance note of May 2015 on [What if your shopping were delivered by drones?](#)

<sup>6</sup> 2014/2243(INI) adopted on 25 September 2015 (rapporteur: Jacqueline Foster, ECR, UK).

development of any EU policy on RPAS, privacy and data protection guarantees are embedded by making, as a minimum requirement, impact assessments and privacy by design and by default compulsory<sup>7</sup>.

Currently, Member States are responsible for regulating and certifying drones below the 150 kg threshold. The responsibility for regulating civil drones over 150 kg is left to the European Aviation Safety Agency. This division of competence between Member States and EASA (above 150 kg) is considered obsolete, according to the Commission (Expl. Mem., p. 7). Drone regulations and operating rules are in place in Austria, Czech Republic, Denmark, France, Germany, Ireland, Italy, the Netherlands, Poland, Spain, Sweden and the UK. The aviation community in the Riga declaration has stressed the need for a common European regulatory framework for drones and drone services. The Commission responded to the need expressed in the above declaration by including rules on drones in the present proposal on civil aviation safety.

## Problem definition

The IA identifies the following two groups of problems in need of action at the EU level:

- 1) The current regulatory system hampers market development (IA, p. 10);
- 2) Drone operations cause risks which are not adequately addressed by existing rules (IA, p. 13).

**Problem 1:** Regarding **market development problems**, the IA discusses the current system of individual authorisations necessary for drone operations and argues that ‘this approach is not sustainable considering the expected growth in the number of drone manufacturers and operators.’ Moreover, ‘individual authorisations are resource-intensive for the administration and costly for the applicant.’ (IA, p. 12). The drone operators<sup>8,9</sup> are mostly concentrated in those Member States that have already introduced dedicated rules for drones. Most countries with rules regulating drones have based those rules on the conventional aviation approach, sometimes making the drones’ authorisation process relatively complex. A new way for authorising drones is the so called ‘operation centric approach’, which authorises drones in proportion to the risk of a particular (type of) drone operation (currently employed in Finland, Switzerland and Austria<sup>10</sup>) (IA, p. 12). In addition, the IA claims that ‘the difficulty to bring drone services to the market also prevents investment decisions to be made in relation to drone design and manufacturing’. As a result, illegal drone operations could flourish, presenting increased safety risks (IA, p. 13).

**Problem 2:** The IA explains that the **risks of drone operations not addressed by existing aviation rules** concern *safety, security, privacy and data protection, environmental protection and liability* (IA, p. 13).

*Safety risks* include possible collisions with piloted aircraft, whereas *security risks* are associated with possible illegal drone activities, such as surveillance or carriage of weapons. However, the IA does not offer any classification or more detailed analysis of such safety risks, which would be necessary in order to distinguish between civil and military use of drones and, especially, their possible overlapping, dual-use application. The proposal refers to the civil use of drones, so the question arises as to whether the examples given, such as carriage of weapons, could be considered as illegal civil or military use, or both. The IA fails to explain this.

Regarding *privacy risks*, the IA gives a short description with examples that include drones breaching privacy by flying into a private garden. The IA touches upon data protection issues, such as indirect privacy concerns due to the increasing possibilities for deploying data recording and sensing equipment on drones<sup>11</sup>. The IA claims that the proposed new [General Data Protection regulation](#) (ongoing discussions in the Council) aims to solve data protection risks, and that therefore the legal framework at EU level does not need to be adjusted. It also claims that security and privacy and data protection risks are actually already addressed by the existing legislation (without specifying the acts concerned), and that the main problem is its effective enforcement by the competent authorities - for example, the light category of drones could easily be acquired and controlled without identifying the actual operator (IA, p. 15).

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<sup>7</sup> 2014/2243(INI) adopted on 25.9.2015 (A8-0261/2015), Recital 24.

<sup>8</sup> ‘Operator’ means any legal or natural person operating or proposing to operate one or more aircraft or one or more aerodromes (Article 3 of the proposal (COM (2015) 613).

<sup>9</sup> According to the IA, the number of drone operators is increasing rapidly - for example, from 316 authorisations issued by the Polish Civil Aviation Agency (CAA) in 2014, to already more than 1000 authorisations issued by mid-2015.

<sup>10</sup> Operation centric approach in those countries is driven by Joint Authorities for Rulemaking on Unmanned Systems (JARUS), which is a group of national experts working on requirements for unmanned systems (IA, p. 70).

<sup>11</sup> In case the camera or sensor is mounted on another vehicle or a fixed structure, rather than on the drone itself, it is already subject to general privacy and data protection rules (IA, p. 15).

Regarding *environmental risks*, the IA claims that noise is a bigger issue than emissions since most drones use electric power. The IA suggests that 'specific drone noise standards and/or operating restrictions may be needed' (IA, p. 15). In addition, if 'drones are equivalent to traditional aircraft, equivalent noise and gaseous emissions standards are to be applied to contain the environmental impact' (IA, p. 16).

Finally, *liability risks* arise in situations where damage is done to people or property, especially when taking into account the current difficulty to establish the identity of a drone owner or operator. If drones operate outside the liability and compensation regimes applicable in the air transport sector, 'liability and compensation may become an issue' (IA, p. 16). No illustrative examples are given to better explain either environmental or liability risks.

## Objectives of the legislative proposal

Rules on drones are part of the proposal on common rules in the field of civil aviation and establishing EASA, and repealing Regulation 216/2008. In addition to aviation safety, the new proposal aims to contribute to fostering growth and jobs, developing the internal market, strengthening Europe's role in global aviation, increasing competitiveness of the European aviation industry and aeronautical manufacturing, and creating a regulatory framework for the integration of new business models and safe integration of unmanned aircraft (Expl. Mem., p. 2).

Regarding drones, '[T]he *general* policy objective is to enable the development of drones and drone services in a safe, secure and sustainable manner and in full respect of citizens' fundamental rights' (IA, p. 30) .

The IA defines the following *specific* objectives:

- 1) Adopt common rules to create a single market for drone manufacturing and drone operations so that manufacturers may easily place their products on the market and operators may provide drone services to the economy;
- 2) Mitigate the specific risks and problems arising from the use of drones, notably in the fields of safety, security, privacy and data protection, and environment. (IA, p. 30).

Five *operational* objectives reflecting the problems to be addressed are identified.

## Range of options considered

Aside from the baseline scenario, the IA presents two options and a sub-option to solve the problems defined above:

Policy Option 1 – Extension of the conventional EU aviation regulation to all drones (IA, p. 37)

Policy Option 2 – 'Operation centric' EU legislation on drones (IA, p. 38)

Policy Option 2.1 – Sub-option applying EU product legislation to low-risk drone operations (IA, p. 40)

The IA explains that the inclusion of the respective policy choices in the new proposal on basic aviation safety 'would be done by a number of "Essential Requirements", similar to the existing ones for "manned aviation": and cover the three main domains of "Airworthiness", "Operations" and "Air Crew"' (and also include cybersecurity (data link<sup>12</sup>) and environment security (noise and emissions). The three policy options analysed in the IA do not differ in terms of those essential requirements' (IA, p. 43). It goes on to explain that under all three policy options it would be up to EASA to prepare specific opinions on drone operations (as is the case today), based on which the Commission would adopt detailed rules through delegated acts, for example, to reflect the evolution in technology. Regarding industry, '[E]very manufacturer would need to apply for a certificate before placing a drone on the market', while the common rules based on which such certificates will be issued are going to be prepared by EASA (IA, p. 37). Oversight would be ensured by national aviation authorities. Drones and drone services would be mutually recognised throughout the EU (IA, p. 38).

### Policy Option 1: extension of the conventional EU aviation regulation to all drones

Under this policy option, drones would be integrated into the existing EU aviation safety policy framework, in particular Regulation (EC) 216/2008 and other relevant legal instruments, by using the conventional civil aviation approach with the existing certification and licensing procedures (the aspects of those procedures are not explained in the IA). The scope of the current regulation covering drones above 150 kg would be extended to all drones. The essential requirements for manned aviation would be adapted to drone operations, and rules and procedures on

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<sup>12</sup> 'Several security aspects have significant overlaps with safety as both intentional and unintentional interference can exploit the same weaknesses, e.g. securing the data link between the remote pilot and the drone' (IA, p. 57).

certification of aircraft, certification of the operator, and licencing of the pilot would be included in the amended regulation (IA, p. 37).

## **Policy Option 2: 'Operation centric' EU legislation on drones**

Under this policy option, the Commission, with the help of EASA, would develop an operation centric approach to integrate drones in the EU aviation system. As in policy option 1, the scope of the regulation would include all drones (not only above 150 kg), and the same set of essential requirements would be included as well, such as certification of the aircraft, certification of the operator and licencing of the pilot. Regarding the latter two, scalable rules would be applied, reflecting the range of risk profiles in different operations and enlarging the range of compliance demonstration procedures with more flexible instruments, such as operator declarations instead of certificates (IA, p. 39). The key to this policy approach would be *the risk of a particular type of operation*. This approach would enable a distinction to be made between low risk operations and risks of operations equivalent to 'manned' aviation, and thus more proportionate rules would apply<sup>13</sup> (IA, p. 38). The IA does not provide any details on the range of low or high risk operations, nor on what the criteria to determine the two would be, for example, by actually assessing the risks of drone operations.<sup>14</sup>

### **Policy Option 2.1: sub-option applying EU product legislation to low-risk drone operations**

This policy option builds on option 2 by including 'product safety mechanisms used in other sectors in the internal market (including market surveillance mechanisms) for drones used in operations involving the lowest level of risk'. The IA explains that such mechanisms<sup>15</sup> would 'cover the large number of mass produced drones which are offered for sale in retail shops and on the internet, to hobbyists and certain professionals (e.g. photographers)' (IA, p. 40).

According to the IA, 'Option 2.1 differs from Option 2 only in relation to the (mass market of) drones performing low risk operations.' The IA illustrates the product standards covered by option 2.1, highlighting, for example, 'embedded altitude limitation; how to avoid that the blades are dangerous for the user; how to avoid harmful radio interference, etc.' Meanwhile, the operational, pilot and navigation rules would follow the same approach as in policy option 2 for lower risk operations (IA, p. 41). Regarding industry, the drone manufacturer can decide for which market to produce - for example, '[I]f the manufacturer wants to go for the mass production of low risk drones, he must meet the standard laid down for this category and may then place his product on the market without the involvement of the civil aviation authorities' (IA, p. 41). Responsible authorities for enforcement under option 2.1 would be aviation authorities, data protection authorities, police and market surveillance authorities.

Under each policy option the IA explains how it is linked to the revision of the aviation safety Regulation (EC) 216/2008. The IA claims that the majority of stakeholders support a more operation centric approach to drone rules which also takes into account other factors, such as: speed, reliability of the system, place where the operation takes place, type of the operation, and the quality of the drone operator (IA, p. 47). However, no description of such factors is included in the analysis of the offered policy options.

The IA presents a comparison of all three options against the baseline in respect of the following criteria: effectiveness, efficiency, coherence, proportionality. As a result, **option 2.1 is the preferred option** scoring the best on the basis of the above criteria (IA, p. 65).

However, it is unclear why policy option 1 (extend the conventional EU aviation regulation to all drones) was retained for further analysis, since it does not appear to respond to the difficulties identified in applying the existing civil aviation safety rules to drones.

Discarded options include 'Voluntary initiatives', 'Maintaining the current division of tasks between EU/EASA and Member States', 'New division of regulatory tasks on the basis of weight categories', and 'A stand-alone legal regime for drones outside the civil aviation safety Regulation (EC) No 216/2008' (IA, p. 36). While the reasons given for precluding the first three options appear to be plausible, the justification for discarding a stand-alone regime for drones, as was initially envisaged, seems less convincing.

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<sup>13</sup> The IA claims this approach is working in Austria, Finland, Switzerland, United Kingdom and France.

<sup>14</sup> The IA explains that 'precise detailed rules to be developed by EASA and adopted by the Commission would be subject to appropriate separate impact assessment at a later stage' (IA, p. 39). The IA claims that delegated acts to be adopted on the basis of the new proposal would have to establish 'how to assess and mitigate different levels of operational risk' (IA, p. 44).

<sup>15</sup> For example, 'CE marking could indicate conformity of the non-mandatory harmonised standards developed by industry as acceptable means of compliance with the requirements' (IA, p. 41).

## Scope of the Impact Assessment

The IA analyses **economic, social and environmental impacts**, which are further fleshed out as follows:

- 1) *Economic impacts* evaluated include the impacts on the internal market, competitiveness<sup>16</sup>, innovation and administrative burden for drone manufacturers and operators.
- 2) *Social impacts* evaluated include the impact on aviation safety, employment (working conditions and qualifications), security and privacy and family life.
- 3) *Environmental impacts* are briefly mentioned, the IA explaining that 'by stimulating innovative drone activities specific options would contribute, for example, to green electricity production or other measures of energy efficiency improvement'. Sub-option 2.1, followed by options 2 and 1 would be expected to have more positive impacts on the environment than the baseline (IA, p. 58). According to the IA, the 'total impact is assumed to be positive compared to the baseline with no distinction between the options.' However, it has to be noted that increase in air traffic, noise and emissions can also be expected, which could be offset by better environmental performance (for example, most drones have electric engines) (IA, p. 59).

Regarding **impacts on the internal market**, the IA claims that all 'policy options would set the frame for internal market for drone manufacturing and services and hence constitute a huge improvement as compared to the fragmented market.' (IA, p. 48).

Regarding **innovation**, the IA claims that all three options would improve innovation due to setting clear direction for future rules which would 'give more market predictability necessary for long-term [research & innovation] decisions of companies' (IA, p. 51).

Regarding **administrative burden for drone manufacturers and operators**, the IA explains that this stems from the costs of obtaining conformity assessment, operating authorisations, and maintaining such certificates or licences. Common European rules under all three policy options would expand the benefits of a single certification and licensing procedure to all drones and, as a result, significantly reduce administrative costs for businesses (IA, p. 52). Under option 2, '[W]hen the operator falls outside the lowest risk, costs will be kept low by specifying requirements by type of operation. This would in particular reduce costs for SMEs which can very precisely choose the type of drone in function of their particular operational needs.' Taking into account various risks, 'the costs for operators will vary from nil to a couple of thousands euros' (depending on the complexity of the operation) (IA, p. 53). Under option 2.1 there would be a limited recurring cost for the manufacturers (for demonstration of compliance). '[a] one-off negative impact could arise with the introduction of new EU rules notably for those drones which have already been marketed under national laws'. (IA, p. 53)

Regarding **aviation safety**, the IA claims that all options 'aim to guarantee primarily air safety. The difference lies in the efficiency and effectiveness of the safety strategies.' (IA, p. 55). Under policy option 1, however, there is a risk of overburdening the low-risk operations with the existing conventional aviation certification and licensing leading to 'a climate of indifference to rules or to illegal operations'. Option 2 is claimed to better cover all drone related risks (although it increases overall risks) than option 1 due to the application of a risk-based safety framework. Sub-option 2.1 addresses the safety of some categories of light drones (such as mass produced drones for recreational purposes or simple professional operations), and the challenge here is 'to connect product market surveillance .. with the aviation sector oversight' (IA, p. 56).

Regarding **employment**, the IA explains that it is extremely difficult to evaluate the effects on employment due to a lack of respective studies and appropriate baseline (IA, pp. 56-57). Policy option 1 is rated as somewhat negative, as it might be difficult for SMEs to cope with heavy certification procedures. Option 2 and sub-option 2.1 are rated as the most promising 'to kick-start the drone market and hence create employment'. 'Dull, dirty and dangerous operations (such as infrastructure inspections) will be the first areas where the small drones will be used, leading partially to better working conditions but also reducing some jobs e.g. in helicopter operations' (IA, p. 57).

Regarding **security**, the IA explains that concrete means to ensure security could be geofencing<sup>17</sup> or an identification capability. Option 1 is described as being 'more restricted so the potential misuses with security impacts would be less' than under policy option 2 and sub-option 2.1 (IA, p. 58).

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<sup>16</sup> See below under SME test/Competitiveness.

<sup>17</sup> Geofencing is the capability to forbid drones to fly in a particular airspace, for example, airports can be 'geofenced' (IA, p. 22).

Regarding *privacy and family life*<sup>18</sup>, the IA explains that there are no specific substantive rules in the area of privacy and data protection proposed; however, ‘all options would allow for adopting safety measures that would also help in enforcing privacy and data protection rules, in particular identification requirements or geofencing.’ (IA, p. 58).

## **Subsidiarity / proportionality**

The proposal is based on Article 4(2)(g) TFEU, which stipulates that transport is a shared competence between the EU and its Member States. Article 100(2) lays down the possibility for the EU to act in the area of air transport. The IA explains that ‘[o]nly EU basic rules for the whole range of drones, regardless of weight, offer a consistent regulatory framework for drone manufacturing and operations in the EU internal market, and have the ability to overcome the main problems identified in [the IA] report’ (IA, p. 29). In accordance with the Better Regulation guidelines, the IA includes a section on proportionality. The IA explains that policy option 1 scored badly under the proportionality criterion, as it ‘would not allow for significant simplification of heavy procedures under ‘manned’ aviation for drone operations of very low risk’ (IA, p. 63). Policy option 2 and sub-option 2.1 are described as proportional in terms of limiting ‘the burden of this regulation on both public authorities and industry by applying an approach which is proportional to risk and avoids burdensome over-protection’ (IA, p. 63).

[Reasoned opinions](#) on the legislative proposal have been received from the Italian Senate and the Maltese House of representatives. The Italian Senate, in its opinion regarding drones, expresses concerns that pilot licensing and certification does not constitute part of the proposal, thus raising doubts as to its effectiveness in maintaining and improving aviation safety.

## **Budgetary or public finance implications**

The IA gives a general description of the impact on resources of national administrations, EASA and the Commission (IA, p. 53). It considers that, as all three proposed options ‘would lead to drone market opening, there is a risk that the workload for oversight authorities would increase compared to the baseline’. ‘Additional certification activities by EASA would be financed through fees and charges paid by industry’ (IA, p. 54). Another burden for national administrations may result from data protection monitoring. The IA claims that policy option 2.1 ‘would create least costs for national aviation authorities’. This option relies on market surveillance mechanisms, but the IA maintains — perhaps somewhat surprisingly — that assessing ‘if these bodies have adequate resources to cope with new technologies of drones’ goes beyond the remit of this impact assessment (IA, p. 55).

## **SME test / Competitiveness**

SMEs represent more than 80% of the companies involved in the development, manufacturing and exploitation of light drones (IA, Annex VI, p. 102). All three policy options would improve the competitiveness of the EU drone industry, as compared to the baseline scenario, and facilitate access to third country markets (IA, p. 49). Under policy option 1, the IA considers that ‘the EASA certificate is a powerful advantage for the products and operators when entering foreign market’. However, it claims that in case of low-risk drones, ‘a formal certification procedure might be too burdensome in terms of time and cost for EU manufacturers’, making them less competitive on the global market. ‘In particular SMEs not familiar with the requirements of the civil aviation safety system would be deterred from incorporating drone operations into their business processes’ (IA, p. 50). Policy option 2 offers a more proportional way to accommodating for ‘the wide range of operational risks and fast evolving technologies’, thus allowing faster deployment of new technologies and improved competitiveness as a result. Policy option 2.1 ‘seems to be more flexible for industry to make the low-risk drones available on the EU market’. (IA, p. 51)

In addition, the IA explains that ‘no blanket derogations or exemptions can be granted to SMEs and micro-enterprises’ as all drone activities concern safety issues (IA, p. 53).

## **Simplification and other regulatory implications**

The proposal seeks to replace the existing Regulation (EC) No 216/2008. The IA indicates that ‘[T]he present initiative does not relate to the adoption of new substantive rules concerning’ privacy, data protection and liability’ (IA, p. 35). For example, regarding liability problems, the IA says that Regulation EC/785/2004 on minimum insurance requirements for air carriers and aircraft operators provides sufficient insurance cover and protection for drone

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<sup>18</sup> For more details, see the DG IPOL in-depth analysis of June 2015, [‘Privacy and Data Protection Implications of the Civil Use of Drones’](#).

operations as well. The IA mentions that regarding aviation safety, '[R]egulation (EC) 216/2008 is completed by other legal instruments, where the most relevant in the safety area are: (1) rules of the air, which regulate how aircrafts can safely fly (based on the [Single European Sky](#)<sup>19</sup>); (2) rules on accident investigation; (3) rules on incident reporting – [where we] can...learn from safety lessons drawn from reported incidents.' (IA, pp. 90-91).

## Quality of data, research and analysis

The Commission has relied on several external studies in drafting the impact assessment: namely, a study analysing the regulatory framework from the perspective of [integration of light RPAS in the European airspace](#), a study on [privacy and data protection risks](#), and a study on [insurance aspects of RPAS](#) (IA, p. 75). These studies have only been partly used in developing the policy options which, for example, do not analyse the integration of drones in the European airspace at all.

The analysis of impacts is mostly qualitative, and the IA explains that it is difficult to access data and make assumptions in this new area of civil use of drones, as 'there are hardly any official reports quantifying the impact' (IA, p. 47). Nevertheless, the number of studies and the reference material available is impressive, yet is only partly used for the purpose of assessing possible impacts.

Existing problems are described rather broadly, making it difficult to immediately gain a precise and informative insight into their implications. For example, under the problem definition the description of operational limitations under individual authorisations is very limited and they are merely mentioned in brackets; better explanation of those limitations would give a deeper understanding of the current problems in drone use. The section on impacts tends to somewhat repeat the same information already provided both under the problem definition and the description of the policy options, without giving sufficient insight into what practical measures those options actually entail. This approach appears to be rather haphazard and potentially misleading to the reader.

The examples given do not always facilitate a better understanding of the current issues, as evidenced by, for example, the mentioning of the fact that most drones in Japan are used in agriculture. The defined problem is not convincingly illustrated in the IA, and some examples can be unclear, for example, descriptions of drones carrying bombs as payload<sup>20</sup>. The proposal discusses civil use of drones, but the IA fails to explain the possible overlapping of military and civil uses of drones.

The IA claims that '...rules will need to lay down the precise criteria to distinguish between "low-risk" and "high-risk" operations. These criteria should be developed in the Commission acts because they are likely to be highly dependent on technological development and market developments which cannot be easily foreseen. This would not be possible if those criteria are fixed in the basic aviation safety Regulation' (IA, p. 45). However, the IA does not give even a general idea as to what those criteria might entail.

## Stakeholder consultation

The IA states that the stakeholders concerned by the proposal are: EU citizens, drone manufacturers and operators, Member States (civil aviation, data protection, and law enforcement authorities), industry in general, and airspace users (IA, p. 24). Under policy option 1, the IA mentions other groups of stakeholders, such as software developers and maintenance companies, as well as training providers and inspectors (IA, p. 37). A public consultation was run from 14 August to 25 October 2014, published on 'Your Voice in Europe'; 253 individuals (23%) and organisations replied to the on-line public consultation on RPAS. The organisations mainly concerned RPAS operators (21%), R&D organisations & consultancy (18%), aircraft design, manufacturers and maintenance (13%), aviation associations (8%) and national regulators (6%) (IA, p. 80).

The IA refers to the stakeholder consultation, and the views expressed therein, throughout the report; nonetheless, it does not consistently provide a breakdown of which groups were expressing which views on a given topic.

## Monitoring and evaluation

The IA includes a chapter on monitoring and evaluation (IA, p. 67) that also determines monitoring indicators. These indicators include drone certification (EASA), drone movements (Eurocontrol), overview of national lists of approved operators (national administrations), drone incidents and accidents (accident and occurrence reports), size of the EU

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<sup>19</sup> For more details see EPRS briefing of April 2015 on [Single European Sky](#).

<sup>20</sup> Payload is the technical term used to describe all things that a drone can carry, for example, cargo, cameras or sensors (IA, p. 14).

drone market and its growth rate (IA, p. 69). Evaluation of the efficiency of European rules, as is the case with all civil aviation rules, is done by the Commission and EASA, and this process, called ‘Article 62 Panel Evaluation’<sup>21</sup>, is organised every 5 years (IA, p. 68).

## Commission Regulatory Scrutiny Board

The Commission’s Regulatory Scrutiny Board (RSB)<sup>22</sup> delivered its first negative opinion on a draft version of the IA, dated 14 October 2015, indicating a number of serious shortcomings which needed improvement. The RSB’s second positive opinion, adopted on 5 November 2015<sup>23</sup>, highlighted the need to further develop on some significant aspects: notably to more extensively describe possible enforcement problems of the policy options and to better present a breakdown of the views of the different categories of stakeholders. The IA does not appear to have fully dealt with these shortcomings in the final version.

## Coherence between the Commission's legislative proposal and IA

The IA clearly describes the preferred way forward (pp. 65-67) and explains that ‘[t]he preferred policy option would only provide the regulatory framework that would need to be followed by more detailed rules and standards’ (IA, p. 67). In this sense, the IA and the part of the proposal dealing with drones appear to correspond.

However, it should be noted that there are some provisions in the proposal concerning essential requirements, such as design, production, maintenance and operation of unmanned aircraft, whose link to the IA is not immediately clear, the IA discussing essential requirements rather from the point of view of safety, security and environmental performance, airworthiness, drone operations and air crew.

## Conclusions

The main strengths of the IA are its solid information base, including the three supporting studies, as well as the presentation of the results of the public consultation throughout, and the examination of options against the proportionality criterion according to the new Better Regulation guidelines.

However, the range of options considered appears to be rather limited, and descriptions are so general that it is very difficult to assess and compare them; for example, the criteria for categorising drone risks, and the question of how the certificates will be issued and by whom, are not explained at all. The IA reiterates throughout that several issues, such as drone risk categorisation, or factors defining an operation-centric approach to regulating drones, will be topics for new impact assessments accompanying future delegated acts. The absence of some more insight concerning the likely content of the measures to be adopted through delegated acts or for the use of such delegated acts is regrettable. Nevertheless, the categorisation of risks (what is a high or low risk operation) could have been explained in more detail, as not every aspect of drone rules is likely to depend only on technological development.

A better illustrated and explained problem description, as well as more detailed descriptions of the policy options, would have contributed to better and clearer understanding of the impacts of the new proposal, especially for a reader who may not be familiar with existing civil aviation safety rules.

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*This note, prepared by the Ex-Ante Impact Assessment Unit for the European Parliament's Committee on Transport and Tourism (TRAN), analyses whether the principal criteria laid down in the Commission's own Impact Assessment Guidelines, as well as additional factors identified by the Parliament in its Impact Assessment Handbook, appear to be met by the IA. It does not attempt to deal with the substance of the proposal. It is drafted for informational and background purposes to assist the relevant parliamentary committee(s) and Members more widely in their work.*

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<sup>21</sup> Article 62 of the Basic Regulation 216/2008 requires the Management Board (established in Article 33) of the Agency to commission periodically an independent external evaluation of the implementation of the Regulation. (EASA Article 62 Panel Evaluation Final report, p. 3)

<sup>22</sup> According to the new Better Regulation guidelines, the Impact Assessment Board is now called the Regulatory Scrutiny Board.

<sup>23</sup> Neither of the RSB opinions is publicly available on the Commission website at the time of writing.