



DETERMINATION OF MERGER NOTIFICATION M/21/048 – TYCO INTERNATIONAL/AIRFLOW SERVICES

Section 21 of the Competition Act 2002

Proposed acquisition by Tyco International Holdings S.a.r.l. of Airflow Services Limited

Dated: 27 October 2021

Introduction

1. On 17 September 2021, in accordance with section 18(1)(a) of the Competition Act 2002, as amended (the “Act”), the Competition and Consumer Protection Commission (the “Commission”) received a notification of a proposed acquisition whereby Tyco International Holding S.a.r.l. (“Tyco Holding”), an indirect wholly-owned subsidiary of Johnson Controls International plc (“JCI”), would acquire the entire issued share capital of Airflow Services Limited (“Airflow”) (the “Proposed Transaction”).

The Proposed Transaction

2. The Proposed Transaction is to be implemented by way of a share purchase agreement dated 17 September 2021 (the “SPA”) between Denis Moynihan and Marina Moynihan (the “Sellers”) and Tyco Holding. Under the terms of the SPA, Tyco Holding will acquire the entire issued share capital of Airflow from the Sellers. Following completion of the Proposed Transaction, JCI (through Tyco Holding) will have indirect sole control of Airflow for the purposes of the Act.

The Undertakings Involved

The Acquirer – Tyco Holding

3. Tyco Holding acts as a financial holding company of JCI and is based in Luxembourg. JCI is a public company listed on the New York Stock Exchange (NYSE: JCI)¹ and is headquartered in Cork, Ireland. JCI is registered in the State under company number 543654.

¹ <https://www.nyse.com/quote/XNYS:JCI>



4. JCI is active in the manufacture, supply, service and maintenance of heating, ventilation, and air conditioning (“HVAC”) equipment. Outside of the HVAC sector, JCI is active in the supply of other equipment for buildings, including building automation and controls, security systems and fire detection/suppression equipment. JCI serves a wide range of customers in more than 150 countries and has over 100,000 employees worldwide. JCI has divided its business into four main business units, organised on a geographic basis, as follows:²
- **Building Solutions North America:** This business unit designs, sells, installs, and services building products and systems in North America, including HVAC equipment, controls, refrigeration, integrated electronic security, integrated fire detection and suppression systems, and data-driven “smart” building solutions;
 - **Building Solutions EMEA/LA:** This business unit designs, sells, installs, and services building products and systems in Europe, the Middle East, Africa, and Latin America, including HVAC equipment, controls, refrigeration, integrated electronic security, integrated fire detection and suppression systems, and data-driven “smart” building solutions;
 - **Building Solutions Asia Pacific:** This business unit designs, sells, installs, and services building products and systems in the Asia Pacific region, including HVAC equipment, controls, refrigeration, integrated electronic security, integrated fire detection and suppression systems, and data-driven “smart” building solutions; and,
 - **Global Products:** This business unit designs and produces heating and air conditioning, and markets products and refrigeration systems to replacement and new construction market customers globally. It also designs, manufactures, and sells fire protection and security products, including intrusion security, anti-theft devices, access control and video management systems.
5. JCI sells and installs its products primarily through its extensive direct channel, consisting of a global network of sales and service offices. It also sells through global third-party channels, such as distributors of air-conditioning, controls, security and fire detection products.

² See JCI’s 2020 annual report, p. 4, available at:
www.sec.gov/ix?doc=/Archives/edgar/data/0000833444/000083344420000048/jci-20200930.htm#ia888b0e6cc554f529ea823313ac2ca2f_217



6. In relation to HVAC systems, JCI serves its customers through a number of JCI-owned brands in the State, including *Johnson Controls, York, Hitachi, Ruskin, Titus, Enviro-Tec, Coleman, Champion, Luxaire, Tempmaster, Triatek, Krueger* and *Skymark*. JCI does not sell through third-party channels in the State.
7. For the financial year ending 30 September 2020, JCI generated worldwide turnover of €[...], of which approximately €[...] was generated in the State.

The Target – Airflow

8. Airflow is an Irish-incorporated company (company registration number 239335) headquartered in Cork and is jointly owned in equal shares by the Sellers.³
9. Airflow operates from its facility in Little Island, Cork and specialises in the supply, installation and maintenance of HVAC systems, which accounts for the vast majority of Airflow's activities. In addition, Airflow also provides cleanroom validation services. Airflow is not involved in the manufacture of HVAC systems.
10. Airflow provides the following services in the State:

Supply and installation of HVAC systems;

- Maintenance, servicing and repair of HVAC plant and equipment;
- Testing and commissioning on new and existing HVAC installations;
- Cleanroom commissioning and cleanroom validation services;
- HVAC performance energy surveys;
- Supply and installation of domestic heat pumps and underfloor heating; and
- Supply and installation of Eco-cooling units.

11. For the financial year ending 31 December 2020, Airflow's worldwide turnover was approximately €[...], all of which was generated in the State.

Rationale for the Proposed Transaction

12. The parties state the following in the notification:

³ Further information on Airflow is available from the company's website: <https://airflow.ie/>



"[...]. The Proposed Transaction will provide JCI with the opportunity to develop additional capabilities and develop expertise via the acquisition of a highly complementary business."

Third Party Submissions

13. No third-party submissions were received.

Industry Background – HVAC systems

14. There are a number of different types of HVAC systems which can be broadly categorised as follows:

- **Central air conditioning systems:** A central air conditioning system cools the entire premises from one central location. Central air conditioners operate by circulating cool air through a system of supply and return ducts. The cooled air is carried from the air conditioner through the building and becomes warmer as it circulates through. It then circulates to the central air conditioner. Central air conditioning systems may also include Air Handling Units ("AHUs"), which are a complement that can be added to a HVAC system. AHUs typically consist of a fan and air-filtration system and are used to distribute cooled or heated air inside the building. In addition, Variable Refrigerant Flow ("VRF") systems are a form of central air conditioning system, which consist of outdoor condensing units connected to multiple indoor units via refrigerant piping to provide cooling and heating to individual zones within a building.
- **Chillers:** Chiller systems are used to cool fluids or dehumidify air, typically in commercial and industrial facilities. Chiller systems come in two forms: water-cooled chillers and air-cooled chillers. Both systems are based largely on the same components: an evaporator, condenser, compressor, and an expansion valve. Typically, air-cooled chillers are installed in smaller buildings, while water-cooled chillers are used in larger commercial and industrial buildings.
- **Packaged air conditioning systems:** Packaged air conditioning systems are a form of central air conditioning system. In a packaged system, the evaporator, condenser, and compressor are all located in one cabinet, which usually is placed on a roof or on a concrete slab next to a building's foundation. Air supply and return ducts connect with the packaged air conditioner, which is usually located outdoors.
- **Split air conditioning systems:** Split air conditioning systems are also a form of central air conditioning system. In a split system, an outdoor metal cabinet contains the condenser and compressor, and an indoor cabinet contains the evaporator.



15. Each type of HVAC system listed above has slightly different technical specifications which means that the choice of HVAC system is largely determined by the specific customer requirements.
16. HVAC systems may be supplied directly by manufacturers to end-users through their own sales networks and/or through third party distributors, resellers, system integrators and HVAC installers.

Competitive Analysis

Horizontal Overlap

17. JCI and Airflow are both active in the supply, installation and maintenance of HVAC systems. This gives rise to a horizontal overlap between the activities of JCI and Airflow in the State.

Market Definition

18. The European Commission has previously considered the HVAC sector in a number of cases.⁴ In particular, the European Commission has considered whether the HVAC sector may be divided into several different categories based on, *inter alia*, cooling power, technology, and product type. However, the European Commission has left open the precise product market definitions in these merger decisions. The European Commission has also considered the installation of HVAC systems in the context of the wider sector of installation of electromechanical systems, but ultimately left open the exact product market definition.
19. The Commission defines markets to the extent necessary depending on the particular circumstance of a given case. For the purposes of assessing whether the Proposed Transaction might result in a substantial lessening of competition, the Commission has analysed its impact in respect of the overall market for the supply, installation and maintenance of HVAC systems. The Commission has also examined the competitive impacts by different types of HVAC systems.

Geographic market

20. The Commission does not need to form a definitive view with respect to the relevant geographic market in this instance since its conclusion on the competitive impact of the Proposed Transaction will be unaffected whether the relevant geographic market is defined narrowly (i.e. the State) or more broadly (i.e. worldwide).

⁴ See for example: Case M.7375 – United Technologies Corporation/CIAT (2014); Case M.5421 – Panasonic/Sanyo (2009); Case M.4271 – Daikin/OYL (2006); and Case M.1433 – Carrier/Toshiba (1999).



21. For the purposes of assessing whether the Proposed Transaction might result in a substantial lessening of competition, the Commission has analysed its impact by reference to the narrowest potential geographic market (i.e. the State).

Competitive Assessment

22. Table 1 below shows the parties' shares in respect of the supply, installation and maintenance of HVAC systems in the State for 2020, by reference to revenue generated:

Table 1: Estimated shares of the parties in respect of the supply, installation, and maintenance of HVAC systems in the State in 2020.

Supplier	By value	
	€ (million)	%
JCI	[...]	0-5%
Airflow	[...]	0-5%
Combined	[...]	0-5%
Others ⁵	[...]	90-100%
Total	[...]	100%

Source: The parties, based on data from [Infinium Global Research](#)⁶

23. As outlined above, the parties estimate their combined share in respect of the supply, installation, and maintenance of HVAC systems in the State to be 0-5%, by reference to revenue generated.
24. Contracts for the supply, installation and maintenance of HVAC systems are typically not exclusive, and customers can readily switch between the wide range of products offered by a significant number of providers active in the State. There are a number of large-scale HVAC manufacturers with operations in the State that will continue to compete with Tyco following implementation of the Proposed Transaction, including Carrier Rental Systems (Ireland) Limited,⁷

⁵ The parties have submitted that they are unaware of any single accurate and consistent third-party source of data as regards the total size the supply, installation and maintenance of HVAC systems. In particular, the parties are not aware of any source of data regarding the relative size of individual undertakings in respect of the supply, installation, and maintenance of HVAC systems. However, the parties consider that the category of 'Others' would at least include each of the competitors listed in paragraph 24 of this Determination.

⁶ *Ireland Air Conditioning Systems Market: Prospects, Trends Analysis, Market Size and Forecasts up to 2026*. Infinium Global Research is a business intelligence company that provides market information services, solutions and reports.

⁷ For more information, please see: <https://www.carrierrentalsystems.ie/>



Flaktgroup Ireland Limited,⁸ Trane Technologies plc,⁹ and Daikin Industries Limited.¹⁰ Further, there are a number of smaller HVAC servicers and installers based in the State that will continue to compete with Tyco, including Astech Air Conditioning Limited,¹¹ BMC Eirco Refrigeration Limited,¹² Brian Scully Services,¹³ Comfort Cooling Limited,¹⁴ Core Air Conditioning Limited,¹⁵ Energywise Savings Ireland Limited,¹⁶ and Frank Roche Air-Conditioning Limited.¹⁷

25. In relation to different types of HVAC products, the parties state that the products offered by JCI and Airflow are complementary. [...]. JCI is not active in VRF and packaged air conditioning systems in the State.

Table 2: % of JCI's total revenue in respect of the supply, installation, and maintenance of HVAC systems in the State in 2021 to date

HVAC product	% of JCI's total revenue in each HVAC product	% of Airflow's total revenue in each HVAC product
Chillers	[...]	[...]
Central air conditioning systems	[...]	[...]
Packaged air conditioning systems	[...]	[...]
Split air conditioning systems	[...]	[...]
VRF systems	[...]	[...]
Miscellaneous ¹⁸	[...]	[...]
Total	100%	100%

⁸ For more information, please see: <https://www.flaktgroup.com/en/>

⁹ For more information, please see: <https://www.trane.com/commercial/europe/ie/en.html>

¹⁰ For more information, please see: <https://www.daikin.com/>

¹¹ For more information, please see: <https://www.astechairconditioning.ie/>

¹² For more information, please see: <https://www.bmceirco.com/>

¹³ For more information, please see: <https://www.bssaircon.ie/>

¹⁴ For more information, please see: <http://www.comfortcooling.ie/>

¹⁵ For more information, please see: <https://www.coreac.com/>

¹⁶ For more information, please see: <https://energywiseireland.ie/>

¹⁷ For more information, please see: <https://www.frankrocheservices.ie/>

¹⁸ Miscellaneous includes revenue generated from (i) supply, installation and services in respect of HVAC systems for customers in domestic settings; (ii) supply, installation and services in respect of AHUs; and (iii) commissioning in respect of HVAC systems.



Source: Data provided by the parties.

26. [...]. As a result, the parties are focused on different product segments in the supply of HVAC systems.
27. Table 2 above shows that chillers account for [...] of JCI's revenue in respect of the supply, installation and maintenance of HVAC systems in the State, while this product accounts for [...] of Airflow's revenue. Similarly, split air conditioning systems represent [...] of Airflow's revenue in the State ([...]), while this product segment accounts for [...] of JCI's revenue. Furthermore, there is no overlap in packaged air conditioning systems as JCI is not active in this segment.
28. In light of the above, the Commission considers that the Proposed Transaction does not raise horizontal competition concerns in respect of the supply, installation, and maintenance of HVAC systems in the State.

Vertical Relationship

29. There is a limited vertical relationship between the parties arising from JCI's activities in the upstream manufacture of HVAC systems and Airflow's activities in the downstream supply, installation and maintenance of HVAC systems.¹⁹ JCI's total sales of HVAC systems products to Airflow in 2020 amounted to approximately €[...].
30. The Commission considers that the vertical overlap is unlikely to raise any competition concerns for the following reasons:
 - I. In terms of input foreclosure, JCI supplies a very limited amount of HVAC products to HVAC installers, amounting to approximately €[...] in 2020 (including JCI's sales to Airflow of €[...] in 2020). The parties will face competition from a number of major international HVAC manufacturers, including Trane, Carrier, Flakt, Daikin and Lennox. Each of these competitors is well-resourced, sophisticated and experienced in the manufacture of HVAC systems. JCI will therefore remain competitively constrained following the Proposed Transaction and would not have the ability to engage in an input foreclosure strategy; and

¹⁹ For completeness, the parties note that JCI's HVAC controls products could in principle be purchased by Airflow. However, Airflow's purchases of such products are negligible (just approximately €[...] in 2020). Consequently, any potential vertical relationship in the State in relation to these products is de minimis and, on this basis, is not considered further in this Notification



- II. In terms of customer foreclosure, following the Proposed Transaction, JCI will have no ability to foreclose access to a significant customer base for manufacturers of HVAC systems. Airflow's total annual spend on HVAC systems is limited, with purchases from its [...] most significant suppliers of HVAC systems amounting to approximately €[...] in 2020 (which accounted for the vast majority of Airflow's purchases of HVAC systems in 2020). Airflow therefore accounts for only a limited proportion of the overall demand for HVAC systems in the State which was worth approximately €[...] in 2020, and its downstream position in the supply, installation and maintenance of HVAC systems is modest.²⁰ Should Airflow choose to source all of its requirements for HVAC systems from JCI in the future, there would remain a sufficiently large customer base that could be served by JCI's competitors. On this basis, no customer foreclosure concerns arise.
31. In light of the above, the Commission considers that the Proposed Transaction does not raise any vertical competition concerns in respect of the supply, installation, and maintenance of HVAC systems in the State.

Conclusion on Competitive Assessment

32. In light of the above, the Commission considers that the Proposed Transaction will not substantially lessen competition in any market for good or services in the State.

²⁰ The parties provided data compiled by Infinium Global Research, which the parties understand includes supply, installation and maintenance, indicates that total spend on central air conditioning systems, split air conditioning systems, packaged air conditioning systems and chillers was approximately \$[...] (approximately €[...]) in 2020.



Ancillary Restraints

33. The parties state in the notification that Clause 14 of the SPA contains certain restrictive covenants including non-compete and non-solicitation clauses which the parties believe are directly related to and necessary for the implementation of the Proposed Transaction.
34. The Commission notes that the restrictions referred to by the parties appear to be contained in Clause 14.1 of the SPA. Clause 14.2 does not impose any restrictions. Clause 14.3 appears to impose a requirement on [...]. The Commission is of the view that Clause 14.3 of the SPA is not directly related and necessary to the implementation of the Proposed Transaction. Therefore, the Commission considers that Clauses 14.3 of the SPA will not benefit from the protections offered by section 4(8) and 5(3) of the Act.
35. The Commission notes that Clauses 14.1(a)-(c), inclusive, contain restrictive obligations upon [...], including a number of non-compete and non-solicitation clauses each for a period of [...]. The parties submit that the Proposed Transaction involves the [...]. The duration of those non-compete and non-solicitation obligations do not exceed the maximum duration acceptable to the Commission.²¹ The Commission considers these non-compete and non-solicitation obligations to be directly related to and necessary for the implementation of the Proposed Transaction insofar as they relate to the State.
36. The Commission notes that Clause 14.1(d) imposes an obligation upon [...]. In addition, the Commission notes that, [...]. The Commission is of the view that, when read in the context of Clause 14 as a whole, Clause 14.1(d) appears to function as a 'non-disparagement' clause rather than a 'non-compete' clause. For this reason, the Commission has not reached a view as to whether or not Clause 14.1(d) of the SPA is directly related to and necessary for the implementation of the Proposed Transaction. Therefore, the Commission considers that Clause 14.1(d) of the SPA will not benefit from the protections offered by section 4(8) and 5(3) of the Act.
37. The Commission notes that Clause 14.1(e) imposes an obligation upon the Sellers not to “for a period of three years after the Completion Date seek to procure orders from, or do business with,

²¹ In this respect, the Commission follows the approach adopted by the European Commission in paragraphs 20 and 26 of its Notice on restrictions directly related and necessary to concentrations (2005) OJ C56/03 (the “European Commission Notice”). For more information, see [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52005XC0305\(02\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52005XC0305(02)&from=EN)



or procure directly or indirectly any other person to seek to procure orders from or do business with any person who has supplied or otherwise provided products, goods, materials or services to the Company at any time during the period of 12 months before the date of this Agreement". The duration of these non-procurement obligations does not exceed the maximum duration acceptable to the Commission. The Commission considers these non-procurement obligations to be directly related to and necessary for the implementation of the Proposed Transaction insofar as they relate to the State.

38. The Commission notes that Clause 14.1(f) imposes an obligation upon the Sellers or anyone controlled by them not to use in the course of business, "any trade or service mark, business or domain name, design or logo which at Completion, was or had been used in respect of the Business or which is capable of confusion with trade or service marks, business or domain names, designs or logos used by or otherwise proprietary to [JCI and/or Tyco] or [Airflow]". In addition, the Commission notes that, unlike the non-compete and non-solicitation obligations, the restriction contained in Clause 14.1(f) of the SPA is not limited in time. The Commission is of the view that, when read in the context of Clause 14 as a whole, Clause 14.1(f) appears to function as a 'copyright' clause. The Commission has not reached a view as to whether or not Clause 14.1(f) of the SPA is directly related and necessary to the implementation of the Proposed Transaction. Therefore, the Commission considers that Clause 14.1(f) of the SPA will not benefit from the protections offered by section 4(8) and 5(3) of the Act.



Determination

The Competition and Consumer Protection Commission, in accordance with section 21(2)(a) of the Competition Act 2002, as amended, has determined that, in its opinion, the result of the proposed acquisition whereby Tyco International Holding S.a.r.l., an indirect wholly-owned subsidiary of Johnson Controls International plc, would acquire the entire issued share capital of Airflow Services Limited, will not be to substantially lessen competition in any market for goods or services in the State, and, accordingly, that the acquisition may be put into effect.

For the Competition and Consumer Protection Commission

Brian McHugh

Member

Competition and Consumer Protection Commission