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Passenger Air Taxi Services: An Assessment of the Current European Union Rules on Consumer Protection for Passengers

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Abstract
The Paris Olympics and Paralympics are scheduled to take place between 26 July and 8 September 2024, whereby electric vertical take-off and landing aircraft are anticipated to take to the skies to offer a new mobility solution to spectators of the Games. This will allow paying members of the public to move between different points within the Paris region akin to an on-demand taxi service, but through the air; passenger air taxi services (PATS). These passengers, as consumers, will have certain rights and duties under European Union law. To determine the level of protection afforded to these air passengers, a full assessment of Regulation (EC) No 261/2004 is required. As the revision of the Regulation is currently on the European Commission's agenda, it is also important to consider its revision in light of PATS, whereby new technology, emerging business practices, changing customer behaviour and societal expectations for the level of legal protection of PATS users must be considered. This article will, therefore, assess the current version of the Regulation, in light of the interpretation from the European Court, to see whether it applies to PATS and, if so, whether it is suitable or if specific amendments need to be added to the planned revised Regulation.

Keywords Passenger Air Taxi Services (PATS) · Unmanned Aircraft Systems (UAS) · Consumer protection · Electric Vertical Take-Off and Landing (eVTOL)

1 Introduction: The Emergence of Flying Air Taxi Services

The Paris Olympics and Paralympics are set to take place between 26 July and 8 September 2024 in the city of lights. It is predicted by the city's tourism office that up to 15.9 million people will visit the Paris region during these dates.[1] Due to the increased volume of people, it is not surprising that Groupe ADP, the French Civil Aviation Authority (DGAC) and the Paris Region have taken steps to ensure efficient transportation services in, out and within the capital. One of these steps is the inclusion of Volocopter, a German-based electric vertical take-off and landing (eVTOL) aircraft manufacturer, as a mobility solution provider where it plans to offer passenger air taxi services (PATS) during the global competition. If this materialises, Paris will be the first city in Europe, and even possibly the world, to offer passenger eVTOL services.

Volocopter will use its VoloCity aircraft, which is a multicopter eVTOL[2] aircraft that has 18 rotors (vertical and horizontal) and 2 seats,[3] capable of transporting one pilot and one paying passenger. It was announced on 20 June 2023 at the Paris Airshow that five aircraft are planned to fly passengers between five vertiport sites with about two flights an hour per aircraft (ca. 80 – 100 flights a day) during the Games.[4]

[1] Graham Dunbar and John Leicester, 'A Guide to How Paris Will Welcome Fans and Stage 32 Sports at the First Post-Pandemic Olympics, AP News, 26 July 2023, https://apnews.com/article/paris-olympics-tickets-transport-accommodation-climate-b6b9798ea2fc65995cb3e4c6c96462f0#:~:text=pre%2Dpandemic%20levels.-,The%20city's%20tourism%20office%20predicts%20that%20up%20to%2015.9%20million,the%20Olympics%20and%20Paralympic%20Games.

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[2] *See*, below, Section 3.1.

[3] Volocopter, 'Built for Megacities Worldwide', https://www.volocopter.com/solutions/volocity/. It is anticipated that, as battery technology advances, the configuration can be changed to take more passengers.

[4] George Downs, 'Will Flying Taxis Get to the 2024 Olympics in Time?', 22 June 2023, Wall Street Journal, https://www.youtube.com/watch?v=m75HjVs0gsM. *See*, Autorité environnementale, 'Avis délibéré de l'Autorité environnementale sur l'aménagement d'un vertiport sur la Seine, quai d'Austerlitz à Paris (75)', n° 2023–46, 7 September 2023.

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This plan depends, however, on the VoloCity aircraft gaining certification of airworthiness in time, which is expected but by no means guaranteed.[5] This will include three connection routes (point A to B):

- Paris-Charles de Gaulle Airport and Paris-Le Bourget Airport
- Vertiport of Austerlitz barge and Paris Heliport
- Paris Heliport and Airfield of Saint-Cyr-l'École (Versailles)

These connection routes will facilitate mobility between 2 Parisian airports, as well as moving people between different populated areas. Additionally, tourist round-trip flights will be offered (point A to A):

- Paris Heliport
- Paris Le Bourget

These two services will allow people to experience eVTOL aircraft. While these services do not serve direct mobility needs, they can increase societal acceptance because they expose people to this new technology and its possible social utility, and they also offer Volocopter publicity and additional revenue streams (Fig. 1).

In the Paris area, ADP Groupe owns and operates Charles de Gaulle, Orly and Le Bourget airports. As a result, it was predictable that such routes would involve these transportation locations.

These services will be available to the general public as an addition to the existing public transportation systems in Paris. However, due to the single-passenger seat configuration, this will not have any tangible impact on the existing public transport infrastructure and will, instead, be a showcase of the involved parties and its technology, as well as being a niche tourist experience.

The ticket price has not yet been announced by Volocopter, with estimates around the EUR 100 mark, but the long-term aspiration of Volocopter is to offer passengers between EUR 3–4 per km. This will not be the case during the Olympics, whereby Volocopter has stated that flights may be subsidised due to the price being significantly higher.[6] Due to these proposed flights being linked to the Olympics, with the strong involvement of other parties, the freedom to set prices by the operator may be impacted through contracts and Memorandum of Understandings (MOU).

The flights will take place below 500m, but should not be audible by most people at ground level in urban environments due to the technology and existing background noise.[7] If the levels of societal acceptance grow and as business cases become more viable, the plan is to increase the coverage to the whole Paris region within the next decade.[8] As PATS become more integrated into the transport system – post-Olympics – its role in supplementing other mobility services is expected to be more prominent.

All places of departure and arrival will be specially adapted areas called 'vertiports'.[9] The construction of these sites began in the summer of 2023 and they are all expected to be completed in 2024 for commercial use. ADP Groupe is also the operator of Pontoise Vertiport.

> "Skyports and Groupe ADP launched the European vertiport terminal testbed in November 2022. The site, located 40km northwest of Paris, France, plays an important part in the development of the AAM industry and will be used by Skyports and leading vehicle manufacturers for testing and demonstrating flight operations, ground infrastructure, technology integration, and the passenger experience."[10]

This vertiport was designed and developed by both Skyports and Groupe ADP, and will be a test bed to prepare the experimentation planned for 2024 and the upcoming launch of passenger services. The vertiport is 115 m^2, which is larger than just the dedicated space for eVTOL aircraft landing, as the passenger experience is also considered in the design.[11] This will include security, check-in, passenger dwell time and aircraft boarding.[12] The knowledge gained at Pontoise will be used for the 5 vertiports.

[5] *See*, EASA, 'Introduction of a Regulatory Framework for the Operation of Drones — Enabling Innovative Air Mobility with MVCA, the Initial Airworthiness of UAS Subject to Certification, and the Continuing Airworthiness of those UAS Operated in the 'Specific' Category'', Opinion No 03/2023.

[6] George Downs, 'Will Flying Taxis Get to the 2024 Olympics in Time?', 22 June 2023, Wall Street Journal, https://www.youtube.com/watch?v=m75HjVs0gsM.

[7] Groupe ADP, 'First Integrated Vertiport Inaugurated in Paris, Epicentre of Sustainable Advanced Air Mobility (AAM) in Europe', https://presse.groupeadp.fr/first-vertiport-pontoise/?lang=en.

[8] Volocopter, 'Groupe ADP & Volocopter at Forefront of Electric Urban Air Mobility: A World First in Summer 2024', https://www.volocopter.com/newsroom/volocopter-paris-routes/.

[9] *See*, below, Section 3.3. *See*, for a detailed discussion on the definition of 'vertiport' and related other terms, Benjamyn I. Scott, 'Vertiports: Ready for Take-off … And Landing Vertiports: Ready for Take-off … And Landing', 87(3) Journal of Air Law and Commerce 503–530 (2022).

[10] Skyports, 'Our Vertiports', https://skyports.net/vertiports/.

[11] Groupe ADP, 'First Integrated Vertiport Inaugurated in Paris, Epicentre of Sustainable Advanced Air Mobility (AAM) in Europe', https://presse.groupeadp.fr/first-vertiport-pontoise/?lang=en.

[12] *Ibid*.

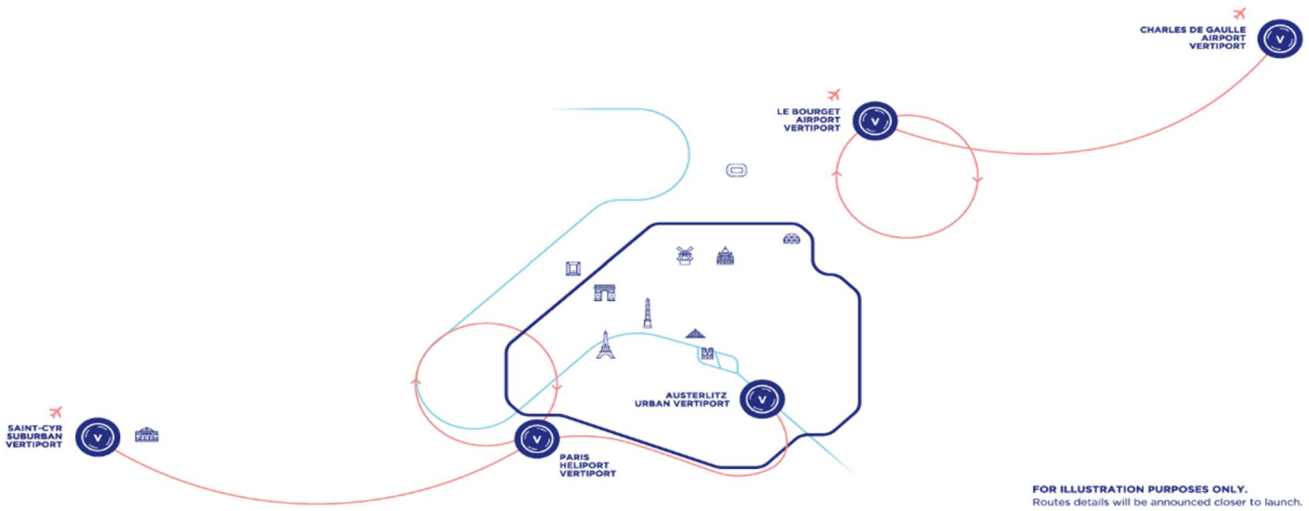

Fig. 1 VoloCity's Routes in Paris (Volocopter, 'Groupe ADP & Volocopter at Forefront of Electric Urban Air Mobility: A World First in Summer 2024', https://www.volocopter.com/newsroom/volocopter-paris-routes/.)

Volocopter is not alone in promising to offer commercial PATS. It has been reported that over 750 different eVTOL concepts have been registered worldwide.[13] While not all of these will come to fruition, several eVTOL aircraft which could be used for PATS are already in the advanced stages of certification.[14] For example, AutoFlight announced on 22 June 2023 that it plans to conduct piloted experimental flights during the 2024 Olympics using its Prosperity I aircraft, which is an eVTOL designed to carry up to four passengers and one pilot.[15] The aircraft uses 10 rotors for lift during take-off and landing (vertical), and 3 rotors for propulsion during its winged flight stage (horizontal).[16] AutoFlight is also working closely with Groupe ADP, whereby they signed an MoU[17] to operate flights from the Pontoise Vertiport during the 2024 Games.

There are also plans to include PATS during the 2026 Winter Olympics in Milan, which could also connect the city (Milan) with other non-urban areas (e.g. Cortina in the mountains) after the Games.[18] There are also examples outside of the Paris Olympics context. For example, in November 2022, Archer and United Airlines announced the first commercial eVTOL route In the United States. The chosen route is between Newark Liberty International Airport to Downtown Manhattan Heliport and should take around 10 min.[19]

PATS is not the sum of all eVTOL activities. For example, beyond taxiing passengers, Volocopter is also collaborating with air rescue operator, ADAC Luftrettung to deploy eVTOL aircraft in emergency medical services[20] and the company is also developing a cargo unmanned aircraft system.[21] PATS are also a part of the wider innovative air

[13] Otilia Drăgan, 'Over 750 eVTOL Concepts Have Been Registered to This Day Worldwide', Auto Evolution, 11 January 2023, https://www.autoevolution.com/news/over-750-evtol-concepts-worldwide-registered-to-this-day-208133.html.

[14] *See*, EASA's activities on the Certified Category under Rulemaking Task 0230, EASA, 'European Plan for Aviation Safety (EPAS) 2023–2025', 17 January 2023.

[15] Michael Doran, 'AutoFlight Plans Experimental eVTOL Flights For Paris Olympics Next Year', Simple Flying, 22 June 2023, https://simpleflying.com/autoflight-paris-air-show-2024-experimental-evtol-flights/.

[16] Autoflight, 'Prosperity I Design Specifications', https://autoflight.com/assets/uploads/files/autoflight-prosperity-i-specs-062023.pdf.

[17] Michael Doran, 'AutoFlight Plans Experimental eVTOL Flights For Paris Olympics Next Year', Simple Flying, 22 June 2023, https://simpleflying.com/autoflight-paris-air-show-2024-experimental-evtol-flights/.

[18] Otilia Drăgan, 'Milan to Launch Pioneering Flying Taxi Service for the 2026 Winter Olympics', Auto Evolution, 19 January 2023, https://www.autoevolution.com/news/milan-to-launch-pioneering-flying-taxi-service-for-the-2026-winter-olympics-208709.html#:~:text=Milan%20will%20host%20the%20Winter,transportation%20over%20the%20next%20decades.

[19] Archer, 'Archer And United Airlines Announce First Commercial Electric Air Taxi Route In The US: Downtown Manhattan To Newark Liberty International Airport', 10 November 2022, https://www.archer.com/news/archer-and-united-airlines-announce-first-commercial-electric-air-taxi-route-in-the-us-downtown-manhattan-to-newark-liberty-international-airport.

[20] Future Transport News, 'ADAC Luftrettung to Collaborate with Volocopter', 23 June 2023, https://futuretransport-news.com/adac-luftrettung-to-collaborate-with-volocopter/.

[21] Volocopter, 'VoloDrone Our Heavy-Lift Solution', https://www.volocopter.com/solutions/volodrone/.

mobility (IAM)[22] topic, where unmanned aircraft systems[23] are also relevant, which offer several services such as cargo delivery, surveillance, mapping and telecommunications.

IAM services are argued to provide solutions to people's real needs by reducing travel time, increasing mobility, reducing pollution due to electrification and serving previously underserved areas. As a result, IAM services will involve, *inter alia*, the commercial transportation of passengers by air. Therefore, it becomes relevant to ask what the levels of protection afforded to these consumers are when contracting with PATS providers under the current legal system and whether it needs to be amended to suitably regulate this future market.

2 Consumer Protection for Air Passengers in the European Union

Council Regulation (EEC) No 295/91 created the basic level of consumer protection for air passengers.[24] However, due to developments in the aviation sector, the EU concluded that the standards of protection set by Regulation 295/91 should be raised to "strengthen the rights of passengers and to ensure that air carriers operate under harmonised conditions in a liberalised market."[25] As a result, Regulation 295/91 was repealed and replaced.[26] Regulation (EC) No 261/2004 (the Regulation) came into force on 17 February 2005 providing a high level of protection for passengers,[27] in case of denied boarding, flight cancellation and long delay by setting out the rules for compensation, reimbursement or re-routing, and right to care.

It is not the purpose of this paper to give a detailed overview of the Regulation nor to analyse its articles generally, but it is important to provide a basic summary to allow for a more detailed analysis of the Regulation's applicability and application to PATS.[28] The Regulation applies to all scheduled and non-scheduled[29] flights departing from an EU Member State for both EU and non-EU air carriers, and to flights arriving in an EU Member State if the flight is operated by an EU carrier unless they receive compensation and assistance in that third country.[30] Air carriers are exempt from paying compensation if the delay or cancellation is caused by 'extraordinary circumstances' "which could not have been avoided even if all reasonable measures had been taken",[31] such as severe weather, security risks, political instability or strikes unrelated to the airline.[32] In case of any issues with a flight that falls under the scope of the Regulation, passengers should immediately

[22] The term 'Innovative Air Mobility' has been defined by the European Aviation Safety Agency as "the safe, secure and sustainable air mobility of passengers and cargo enabled by new-generation technologies integrated into a multimodal transportation system." EASA, Introduction of a Regulatory Framework for the Operation of Drones — Enabling Innovative Air Mobility with Manned VTOL-Capable Aircraft, the IAW of UAS Subject to Certification, and the CAW of those UAS Operated in the 'Specific' Category, NPA 2022-06 (2022), at 19.

[23] The term 'unmanned aircraft system' is defined as "an unmanned aircraft and the equipment to control it remotely". Commission Implementing Regulation (EU) 2019/947 of 24 May 2019 on the Rules and Procedures for the Operation of Unmanned Aircraft, OJ L 152, 11 July 2019, p. 45–71, Art. 2(1). The term 'unmanned aircraft' is defined as "any aircraft operating or designed to operate autonomously or to be piloted remotely without a pilot on board". Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91, OJ L 212, 22 August 2018, p. 1–122, Art. 3(30).

[24] Council Regulation (EEC) No 295/91 of 4 February 1991 Establishing Common Rules for a Denied-Boarding Compensation System in Scheduled air Transport, OJ L 36, 8 February 1991, p. 5–7: "Whereas common action in the field of the protection of the interests of air transport users is required, in order to ensure a well-balanced development in the light of the radically changing environment in which air carriers have to operate.".

[25] Regulation (EC) No 261/2004 of the European Parliament and of the Council of 11 February 2004 Establishing Common Rules on Compensation and Assistance to Passengers in the Event of Denied Boarding and of Cancellation or Long Delay of Flights, and Repealing Regulation (EEC) No 295/91, OJ L 46, 17 February 2004, p. 1–8, Recital 4.

[26] The EU's is competent to produce secondary EU legislation on 'consumer protection' pursuant to Article 169 of the Treaty on the Functioning of the European Union (TFEU). The EU is further competent to produce secondary legislation on air transport pursuant to Article 100(2) of the TFEU. Consolidated version of the Treaty on the Functioning of the European Union, OJ C 326, 26 October 2012, p. 47–390.

[27] Regulation (EC) No 261/2004, Recital 1: "Action by the Community in the field of air transport should aim, among other things, at ensuring a high level of protection for passengers. Moreover, full account should be taken of the requirements of consumer protection in general." Providing a high level of protection for passengers has also been confirmed in numerous cases from the European Court, such as the early and seismic *Sturgeon* case in 2007, to more recent examples such as the 2022 *NC v. Compania* case. C-402/07, *Sturgeon v. Condor Flugdienst GmbH*, at 44, 49 and 60; and C-229–22, *NC v. Compania Naţională de Transporturi Aeriene Tarom SA*, at 3.

[28] *See*, for a recent analysis of the Regulation, Cyril-Igor Grigorieff and Dimitri de Bournonville, 'Le droit des passagers aériens dans l'Union: bientôt 20 ans! Analyse et perspectives', 300 *Journal de Droit Européen* 282–288 (2023).

[29] Regulation 261/2004, Recital 5.

[30] *See*, for an overview of air passenger consumer protection rules around the world, ICAO, 'Consumer Protection Rules', https://www.icao.int/sustainability/Pages/ConsumerProtectionRules.aspx.

[31] Regulation 261/2004, Art. 5.

[32] *Ibid*, Recital 14.

contact the airline to seek the required assistance and compensation. If the airline does not adequately address the situation, passengers can file a complaint with the relevant national enforcement body (NEB)[33] or bring a claim to the relevant national court. In addition to enforcement, the Regulation has been referred over 70 times to the Court of Justice of the European Union (the European Court) for interpretation. This has resulted in the Regulation being referred to as the most litigated piece of EU secondary legislation.[34] As a result, the Regulation cannot be read in isolation and the interpretation provided by the European Court is extremely important.[35]

The Regulation plays a vital role in protecting the rights of air passengers, ensuring they are provided with appropriate and uniform support in case of denied boarding, cancellation and delay. Despite this, there have been calls for its revision.[36] The European Commission adopted a revised proposal of the Regulation on 13 March 2013.[37] Further, on 5 February 2014, the European Parliament added several measures in favour of air passengers to the European Commission's proposal.[38] However, the revision was put on hold for several years pending the resolution of the dispute between Spain and the United Kingdom over the inclusion of Gibraltar's airport in the Regulation.[39] While a resolution did not come, Brexit resulted in the UK withdrawing its membership from the EU and, thus, placing Gibraltar's airport outside the territorial scope of the EU and, consequently, outside the scope of the Regulation. As a result, the file on the revision of the Regulation could be re-opened. On 12 October 2022, the European Commission published its Work Programme for 2023 and the revision of the Regulation was listed in Annex III as a Priority pending proposals.[40] Due to this, this paper will take a proactive approach by commenting on the existing text within the specific context of PATS, to support the revision process.

3 Scope of the Regulation

For the Regulation to apply to cases of denied boarding, cancellation and delay experienced by an air passenger, certain criteria must be met. The criteria are set out in the Regulation and must be assessed to determine whether the Regulation applies to PATS. Therefore, this section will look at the scope of the Regulation and determine if it can be applied to PATS.

3.1 Aircraft

The Regulation centres around air transport,[41] which means – in practical terms – the movement of people

[33] *Ibid*, Art. 16.

[34] *See*, as an example of such claim, Pablo Mendes de Leon, *Introduction to Air Law*, Eleventh Edition, (Wolters Kluwer, 2022), at 308, fn 3.

[35] *See*, for European Commission guidance on interpretation, European Commission, Commission Notice — Interpretative Guidelines on Regulation (EC) No 261/2004 of the European Parliament and of the Council Establishing Common Rules on Compensation and Assistance to Passengers in the Event of Denied Boarding and of Cancellation or Long Delay of Flights and on Council Regulation (EC) No 2027/97 on Air Carrier Liability in the Event of Accidents as Amended by Regulation (EC) No 889/2002 of the European Parliament and of the Council, OJ C 214, 15 June 2016, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016XC0615%2801%29; and European Commission, Commission Notice — Interpretative Guidelines on EU Passenger Rights Regulations in the Context of the Developing Situation with Covid-19, C(2020) 1830, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=OJ:JOC_2020_089_I_0001.

[36] *See*, for a recent discussion on updating the Regulation, Delphine Defossez, 'Endangering Passengers' Rights and Going Against the International Trend?', 91 *Journal of Air Transport Management* 1–17 (2021). The Regulation has been revised once to address linguistic differences. *See*, OJ L 119, 7.5.2019, p. 202–202 (DE, LV, PL, PT, SL) and OJ L 119, 7.5.2019, p. 202–203 (HR, HU).

[37] European Commission, Proposal for a European Parliament and Council Regulation amending Regulation 261/2004 Establishing Common Rules on Compensation and Assistance to Passengers in the Event of Denied Boarding and of Cancellation or Long Delay of Flights and Regulation 2027/97 on Air Carrier Liability in Respect of the Carriage of Passengers and Their Baggage by Air, COM(2013) 130, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52013PC0130. *See*, for a discussion on the 2013 text, Thomas van der Wijngaart, John Balfour and Peter Macara, 'European Union: Air Passenger Rights Revisited—European Commission Publishes Proposal For Amendment Of Regulation 261/2004', 21 March 2013, https://www.mondaq.com/uk/aviation/228496/air-passenger-rights-revisited--european-commission-publishes-proposal-for-amendment-of-regulation-2612004.

[38] European Parliament, Legislative resolution of 5 February 2014 on the proposal for a regulation amending Regulation 261/2004 and Regulation 2027/97, 2013/0072 (COD), https://www.europarl.europa.eu/doceo/document/TA-7-2014-0092_EN.html?redirect.

[39] European Parliament, 'Revision of Regulation 261/2004 on Air Passenger Rights and of Regulation 2027/97 on Air Carrier Liability in Respect of the Carriage of Passengers and their Baggage by Air', https://www.europarl.europa.eu/legislative-train/theme-deeper-and-fairer-internal-market-with-a-strengthened-industrial-base-services-including-transport/file-common-rules-on-compensation-to-passengers.

[40] European Commission, Commission Work 2023 Programme: A Union Standing Firm and United, COM (2022) 548 Final. *See*, European Commission, '2023 Commission Work Programme – Key Documents', https://commission.europa.eu/publications/2023-commission-work-programme-key-documents_en. It was also listed in the 2022 programme, European Commission, '2022 Commission Work Programme – Key Documents', https://commission.europa.eu/publications/2022-commission-work-programme-key-documents_en.

[41] *See*, above, FN 27.

through the airspace from point A to point B with an *aircraft*.[42]

> "This Regulation shall only apply to passengers transported by motorised fixed wing aircraft."[43]

The term 'aircraft' is not defined in the Regulation, but a definition can be found in other sources of EU law. Regulation 2018/1139 defines the term as:

> "any machine that can derive support in the atmosphere from the reactions of the air other than reactions of the air against the earth's surface".[44]

This definition, which is taken from the different Annexes to the Convention on International Civil Aviation of 1944, includes fixed wing, rotorcraft, balloons and other machines fitting this defection.

PATS will typically use *electric* VTOL. There is currently no definition of the term 'VTOL' in EU law. However, the European Union Aviation Safety Agency (EASA) has proposed a definition in its Prototype Technical Design Specifications for Vertiports.

> "'VTOL-capable aircraft' means a heavier-than-air aircraft, other than aeroplane or helicopter, capable of performing vertical take-off and landing by means of more than two lift/thrust units that are used to provide lift during the take-off and landing."[45]

This definition makes it clear that these eVTOL vehicles are *aircraft*, whether manned or remotely piloted, despite their varying designs. They are, however, distinct from aeroplanes[46] and helicopters.[47] While the vehicles conducting PATS are aircraft, not every vehicle will fall within the scope of the regulation as Article 3(4) makes it clear that the Regulation only applies to 'motorised fixed wing aircraft'. This will result in passengers being "treated differently",[48] which the Court has been proactive in limiting.

VoloCity is a multicopter aircraft and does not have fixed wings. Therefore, PATS provided by Volocopter during the Olympics and beyond are clearly outside the scope of the Regulation. However, this is not the case for every eVTOL aircraft being designed for PATS. For example, the above-mentioned Prosperity I aircraft is a 'motorised fixed wing aircraft'. This is the case for others, such as, Joby Aviation's S4 eVTOL aircraft, which is expected to be used for commercial operations in 2025,[49] and is designed to take off and land vertically with rotors, and then transition to horizontal cruise utilising its fixed wings.[50] Also, Lilium's Lilium Jet, which is set to gain Type Certification in 2025,[51] has two sets of fixed wings, which house ducted vector thrusters that title to provide horizontal and vertical movement.[52] As a result, these aircraft are included within the scope provided in Article 3(4) of the Regulation.

The limitation found in Article 3(4) makes sense as the Regulation was drafted to protect air passengers engaged in traditional commercial air transport provided by airlines. However, PATS, while providing commercial air transport, will use a variety of aircraft designs. Some designs will be within the scope of Article 3(4) (e.g. AutoFlight, Joby and Lilium) and others will be outside (e.g. Volocopter). This does not provide a uniform level of consumer protection as the rules will vary depending on which aircraft is being

[42] It could also include Point A to A operations as, for example, 'aerial works' fall within the scope of 'air transport'. The term 'aerial works' is defined as "an aircraft operation in which an aircraft is used for specialised services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.". Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 Laying Down the Common Rules of the Air and Operational Provisions Regarding Services and Procedures in Air Navigation and Amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010, OJ L 281, 13 October 2012, p. 1–66, Art. 2(12).

[43] Regulation 261/2004, Art. 3(4).

[44] Regulation (EU) 2018/1139, Art 3(28). This is the same definition as the one adopted in the various Annexes to the Convention on International Civil Aviation. *See*, as an example, Convention on International Civil Aviation, 7 December 1944, 61 Stat. 1180; 15 UNTS 295. *See*, for example, Annex 7 to the Chicago Convention 1944, *Aircraft Nationality and Registration Marks*, Sixth Edition, (July 2012), at 1.

[45] EASA, 'Vertiports Prototype Technical Specifications for the Design of VFR Vertiports for Operation with Manned VTOL-Capable Aircraft Certified in the Enhanced Category', PTS-VPT-DSN, March 2022, https://www.easa.europa.eu/en/document-library/general-publications/prototype-technical-design-specifications-vertiports.

[46] EASA, 'Definitions and Abbreviations Used in Certification Specifications for Products, Parts and Appliances CS-Definitions', at 1: The term 'aeroplane' is "an engine-driven fixed-wing aircraft heavier than air, that is supported in flight by the dynamic reaction of the air against its wings.".

[47] *Ibid*, at 11: The term 'heliport' is "a rotorcraft that, for its horizontal motion, depends principally on its engine-driven rotors." The term 'rotorcraft' is later defined at page 19 as "a heavier-than-air aircraft that depends principally for its support in flight on the lift generated by one or more rotors." EASA is trying to create a regulatory barrier between the existing rules for traditional manned aviation (aeroplanes and helicopters) and the developing rules for UAS and eVTOL.

[48] C-402/07, *Sturgeon v. Condor Flugdienst GmbH*, para 60.

[49] Hanneke Weitering, 'Joby Completes FAA Means of Compliance for eVTOL Aircraft Type Certification', Future Flight, 9 February 2023, https://www.futureflight.aero/news-article/2023-02-08/joby-completes-faa-means-compliance-evtol-aircraft-type-certification.

[50] *See*, Joby Aviation, 'Home', https://www.jobyaviation.com/.

[51] Lilium, 'FAA Issues G-1 for Lilium Jet, Making Lilium Only eVTOL Manufacturer with EASA and FAA Certification Basis for a Powered Lift eVTOL Aircraft', https://lilium.com/newsroom-detail/faa-issues-g-1-for-lilium-jet.

[52] Lilium, 'An Introduction to the Lilium Jet', https://lilium.com/newsroom-detail/youve-never-seen-anything-like-this-an-introduction-to-the-lilium-jet.

used. Further, this may incentivise operators to use certain aircraft designs. This would impact consumer protection and the saleability of certain eVTOL designs, thus impacting the manufacturers which have put a considerable amount of investment into actualising this aircraft.

3.2 Air Carrier and Operating Licence

The aircraft must be operated by an 'air carrier' for the Regulation to be applicable. The term 'air carrier' is defined in Article 2(a) as "an air transport undertaking with a valid operating licence". An 'undertaking' is any entity engaged in economic activities, notably the offering of goods or services on a given market. PATS will be provided by an *undertaking*. For example, the manufacturer may provide the service, such as in the case of the Paris Olympics. Volocopter is a limited liability company (*Gesellschaft mit beschränkter Haftung* (GmbH)) and will satisfy this definition. Alternatively, an air carrier may lease or purchase the eVTOL aircraft from the manufacturer and provide PATS. Again, this will be an *undertaking*.

The undertaking must also have a valid operating licence to be designated as an *air carrier*. Within the EU, Regulation (EC) No 1008/2008[53] sets out the requirements for gaining an operating licence from the competent licensing authority of a Member State. The undertaking must have:

1. its principal place of business must be located in that Member State,
2. a valid Air Operator Certificate (AOC),[54]
3. one or more aircraft,
4. its main occupation is the operation of air services,
5. a company structure allows the competent licensing authority to implement the provisions of this Chapter,
6. more than 50% ownership and control by EU nationals (natural or legal),
7. met certain financial conditions,[55]
8. conformity with the insurance requirements in Regulation 785/2004,[56] and
9. compliance with the provisions of good reputation.[57]

To get a valid operating licence, the undertaking will have to satisfy each one of these requirements.[58] Currently, eVTOL stakeholders are more focused on aircraft certification (point 2) and gaining ad hoc authorisation for demonstrations. However, the relevance of a valid operating licence will become clearer as PATS get closer to realisation.

In cases where the manufacturer wishes to be the air carrier, as is the case for the Paris Olympic flights, point 4 will be of relevance as Volocopter's main occupation is the manufacturing of the aircraft and not 'the operation of air services'.

The ownership and control requirements may also cause issues. First, not all eVTOL companies have the required link to the EU. Second, even those with strong ties to the EU, the PATS market has yet to be established, so companies are reliant on external financial investment rather than relying on revenue streams. This could impact the levels of ownership and control of a company. This will have to be assessed on a case-by-case basis. Such a requirement could be seen as too strict for a new market and it could limit the investment streams necessary to jump-start the market into existence. If the operator is not an EU company, then it will have to gain access via the air service agreements. Point A to B operators will likely be within a single State, so they will be cabotage flights and it is uncommon for air service agreements to grant such rights. Interestingly, Volocopter's point A to A flights will be considered tenth freedom flights as they will be cabotage between the same point of departure and arrival.[59] Such rights are novel and not expressed in the existing body of air service agreements.

If the undertaking can get a valid operating licence, then it will be an 'air carrier' for the purpose of the Regulation. If it is not possible or if it is not required, then it will not be subject to the Regulation.[60] This section focused on the operating licence under EU law. However, the Regulation also applies to non-EU air carriers, so the specific rules for the relevant jurisdictions will also be relevant.

[53] Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24 September 2008 on Common Rules for the Operation of Air Services in the Community, OJ L 293, 31 October 2008, p. 3–20.

[54] EASA is still in the process of drafting the safety based rules for PATS (i.e. Certified Category). *See*, Benjamyn I. Scott, 'Open Skies for Unmanned Aircraft in Europe: An Outlier or a New Approach?', 46(1) *Air & Space Law* 57–80 (2021).

[55] Regulation 1008/2008, Art 5.

[56] Mandatory insurance requirements related to Regulation 785/2004, which establishes the "minimum insurance requirements for air carriers and aircraft operators in respect of passengers, baggage, cargo and third parties." Regulation (EC) No 785/2004 of the European Parliament and of the Council of 21 April 2004 on Insurance Requirements for Air Carriers and Aircraft Operators, OJ L 138, 30 April 2004, p. 1–6.

[57] Regulation 1008/2008, Art 7.

[58] There are different requirements for "aircraft of less than 10 tonnes maximum take-off mass (MTOM) and/or less than 20 seats." This will be relevant for VTOL aircraft as they will be within these limits. Regulation 1008/2008, Art 5.

[59] *See*, Benjamyn I. Scott, 'Open Skies for Unmanned Aircraft in Europe: An Outlier or a New Approach?', 46(1) *Air and Space Law* 57–80 (2021), at 77–79.

[60] C-292/18, *Petra Breyer and Heiko Breyer v. Sundair GmbH*: "[it] must be interpreted as meaning that an undertaking, such as that at issue in the main proceedings, which had lodged an application for an operating licence that was not issued to it at the time for the performance of scheduled flights cannot fall within the scope of that regulation, so that the passengers concerned have no right to compensation under Article 5(1)(c) and Article 7(1) of the regulation.".

3.3 Landing and Departing from an Airport

As the Regulation applies to flights departing from an EU Member State for both EU and non-EU air carriers, per Article 1(1)(a), this would include the proposed routes for the Paris Olympics which are within a single State. The Regulation also applies, per Article 1(1)(b), to non-EU air carriers, and to flights arriving in an EU Member State if the flight is operated by an EU carrier unless they receive compensation and assistance in that third country. This requires the flight to be between States, which may become relevant in the future.

Article 3 of the Regulation requires that the place of departure and place of arrival[61] must be an 'airport'. The Regulation does not define the term 'airport'. However, a definition can be found in EU law in Article 2(7) of Regulation 1008/2008.[62]

> "any area in a Member State especially adapted for air services".

First, the term 'air services' means "a flight or a series of flights carrying passengers, cargo and/or mail for remuneration and/or hire."[63] PATS will carry paying passengers, so are to be considered as *air services.*

Second, the 'area' where departure and arrival take place must be 'adapted' for air service. During the Olympics, the VoloCity aircraft will use exclusively vertiports. A vertiport is "an area of land, water, or structure that is used or intended to be used for the landing, take-off, and movement of eVTOL-capable aircraft."[64] This definition does not require the area to be 'adapted', but in this case, all 5 vertiports will be adapted to provide landing, passenger and electrical charging facilities.[65] Therefore, these vertiports will satisfy the definition of 'airport'.

In the future, it could be the case that passenger collection and drop-off is done at ad hoc locations. This could include existing vertiport, aerodrome or heliport infrastructure, but also open spaces that have not been adapted. This is, for example, a practice carried out by Emergency Medical Operations (HEMS) whereby there is a high social value in allowing these aircraft to land in public spaces. While such operations are unlikely in the short term, they may be possible in the future. Ad hoc areas would not be considered 'airports' and such operations would be outside the scope of the Regulation.

3.4 Passenger

The final criterion is that the denied boarding, cancellation or delay must happen to 'passengers'. While this term is not defined, the Regulation provides some guidance as passengers must have a confirmed reservation as evidenced, for example, by a ticket.[66] Booking a PATS will likely be done through a mobile phone application. This will be familiar to many as it will mirror other Mobility-as-a-Service (MaaS) or Mobility-on-Demand (MoD) services like car taxi services (e.g., Lyft and Uber). Joby Aviation, for example, acquired Uber Elevate. This is the PATS part of Uber, which "will allow Joby to use Uber's app to offer air taxi rides when the company's aircraft eventually enters service".[67] Booking a PATS will less likely be booked far in advance, from a website, but rather through a mobile phone app in real-time. This will streamline the service and mean the 'ticket'[68] will be stored solely in the phone app. As a result, confirmation of the booking, in way of an e-ticket, should be provided. If a person has a valid ticket, then they will be considered a passenger. The compatibility between MoD and PATS will be tested.

The Regulation does not apply to people travelling free of charge[69] or at a reduced rate not available to the public[70] but may apply to people travelling on frequent flyer programmes. Current Mobility-as-a-Service apps sometimes

[61] The outbound flight and the inbound flight are considered separate, even though the two flights are purchased on a single ticket. C-173/07, *Emirates Airlines — Direktion für Deutschland v. Diether Schenkel*, at 22: "[It] must be interpreted as not applying to the case of an outward and return journey in which passengers who have originally departed from an airport located in the territory of a Member State to which the EC Treaty applies travel back to that airport on a flight from an airport located in a non-member country. The fact that the outward and return flights are the subject of a single booking has no effect on the interpretation of that provision.".

[62] Although there are direct links between the Regulation and Regulation 1008/2008, the definitions in Regulation 1008/2008 are "[f] or the purposes of this Regulation" and not universal among the EU aviation acquis.

[63] Regulation 1008/2008, Art. 2(4).

[64] EASA, 'Vertiports Prototype Technical Specifications for the Design of VFR Vertiports for Operation with Manned VTOL-Capable Aircraft Certified in the Enhanced Category', PTS-VPT-DSN, March 2022, https://www.easa.europa.eu/en/document-library/general-publications/prototype-technical-design-specifications-vertiports.

[65] The United States has also introduced the term 'vertistop', which is not present in the EU. It is an "area similar to a vertiport, except that no charging, fueling, defueling, maintenance, repairs, or storage of aircraft are permitted." As a result, this is a vertiport with fewer facilities.

[66] Regulation 261/2004, Art. 3(2). The term 'reservation' is defined in Article 2(g) to mean "the fact that the passenger has a ticket, or other proof, which indicates that the reservation has been accepted and registered by the air carrier or tour operator.".

[67] Phil LeBeau, 'Uber Sells its Flying Taxi Business, CNBC, 8 December 2020, https://www.cnbc.com/2020/12/08/air-taxi-start-up-joby-acquires-uber-elevate-.html.

[68] Pursuant to Article 2(f) of the Regulation, the term 'ticket' "means a valid document giving entitlement to transport, or something equivalent in paperless form, including electronic form, issued or authorised by the air carrier or its authorised agent".

[69] Regulation 261/2004, Article 3(3). *See*, C-686/20, *YE, LP, AN, OL, VX, CE v. Vueling Airlines.*

[70] *See*, C-316/20, *VO, ZO, ML, NB, KE, JE, PI, VY v. SATA Azores Airlines*.

offer new customers the first ride for free or run loyalty programmes that give repeat customers discounts. Such discounts will not cause any specific issues as these will be available to the public. Therefore, any related flight will not be outside the scope of the Regulation. This is also the case for subsidised tickets, which have been referenced by Volocopter as an option during the Games.

4 Types of Passenger Protection

4.1 Denied Boarding

Overbooking is the practice of selling more seats than the operating aircraft has onboard. Air carriers do this as it is common practice for a few passengers per flight to not show up, despite having purchased a ticket. Therefore, the air carrier sells extra tickets to make the flight more profitable and potentially reduce the cost per ticket. However, in some cases, more passengers may turn up than the aircraft can accommodate. In such cases, the air carrier should call for volunteers[71] in exchange for benefits.[72] If an insufficient amount of volunteers come forward, then the air carrier must deny boarding – 'bump' – passengers.[73]

Six points make it difficult to determine whether overbooking will be a practice for PATS:

- The first eVTOL aircraft used for PATS will have between 2 and 6 seats per aircraft. As a result, the total number of a passenger not showing up is significantly lower than on an A320 that can seat up to 180 passengers.[74]
- Second, the operational practices of PATS providers are not yet determined. Operators may create a flexible system. For example, high-frequency, short-distance routes between two populated points may be operated with additional capacity. An analogy could be a car taxi rank at an airport, whereby there are multiple cars to take MOD passengers.
- Third, a passenger's ticket may correspond to a time slot (or time window) as opposed to a flight number, so it may be impossible to determine whether the passenger was truly bumped.
- Fourth, it is unknown how passengers will behave as consumers. Allowing for MoD services, whereby bookings can be made at short notice, could make passengers more likely to show up due to the immediate need to travel or make them more flippant to not show up. During the early days of PATS, the prior is more likely due to the novelty and high prices, when compared to car taxi service. However, once the novelty has worn off and as prices drop, the latter may become more prevalent.
- Fifth, it has not yet been determined whether there will be staff on-site with the authority to deny boarding. This could be the pilot, but the primary focus is on the safety–critical tasks and it is late in the boarding process to do this. In the future, the pilot will be removed from the cockpit.
- Sixth, PATS are often discussed within the concept of mobility, as opposed to transport, whereby they link to other mobility services to allow people seamless travel with connections. In reality, this is still to be established and connections may cause issues which result in passengers not arriving on time.[75]

Overbooking is not the only reason for an air carrier to deny boarding. For example, the passenger may not have the right documentation.[76] While this is not a new matter, specific issues may arise for PATS. It has not yet been decided which, if any, documents would be required for passengers to carry. For example, an international flight could require a passport or valid ID. However, for a domestic flight, official identification may not be required. Some of these will be required by law, such as passports/ID for international flights, and some will be decisions of the air carriers. The checking of documents may be difficult as vertiports may not have the same resources as current airports, such as immigration checks. Additionally, the booking apps may store the required information, whereby documentation is verified when registering with the app and not per flight. The storing of information could produce issues for data protection, such as under the General Data Protection Regulation[77] and the

[71] Regulation 261/2004, Art. 4. The term 'volunteer is defined in Article 2(k) if the Regulation 261/004 as "a person who has presented himself for boarding under the conditions laid down in Article 3(2) and responds positively to the air carrier's call for passengers prepared to surrender their reservation in exchange for benefits.".

[72] *See*, *Ibid*, Recitals 9–11.

[73] The term 'denied boarding' is defined in Article 2(j) of the Regulation as "a refusal to carry passengers on a flight, although they have presented themselves for boarding under the conditions laid down in Article 3(2), except where there are reasonable grounds to deny them boarding, such as reasons of health, safety or security, or inadequate travel documentation.".

[74] Airbus, 'A320ceo Setting Single-Aisle Standards', https://aircraft.airbus.com/en/aircraft/a320-the-most-successful-aircraft-family-ever/a320ceo#:~:text=With%20a%20versatile%20cabin%20that,of%20up%20to%20180%20travellers.

[75] *See*, for example, the recent case C-238/22—LATAM Airlines Group.

[76] *See*, C-584/18, *DZ v. Blue Air*; and C-756/18 *LC, MD v. Easyjet*.

[77] *See*, Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation), OJ L 119, 4 May 2016, p. 1–88.

Passenger Name Record Directive.[78] Further, if the PATS is connected to a normal commercial passenger flight, this may require a two-tiered checking system, such as that exists now between Schengen and non-Schengen flights.

Recent news stories about airlines weighing passengers attract attention. However, they usually relate to information gathering as opposed to denying boarding to overweight passengers.[79] However, this could be a real issue for PATS due to the maximum take-off mass (MTOM) of the aircraft. The VoloCity weighs 700 kg when empty and has a MTOM of 900 kg. This means that its pilot, passenger and any baggage or cargo must be less than 200 kg. EASA conducted a study in 2022 and determined that the mean weight of a man is 82.2 kg and a woman is 67.5 kg.[80] As a result, it is not unreasonable for 200 kg to be exceeded. If the aircraft exceeds its MTOM, then the passenger will be denied boarding. The contents of the baggage may also need to be inspected. For example, there are limitations and requirements for the transport of dangerous goods[81] or prohibited articles.[82] Therefore, baggage may need to be checked for security reasons and this could also lead to the passenger being denied boarding. This is standard practice for helicopter services, such as that offered by BLADE which offers "one (1) standard-sized bag (60cm X 45cm X 25 cm) not to exceed 21 kg as well as one small handbag (purse or briefcase)" whereby "BLADE reserves the right to disallow bags that are deemed too heavy or large. In this case, BLADE will put the luggage on the Jitney or other mode of transport to the traveler's destination".[83]

While denied boarding does not appear to cause any interpretive issues for PATS, its application due to the specific ground infrastructure and operational restrictions of the aircraft may produce issues.

4.2 Cancellation

Cancellation is the "non-operation of a flight which was previously planned and on which at least one place was reserved."[84] If the PATS flight is a scheduled service, then there will be a high level of planning with a predetermined departure time. However, if the service is an unscheduled MoD service, which is booked on the spot with immediate transportation, then the flight may not be defined as 'previously planned'.

External factors specific to PATS operations need also to be considered. For example, urban environments may have microclimates that cause flying conditions to be too dangerous for small aircraft, such as due to the Venturi effect where the wind gets squeezed between tall buildings and increases the speed. Localised low-altitude air space closures[85] could occur at short notice which could result in flight times being changed. If the departure time is moved to an earlier time, then it would likely be considered cancelled.[86] If the departure time is moved to a later time, it could also be considered cancelled. This is not likely for short delays,[87] which will be treated under Article 6, but longer delays, such as those over 24 h could be considered as cancelled.[88]

Operations in high-density airspace and over urban populations may also require the aircraft to change route or divert. This is anticipated for unmanned aircraft operations, whereby return to home, hoover or land at the nearest safe location are expected in cases where the safe operation of the flight can not be guaranteed. If an aircraft lands at an emergency stopping place, this will not be considered a cancellation so long as the flight continues to the scheduled point of

[78] Directive (EU) 2016/681 of the European Parliament and of the Council of 27 April 2016 on the Use of Passenger Name Record (PNR) Data for the Prevention, Detection, Investigation and Prosecution of Terrorist Offences and Serious Crime, OJ L 119, 4 May 2016, p. 132–149.

[79] *See*, Natalie Neysa Alund, 'Boarding Pass Please? Now Stand on this Scale. Korean Air will Soon Weigh Passengers', 24 August 2023, USA Today https://eu.usatoday.com/story/travel/airline-news/2023/08/24/korean-air-to-weigh-passengers/70667391007/.

[80] EASA, 'EASA Review of Standard Passenger Weights in 2022 Shows no Significant Change', https://www.easa.europa.eu/en/newsroom-and-events/news/easa-review-standard-passenger-weights-2022-shows-no-significant-change.

[81] *See*, Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council, OJ L 296, 25 October 2012, p. 1–148, Annex III (Part ORO), Annex IV (Part CAT), Annex V (Part SPA), Annex VI (Part NCC), Annex VII (Part NCO).

[82] The term 'prohibited article' is defined as "weapons, explosives or other dangerous devices, articles or substances that may be used to commit an act of unlawful interference that jeopardises the security of civil aviation." Regulation (EC) No 300/2008 of the European Parliament and of the Council of 11 March 2008 on Common Rules in the Field of Civil Aviation Security and Repealing Regulation (EC) No 2320/2002, OJ L 97, 9 April 2008, p. 72–84, Art. 3(7).

[83] BLADE, 'Luggage Policies', https://www.blade.com/p/luggage.

[84] Regulation 261/2004, Art 2(l):

[85] C-294/10, *Andrejs Eglītis, Edvards Ratnieks v. Latvijas Republikas Ekonomikas Ministrija*.

[86] C-146/20, *AD, BE, CF v. Corendon Airlines and others*: "Regulation No 261/2004 must be interpreted as meaning that a flight is regarded as having been 'cancelled' in the case where the operating air carrier brings that flight forward by more than one hour.".

[87] C-395/20, *EP, GM v. Corendon Airlines Turistik Hava Taşımacılık A.Ş.*: "must be interpreted as meaning that a flight is not regarded as 'cancelled', within the meaning of those provisions, in the case where the operating air carrier postpones the time of departure of that flight by less than three hours, without making any other change to that flight.".

[88] C-402/07, *Sturgeon v. Condor Flugdienst GmbH*.

arrival.[89] If the aircraft is required to return to the departing airport, this would result in a cancellation if the flight does not continue.[90] If these deviations cause the aircraft to be delayed by over 3 h, then delay may also be relevant per Article 6 of the Regulation.

The aircraft may be required to divert to a nearby landing area. This would not constitute a cancellation so long as the alternate airport "serves the same town, city or region is not capable of conferring on the passenger a right to compensation for cancellation".[91] However, this test may not be suitable for PATS. For example, during the Olympics, all five vertiports will be located in the same "town, city or region". A passenger that is diverted to Airfield of Saint-Cyr-l'École (Versailles) on a flight between Paris-Charles de Gaulle Airport and Paris-Le Bourget Airport is now further away from the scheduled place of arrival than before the flight started. The passenger, which has opted to pay extra for a fast mobility service, is likely more inconvenienced as they can no longer benefit from other modes of public transport which directly connect to those two points (e.g. bus and train). As a result, the test provided in the Regulation is not suitable for PATS.

4.3 Delay

Passengers expecting to be delayed, depending on the length of the delay and distance flown, should be offered assistance.[92] The *Sturgeon* case also confirmed that passengers suffering from long-delay (above 3 h) can also claim compensation.

The time is calculated between "the scheduled time of arrival and the actual arrival time, that is to say, the moment when at least one of the doors of the aircraft is opened".[93] First, the delay may arise at the point of departure. during any connection or in flight.[94] Second, the delay is from the moment the passengers are permitted to leave the aircraft. The European Court has justified this approach:

> "During a flight, passengers remain confined in an enclosed space, under the instructions and control of the air carrier, in which, for technical and safety reasons, their possibilities of communicating with the outside world are considerably restricted. In such circumstances, passengers are unable to carry on, without interruption, their personal, domestic, social or business activities. It is only once the flight has ended that they are able to resume their normal activities."[95]

As PATS are unlikely to have cabin crew, and in later stages even an on-board pilot, the question of who will be responsible for opening and closing the doors arises. This could be delegated to vertiport staff, the responsibility of the passengers or it may be automated upon safe landing. All of these, however, have a direct link to the air carrier, so are unlikely to fall outside the responsibilities of the air carrier.[96] Therefore, recording the exact time could be difficult. Further, the level of 'instructions and control' is also different. Finally the possibility of 'communicating with the outside' is not as limited due to the low altitude of PATS flights, so access to ground telecommunication networks is possible (use of a mobile phone is likely for the entire journey).

On routes served by multiple eVTOL aircraft, an alternative aircraft may be found, which can reduce delays. This will depend on the level of flexibility that is built into the system. However, in the early stages, such as during the Paris Olympics, there will not be much flexibility.

It is questionable as to whether a passenger would or should wait more than 3 h on a flight that is likely short-distance and time-sensitive, whereby the route is served by other MoD transport options, or could even be walked in under 3 h. As a result, the definition of 'long delay' is unsuitable for PATS. First, the threshold of 2 h for care and 3 h for compensation is disproportionate to the flight time and length. Second, it will discourage passengers from seeking suitable alternate means of transport in a timely manner that is easily available to them. This is because if they find alternative options, they could be considered no-shows and would not be able to apply the Regulation. Airports are confined areas and there are often no alternative options but to fly in traditional aviation, so passengers are at the mercy of air carriers when their flight is delayed or cancelled. This is, however, not necessarily the case at vertiports.

5 Right to Compensation, Care and Assistance

5.1 Compensation

In cases of cancellation and long delay, passengers are entitled to compensation so long as the cause is not due to an extraordinary circumstance. Article 7(1) sets out the limits of compensation:

- EUR 250 for all flights of 1500 km or less;

[89] C-32/16, *Ute Wunderlich v. Bulgarian Air Charter Limited*.

[90] C-83/10, *Manuel López Alonso, Yaiza Pato Rodríguez v. Air France SA*.

[91] C-826/19, *WZ v. Austrian Airlines AG*.

[92] Regulation 216/2004, Recitals 17 and 18.

[93] C-654/19, *FP Passenger Service GmbH v. Austrian Airlines AG*.

[94] *See*, Case C-11/11, *Air France SA v. Heinz-Gerke Folkerts*.

[95] C-452/13, Germanwings GmbH v. Ronny Henning, at 20. This approach provides equal treatment for all passengers onboard the aircraft as there will be one single time.

[96] *See*, Section 5.1 and related case law.

- EUR 400 for all intra-Community flights of more than 1,500 km, and all other flights between 1,500 and 3,500 km;
- EUR 600 for all flights not falling under (a) or (b).

The distance is calculated based on the distance between "the first point of departure and the final destination on the basis of the 'great circle' method, regardless of the distance actually flown."[97] This is the shortest distance between two points on the surface of a sphere, measured along the surface of the sphere (as opposed to a straight line through the sphere's interior). The traffic management systems are still being developed, but eVTOLs will not have unlimited access to urban air spaces. There will be restricted areas, separation requirements and flight corridors. Therefore, the flight will unlikely fly in a straight line, but will take longer journeys to navigate the concrete jungle and regulatory restrictions. Thus, the 'great circle' method may not be appropriate as it will not represent the true distance. On the other hand, the flights will be highly automated, so exact records should be kept and available.

Accurately calculating distances may not be such an issue in the short term as most PATS, due to the limitations of the aircraft, are likely to be short distances, so falling under the first tier of compensation. For example, the VoloCity currently has a range of 35 km and the Prosperity 1 of 250 km. However, technical stops to recharge or replace batteries may be possible, so to length then flight. Also, as battery technology advances, longer flights will be possible. Finally, it may be the case that the PATS is part of a single booking for an international flight.

> "in the case of connecting flights, where there are two flights which are the subject of a single reservation, departing from an airport located within the territory of a third country for an airport located in a Member State via the airport of another Member State, a passenger who suffers a delay of three hours or more in reaching his or her final destination, the cause of that delay arising in the first flight operated, under a code-share agreement, by a carrier established in a third country, may bring his or her action for compensation under that regulation against the Community air carrier that performed the second flight."[98]

Therefore, this point may become important if booking practices evolve, whereby PATS are connected to normal commercial passenger flights.

Pursuant to Article 14(1), the air carrier has certain obligations to inform the passenger. Firstly, at check-in, a legible notice containing the following text is displayed in a manner visible to passengers:

> "If you are denied boarding or if your flight is cancelled or delayed for at least two hours, ask at the check-in counter or boarding gate for the text stating your rights, particularly with regard to compensation and assistance'.

It may be the case that there is no check-in counter or boarding gate. Therefore, this will be impossible to fulfil. Pontoise Vertiport is, however, testing check-in as an expected element of PATS, so it is a known and considered factor. It could, therefore, be dependent on the specifics of each vertiport.

The levels of compensation have been debated in manned aviation as to whether they are proportionate to the cost of the ticket.[99] The actual price of an eVTOL ticket is still unknown, but as noted above, Volocopter hopes to charge EUR 3–4 per km, per passenger. Considering the VoloCity's maximum range (35km) and the desired price point (EUR 4), that would result in the most expensive ticket costing EUR 140. Therefore, passengers could receive EUR 110 in compensation over the ticket price. This raises questions as to whether this is proportionate and appropriate.

The link between the Convention for the Unification of Certain Rules for International Carriage by Air of 1999 (Montreal Convention)[100] and the Regulation becomes relevant again. This time, not within the context of exclusivity,[101] but about the balancing act between the protection of the airlines and passengers. The predecessor to the Montreal Convention was the Warsaw Convention.[102] This Convention is from 1929 and when it was drafted, its drafters wanted to strike a balance between protecting a new emerging industry and ensuring passengers get a certain level of protection. The manned airline industry is now mature and the balance has shifted with the Montreal Convention. However, the eVTOL industry has yet to emerge, so questions of whether and to what degree it should be protected arise. The Regulation was designed to offer high levels of consumer protection to passengers engaging with a mature sector. This is not the case

[97] C-559/16, *Birgit Bossen, Anja Bossen, Gudula Gräßmann v. Brussels Airlines SA/NV*.

[98] *See*, C-367/20, *SP v. KLM Royal Dutch Airlines*.

[99] *See*, as an example, ERA, 'An ERA study into Regulation EU261: passenger compensation for delayed or cancelled flights Does it really protect the passenger?', https://www.eraa.org/system/files/era_eu261_study_brochure_final_version_26sep.pdf.

[100] Convention for the Unification of Certain Rules for International Carriage by Air, 28 May 1999, Montreal, UNTS, 2242, I-39917, entry in force 4 November 2003.

[101] Case C-344/04, *International Air Transport Association, European Low Fares Airline Association v. Department for Transport*.

[102] Convention for the Unification of Certain Rules Relating to International Carriage by Air, 12 October 1929, Warsaw, LNTS, 137, p. 11, entry in force 13 February 1933.

here, so it must be asked whether it is appropriate to subject PATS to rules designed to regulate a mature industry.

Volocopter will offer PATS services to and from two airports, connecting them to the existing transportation network. Additional links to traditional aviation can be seen in the different partnerships between eVTOL manufacturers and airlines. For example,

- Lilium and Lufthansa[103]
- Eve Air Mobility and Republic Airways[104]
- Eve Air Mobility and United Airlines[105]
- Japan Airlines and Vertical Aerospace[106]

This could eventually lead to a combined ticket under a single booking,[107] whereby a section of the journey is performed by an eVTOL aircraft. Additionally, business practices may allow for cooperation between airlines and PATS air carriers, such as in a codeshare agreement. This could impact the place of the final destination,[108] thus extending the distance of the flight. A consideration could be if the eVTOL flight is linked to a manned aircraft flight, such as via a codeshare[109] or connecting flight.[110] Thus, the eVTOL air carrier could be connected to another air service. If they are delayed, causing the person to miss their connecting flight, then the passenger could claim compensation from them as a contractual carrier.[111]

A linguistic tool could be used to try and exclude PATS from the scope of the Regulation. The European Commission, in its Interpretative Guidelines on Regulation (EC) No 261/2004, made it clear that multimodal journeys are not covered by the Regulation.

> "Multimodal journeys involving more than one mode of transport under a single transport contract (e.g. a journey by rail and air sold as a single journey) are not covered as such under the Regulation, nor are they covered by any Union legislation on passenger rights in other modes of transport."[112]

The European Commission specifically highlights trains, coaches and ships as other modes of transport. If PATS are classified as different from traditional air passenger transport, then it would be possible to consider a codeshare flight as multimodal.[113] However, under the current rules, this is not possible[114] as PATS are a journey by air. To exclude PATS in this way would require the European Commission to make a policy decision during the revision process.

The person holding a ticket must also intend to fly (in cases of denied boarding or cancellation) or be flown on the flight (in case of delay). This would typically be demonstrated by being present at the check-in counter or departure gate. However, it is fact-specific so other factors may be considered, whereby it will be for the national courts to determine.[115] Assessing this aspect in PATS could be complex. For example, once a journey is booked using the app, the additional step of checking in, which is common practice in traditional commercial air transport, may not be required. Further, arriving early at the airport is common for traditional commercial air transport passengers,

[103] Lufthansa Aviation Training, 'Lilium Partners with Lufthansa Aviation Training to Select and Train Pilots for Lilium Jet', https://www.lufthansa-aviation-training.com/-/lilium-partners-with-lufthansa-aviation-training.

[104] Eve Air Mobility, 'Eve and Republic Airways Announce Partnership to Develop Regional Operator Network of the Future with an Order for up to 200 eVTOL Aircraft', https://eveairmobility.com/eve-and-republic-airways-announce-partnership-to-develop-regional-operator-network-of-the-future-with-an-order-for-up-to-200-evtol-aircraft/.

[105] Eve Air Mobility, 'United Airlines and Eve Air Mobility Collaborating to Bring First Electric Commuter Flights to San Francisco', https://eveairmobility.com/united-airlines-and-eve-air-mobility-collaborating-to-bring-first-electric-commuter-flights-to-san-francisco/.

[106] Alfred Chua, 'Japan Airlines to Acquire up to 100 Vertical Aerospace eVTOLs from Lessor Avolon, Flight Global, 20 October 2021, https://www.flightglobal.com/aerospace/japan-airlines-to-acquire-up-to-100-vertical-aerospace-evtols-from-lessor-avolon/146000.article#:~:text=Japan%20Airlines%20to%20acquire%20up%20to%20100%20Vertical%20Aerospace%20eVTOLs%20from%20lessor%20Avolon,-By%20Alfred%20Chua&text=Japan%20Airlines%20intends%20to%20lease,taxis%20from%20aircraft%20lessor%20Avolon.

[107] *See*, C-606/19, *Flightright GmbH v. Iberia LAE SA Operadora Unipersonal*, and C-20/*21 JW, HD, XS v. LOT Polish Airlines*.

[108] The term 'final destination' is defined in Article 4(h) of the Regulation as "the destination on the ticket presented at the check-in counter or, in the case of directly connecting flights, the destination of the last flight; alternative connecting flights available shall not be taken into account if the original planned arrival time is respected.".

[109] C-367/20, *SP v. KLM Royal Dutch Airlines*.

[110] C-11/11, *Air France SA v. Heinz-Gerke Folkerts,Luz-Tereza Folkerts, Dutch Airlines*.

[111] C-592/20 *NT, RV, BS, ER v. British Airways*.

[112] European Commission, Commission Notice — Interpretative Guidelines on Regulation (EC) No 261/2004 of the European Parliament and of the Council Establishing Common Rules on Compensation and Assistance to Passengers in the Event of Denied Boarding and of Cancellation or Long Delay of Flights and on Council Regulation (EC) No 2027/97 on Air Carrier Liability in the Event of Accidents as Amended by Regulation (EC) No 889/2002 of the European Parliament and of the Council, OJ C 214, 15 June 2016, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016XC0615%2801%29.

[113] Convention for the Unification of Certain Rules for International Carriage by Air, 28 May 1999, Montreal, UNTS, 2242, I-39917, entry in force 4 November 2003, Art. 38.

[114] *See*, Section 3.

[115] C-756/18, *LC, MD v. easyJet Airline Co. Ltd*: "passengers on a flight with a delay of 3 h or more on arrival who have a confirmed reservation on that flight cannot be denied compensation under that regulation solely on the ground that, upon claiming compensation, they failed to prove that they were present for check-in for that flight, in particular by means of a boarding card, unless it can be established that those passengers were not transported on the delayed flight at issue, which is matter for the national court to determine.".

colloquially 2 h before the departure time, but this is unreasonable for short-distance PATS or impossible at small vertiports with limited capacity. Therefore, different time scales will exist when assessing step commercial practice, so check-in may not be required and there may be uncertainty as to when is suitable to be present for the flight. Second, there will not be a standard vertiport. Each will have different levels of facilities and infrastructure. Proving that the person was at the vertiport on time to take the PATS may be difficult to prove at vertiports with minimal facilities and infrastructure.

5.2 Care and Assistance

Article 8 covers the right to reimbursement and a return flight to the first point of departure, or re-routing. Pursuant to Article 5 of the Regulation, passengers whose flights are cancelled should be able to either:

1. obtain reimbursement for their tickets or
2. obtain re-routing under satisfactory conditions, and should be adequately cared for while awaiting a later flight.[116]

The booking systems are likely to be digital and automated, whereby the air carrier has access to flight and personal information. Therefore, reimbursement of the ticket should be easy to facilitate.

Re-routing will depend on the availability of other aircraft. It may be possible to designate another aircraft on a high-density route, where the air carrier has a lot of resources conducting MoD. This may, however, be more difficult in remote areas where there is only a single aircraft serving the community. Re-routing must be "under comparable transport conditions, to their final destination at the earliest opportunity".[117] The term 'comparable transport conditions' has been interpreted by the European Court in terms of time (moved back[118] or forward[119]).[120] For long-distance journeys, this will typically mean a flight or possibly a high-speed train. Thus, the options are limited and can be easily assessed by the air carrier. However, for PATS, the journeys will be shorter distances and alternative modes of transport could include road taxis, trains, buses or trams. Therefore, the air carrier will have to be familiar with all the MoD services in the region it serves.

When applicable, passengers have the right to meals, refreshments, hotels, transport and communications (e.g. telephone calls). This may be impractical at smaller vertiports which do not have the facilities. Therefore, vertiport design[121] may need to take such obligations into consideration or vertiport providers may need to cooperate with third parties in the vicinity of the vertiport for such services.

5.3 Other Considerations

There is a tendency by eVTOL stakeholders to view them outside of traditional aviation. Further, regulators often make a distinction between eVTOL and traditional manned aviation. Therefore, there may be a tendency to see PATS automatically outside the scope of the Regulation. However, as this paper has so far shown, certain PATS fall within the scope of the Regulation. Therefore, Article 15 is relevant as it declares that the protection offered in the Regulation cannot be limited or waived. It is not possible for eVTOL operators to contract out of their obligations.

In cases of infringement,[122] each Member State shall designate a body responsible for enforcement of the Regulation.[123] Each Member State has done this and it is typically the Civil Aviation Authority (CAA) or a national consumer protection authority. However, PATS may also necessitate the inclusion of authorities at a local level. This is highlighted in the U-space rules.

[116] *See*, Regulation 261/2004, Recital 13.

[117] *Ibid*, Art. 8(1)(b).

[118] C-395/20, *EP, GM v. Corendon Airlines Turistik Hava Taşımacılık AŞ*.

[119] *See*, C-146/20, *AD, BE, CF v. Corendon Airlines and others*.

[120] The assessment of 'comparable transport conditions' "can depend on a number of factors and must be decided on a case-by-case basis." However, this does not relate to other modes of transport, such as trains. European Commission, Commission Notice — Interpretative Guidelines on Regulation (EC) No 261/2004 of the European Parliament and of the Council Establishing Common Rules on Compensation and Assistance to Passengers in the Event of Denied Boarding and of Cancellation or Long Delay of Flights and on Council Regulation (EC) No 2027/97 on Air Carrier Liability in the Event of Accidents as Amended by Regulation (EC) No 889/2002 of the European Parliament and of the Council, OJ C 214, 15 June 2016, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016XC0615%2801%29.

[121] The regulation also deals with people with reduced mobility. Their specific needs must be considered when applying the rules on the right to care under Article 9. Due to the varying VTOL and ground infrastructure designed, people with reduced mobility may have different experiences. Again, vertiport designs need to consider these individual needs. Regulation 216/2004, Recital 1. Article 2(i) defines 'person with reduced mobility' as "any person whose mobility is reduced when using transport because of any physical disability (sensory or locomotory, permanent or temporary), intellectual impairment, age or any other cause of disability, and whose situation needs special attention and adaptation to the person's needs of the services made available to all passengers.".

[122] *See*, Regulation 216/2004, Recitals 21 and 22. C-145/15 and C-146/15, *K Ruijssenaars, A Jansen, JH Dees-Erf v. Staatssecretaris van Infrastructuur en Milieu, intervening parties: Royal Air Maroc SA, Koninklijke Luchtvaart Maatschappij NV*.

[123] European Commission, 'National Enforcement Bodies (NEB)', https://transport.ec.europa.eu/transport-themes/passenger-rights/national-enforcement-bodies-neb_en.

> "The designated competent authorities shall:
> (f) establish a mechanism to coordinate with other authorities and entities, including at local level, the designation of U-space airspace, the establishment of airspace restrictions for UAS within that U-space airspace and the determination of the U-space services to be provided in the U-space airspace".[124]

Therefore, local municipalities will have an important and active role in designating, establishing, restricting and determining PATS that operate in their local airspace. Therefore, local authorities may be the cause of the delay or cancellation so have access to the relevant information, and have direct links to the air carriers and passengers, making them more suitably placed to act as the NEB.

6 Extraordinary Circumstances

An air carrier can rely on the defence of extraordinary circumstances to elevate itself from paying compensation.

> "An operating air carrier shall not be obliged to pay compensation in accordance with Article 7, if it can prove that the cancellation is caused by extraordinary circumstances which could not have been avoided even if all reasonable measures had been taken."[125]

Since the *Sturgeon* case, this also includes long delay. Recital 14 of the Regulation gives some interpretative guidance as to what this means as it states that "political instability, meteorological conditions incompatible with the operation of the flight concerned, security risks, unexpected flight safety shortcomings and strikes that affect the operation of an operating air carrier." However, the definition has been highly disputed by the European Court. *Wallentin-Hermann v. Alitalia* gave the following test:

> "unless that problem stems from events which, by their nature or origin, are not inherent in the normal exercise of the activity of the air carrier concerned and are beyond its actual control."[126]

As PATS is an emerging sector, it may be quite difficult to accurately determine what the terms 'inherent' and 'normal' mean as this will potentially take some time to establish in the very specific context of PATS, whereby the technology is new and advancing, there are numerous eVTOL designs, and each route will have specific localised factors.

The European Court has clarified several circumstances that will constitute an extraordinary circumstance. Due to the operations being at a lower altitude, interactions with birds may be more common. While the aircraft will be designed with safety features to handle bird strikes, they may still cause delays. While the European Court ruled that bird strikes are extraordinary circumstances,[127] this may need to be reassessed for low-altitude, high-density PATS due to their probable proximity to birds.

Issues on the ground may also cause delays. For example, debris in the landing area could cause delays. This could be an extraordinary circumstance so long as "it deployed all its resources in terms of staff or equipment and the financial means at its disposal".[128] Debris on an ad hoc landing zone could be very hard to manage, so is well outside the control of the air carrier.[129]

The European Court has also ruled on unruly passengers:

> "the unruly behaviour of a passenger which has justified the pilot in command of the aircraft in diverting the flight concerned to an airport other than the airport of arrival in order to disembark that passenger and his baggage falls within the concept of 'extraordinary circumstances', within the meaning of that provision, unless the operating air carrier contributed to the occurrence of that behaviour or failed to take appropriate measures in view of the warning signs of such behaviour, which it is for the national court to verify."[130]

In PATS, there may be a person on board responsible for the flight controls of the aircraft. EASA is still reviewing whether such persons are 'pilots' as part of its rulemaking activities for the Certified Category for UAS. It is not determined whether these people will be 'pilots' and what their exact responsibilities are towards the passengers. Further, in the future there may be no pilot on board, so there will be no one supervising the passengers. Therefore, it remains unclear how air carriers providing PATS will deal with unruly passengers and how 'contributed' could be interpreted in such a case.

VTOL aircraft are likely to be electric, so they have different power supplies than manned aviation. The European Court has ruled that:

> "where the airport of origin of the flights or aircraft concerned is responsible for the aircraft refuelling system, a generalised breakdown in the supply of fuel can

[124] Commission Implementing Regulation (EU) 2021/664 of 22 April 2021 on a Regulatory Framework for the U-space, OJ L 139, 23 April 2021, p. 161–183, Art. 18(f). *See*, Article 2(1) for a definition of U-space.

[125] Regulation 261/2004, Art. 5(3).

[126] C-549/07, *Friederike Wallentin-Hermann v. Alitalia — Linee Aeree Italiane SpA*, at para 34.

[127] C-315/15, *Marcela Pešková, Jiří Peška v. Travel Service as*.

[128] C-501/17, *Germanwings GmbH v. Wolfgang Pauels*.

[129] *See*, C-159/18, *André Moens v. Ryanair Ltd*.

[130] C-74/19, *LE v. Transport Aéreos Portugueses SA*.

be regarded as an 'extraordinary circumstance' within the meaning of that provision."[131]

If a vertiport has the capacity to store electricity centrally or in charged batteries, then there is less chance of a breakdown in the immediate supply. However, the electricity must be sourced from somewhere. This could be from third parties, such as the national power grid, which would mean a strong reliance on external infrastructure. Energy infrastructure and air transport are both 'critical entities'[132] so these two essential sectors will have to work together in a way that is both safe and secure, while providing a reliable service.

In cases of air space closure, the air carrier may not be able to rely on extraordinary circumstances:

"an air carrier, since it is obliged to implement all reasonable measures to avoid extraordinary circumstances, must reasonably, at the stage of organising the flight, take account of the risk of delay connected to the possible occurrence of such circumstances."[133]

Air space closure can happen for a number of reasons, but due to PATS's proximity to urban environments, this could happen more frequently on a micro level. Local authorities and U-space service providers also have a role, in addition to traditional entities, so there is increased complexity.

Finally, strikes have also been litigated. There is a difference between organised and wildcat strikes. Organised ones take planning and are often, but not always, orchestrated around a Union. It is unclear whether eVTOL employees will belong to a Union, so strikes, if they were to happen, may be more spontaneous and decentralised. However, the European Court has been consistent in ruling that strikes are not an extraordinary circumstance.[134] One issue could arise due to the automation of eVTOL aircraft, as it is planned to phase out piloted eVTOL for unmanned eVTOL. This could cause tension with the pilots, who have currently yet to be found and trained, as they will be out of a job in just a few years.[135] Further, it is still to be determined who will be employed at the vertiports; they may be fully automated or they may be manned, such as for check-in, security and ground handling. These could also strike.

7 Conclusions

The Regulation was drafted with a very specific type of service in mind. This was traditional commercial passenger transportation from one airport to another via large civil aircraft (e.g. Airbus and Boeing). The Regulation has been highly litigated, whereby over 70 requests to the European Court have been made by national courts for interpretation. This shows that even in operations within the scope of normal commercial passenger transportation, the Regulation is not sufficiently clear and judicial interpretation is required. When drafted, PATS were not on the European Commission's rulemaking radar, so it is not surprising that the Regulation does not directly cite such services. Despite this, certain PATS may fall under the scope of the Regulation, and, as shown in this paper, these operations do not fit comfortably within the existing text. As a result, the following recommendations are made.

The EU Commission is set to revise the Regulation. The proposal of 2013 does not take into consideration PATS and was based on lessons learned from traditional commercial passenger transportation. Therefore, the starting point is that the European Commission must consider PATS when revising the Regulation. This must be done to ensure that such services are not accidentally included or excluded. This is a policy decision.

PATS have not yet been offered to the public. A balance needs to be found between offering a suitable level of consumer protection, so that passengers have clear rights, and protecting an emerging industry so that it is not killed by burdensome obligations. The transition from the Warsaw Convention to the Montreal Convention offers precedent in the aviation sector for such an approach. Further, while early PATS will likely be inaccessible to the majority of people, due to the cost and offered services, this should not impact the aspiration of achieving a suitable level of consumer protection. The users are, just like first-class passengers on a traditional flight, still consumers and should have their rights protected by the law.

Any rules on passenger protection for PATS should create a level playing field. For example, the current Regulation only applies to fixed wing aircraft. As not all eVTOL aircraft are fixed wing, such as the VoloCity, this will

[131] C-308/21, *KU, OP, GC v. SATA International – Azores Airlines SA*.

[132] Directive (EU) 2022/2555 of the European Parliament and of the Council of 14 December 2022 on Measures for a High Common Level of Cybersecurity Across the Union, Amending Regulation (EU) No 910/2014 and Directive (EU) 2018/1972, and repealing Directive (EU) 2016/1148 (NIS 2 Directive), OJ L 333, 27 December 2022, p. 80–152, Annex I.

[133] C-294/10 *Andrejs Eglītis, Edvards Ratnieks v. Latvijas Republikas Ekonomikas Ministrij*. This must be balanced against Case C-12/11 *Denise McDonagh v. Ryanair Ltd*.

[134] C-195/17, C-197/17 to C-203/17, C-226/17, C-228/17, C-254/17, C-274/17, C-275/17, C-278/17, to C-286/17 and C-290/17 to C-292/17, *Helga Krüsemann and Others v. TUIfly GmbH*; C-28/20, *Airhelp Ltd v. Scandinavian Airlines System Denmark – Norway – Sweden*; and C-287/20, *EL, CP v. Ryanair; CS v. Eurowings*.

[135] Yuran Shi, 'Pilots in the Evolving Urban Air Mobility: From Manned to Unmanned Aviation', Conference on Unmanned Aircraft Systems (ICUAS), 6-9June 2023, Warsaw, Paper WeA2.4.

create an uneven playing field. This should be prevented as the level of consumer protection will be uneven. It could also distort competition as different operators, depending on their eVTOL aircraft used, will be subject to different financial obligations (i.e. compensation). Further, it could force operators to select certain types of aircraft designs, which would negatively impact fixed wing manufacturers. This could lead manufacturers to adapt designs or for operators to pick less optimal designs for the activities, which may not be the most economical or environmentally friendly, based on consumer protection rules.

As with traditional discussions on the Regulation, the compensation limits need to be assessed. Pricing, routes, maturity of the industry, booking style, and aircraft type are all different. Therefore, applying the current limits to PATS may not make sense.

There is a need for clarity of terms. The definitions must reflect the actual PATS sector, rather than be generic aviation terms. While some terms are suitable, such as 'aircraft', others may need revision. For example, the term 'airport' may need to be revised to properly reflect whether 'vertiports' are considered airports or not. Alternatively, a definition of 'vertiport' could be included to make this clear. This could be a mechanism to ensure none or all PATS fall within the scope of the Regulation.

Finally, any new rule must fit within the existing EU acquis. For example, there is a clear link between Regulation 261/2004 and other EU regulations. For example, Regulation 1008/2008 for operating licences, Regulation 2018/1139 for safety and Regulation 785/2004 for insurance. Therefore, the introduction of new rules should not have unintended consequences for existing rules. Further, a decision needs to be made by the European Commission on how these other rules are to apply to PATS. The position is clear for safety, as EASA is actively working on the Certified Category rules for eVTOL aircraft, but it is yet to be seen whether PATS will be required to have a valid operating licence. This is a serious question as the European Commission has the chance to provide fully liberalised air services free of the ownership and control requirements or subject them to the existing restricted system.

In conclusion, the Regulation is not suitable for PATS. As a result, the European Commission needs to appropriately reflect such operations in the revised Regulation or create a new one specifically for such activities. Either way, a new regulation is needed and it must consider the nuances and specificities of the emerging PATS market, as well as being future proof, so as to allow the market to be born and grown, but also protect consumers.

Author's Contributions In relation with your submission: (This is "Applicable"—Who made your manuscript and did the research?). Kindly provide complete list of all authors (names or initials) and each contribution in your "Authors' contributions" section.

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