Gogo Inc. Form 10-K February 25, 2016 Table of Contents

## **UNITED STATES**

# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## FORM 10-K

(M	fark One):
X	ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACTOF 1934.
	For the fiscal year ended December 31, 2015
	OR
	TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.
	For the transition period from to
	Commission File Number: 001-35975

Gogo Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of

27-1650905 (I.R.S. Employer

**Incorporation or Organization**)

**Identification No.)** 

111 North Canal St., Suite 1500

Chicago, IL 60606

(Address of principal executive offices)

**Telephone Number (312) 517-5000** 

(Registrant s telephone number, including area code)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes x No "

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes "No x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No "

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No "

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer x

Accelerated filer

Non-accelerated filer " (Do not check if smaller reporting company) Smaller reporting company " Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes " No x

The aggregate market value of the voting and non-voting stock held by non-affiliates of the registrant as of June 30, 2015, the last business day of the registrant s most recently completed second fiscal quarter, was \$1,206,186,050 based upon the closing price reported for such date on the NASDAQ Global Select Market.

As of February 17, 2016, 85,913,206 shares of \$0.0001 par value common stock were outstanding.

## **Documents Incorporated By Reference**

Portions of the registrant s definitive Proxy Statement for its Annual Meeting of Stockholders scheduled to be held June 16, 2016 are incorporated by reference into Part III of this Form 10-K. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant s fiscal year ended December 31, 2015.

# Gogo Inc.

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## INTRODUCTORY NOTE

Unless the context otherwise indicates or requires, as used in this Annual Report on Form 10-K for the fiscal year ended December 31, 2015 references to: (i) we, us, our, Gogo, or the Company refer to Gogo Inc. and its directly and indirectly owned subsidiaries as a combined entity, except where otherwise stated or where it is clear that the term means only Gogo Inc. exclusive of its subsidiaries; (ii) CA, CA business or commercial aviation refers to our commercial aviation North American, or CA-NA, segment and our commercial aviation rest of world, or CA-ROW, segment, taken as a whole and (iii) fiscal, when used in reference to any twelve-month period ended December 31, refers to our fiscal year ended December 31. Unless otherwise indicated, information contained in this Annual Report is as of December 31, 2015. We have made rounding adjustments to reach some of the figures included in this Annual Report and, unless otherwise indicated, percentages presented in this Annual Report are approximate.

## **Cautionary Note Regarding Forward-Looking Statements**

Certain statements in this report may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, without limitation, statements regarding our industry, business strategy, plans, goals and expectations concerning our market position, international expansion, future technologies, future operations, margins, profitability, future efficiencies, capital expenditures, liquidity and capital resources and other financial and operating information. When used in this discussion, the words continue, could, anticipate, assume. believe. budget, estimate, expect, intend. should, future and the negative of these or similar terms and phrases are intended to identify forward-looking will, statements in this Annual Report on Form 10-K. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties that may cause actual results to differ materially. We describe risks and uncertainties that could cause actual results and events to differ materially under Risk Factors, and Qualitative Disclosures about Market Risk, and Management's Discussion and Analysis in this report. We undertake no obligation to update or revise publicly any forward-looking statements, whether because of new information, future events, or otherwise.

## Item 1. Business Who We Are

Gogo s mission is to advance aviation by connecting every aircraft with the most trusted communications services on and above our planet. We believe that aircraft connectivity is transforming the global aviation industry and that we are well-positioned to lead this transformation.

Gogo is the leading provider of in-flight connectivity and wireless entertainment solutions for the global aviation industry. We believe we deliver the most reliable communications services for global aviation, enabling our customers to operate with confidence and efficiency in connected aircraft. Our commercial aviation business, which operates through our CA-NA and CA-ROW segments, provides connectivity-based solutions that enable our airline partners to differentiate their service offerings, increase passenger satisfaction, unlock new revenue streams and achieve operational efficiencies. Our Gogo Business Aviation segment (BA) offers a broad suite of in-flight Internet connectivity and other voice and data communications products and services to the business aviation market.

Our full fleet solutions enable our airline partners and business aircraft owners and operators to benefit from connected aircraft by delivering in-flight connectivity-based services to passengers and connecting the aircraft and its crew with ground-based operations. We currently provide services on approximately 9,600 aircraft, which represents

more than 20% of the world s total commercial and business jet aircraft. Our scale position supports global operational execution, as well as a research and development program that enables us to pioneer groundbreaking technologies for the global aviation industry.

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### What We Offer

We believe we offer the global aviation industry an innovative and open connectivity platform that enables our customers to lower their operating costs and improve customer experiences.

Global Network Solutions. We have the broadest array of connectivity solutions in the commercial and business aviation sectors, which gives us the unique ability to offer each airline customer a solution tailored to particular aircraft types and flight routes. Our technology suite is designed to meet the cost, capacity, coverage, reliability and aero-performance requirements of airlines, aircraft owners and operators and their passengers around the world. This broad suite of network solutions enables us to provide Internet connectivity and in-flight entertainment to more aircraft and to offer full fleet solutions to more airlines than our competitors.

## Global Satellite Solutions for CA

2Ku: Our next generation global satellite solution, 2Ku, was announced to the market in 2014. Currently, 2Ku is installed and undergoing testing on our Boeing 737 test aircraft and an aircraft operated by one of our airline partners. 2Ku is expected to begin passenger revenue service in the first half of 2016. As of February 21, 2016, seven airlines have awarded approximately 800 aircraft to Gogo for 2Ku service on either a long term or trial basis. Of such awarded aircraft, approximately 240 are not yet subject to a definitive contract or amendment to an existing contract. 2Ku will initially launch on two foreign airlines, following through on our commitment to provide innovative solutions to both U.S. and international airlines. 2Ku employs two low-profile, highly efficient satellite antennas that provide twice the efficiency of our Ku-band service and significantly improve performance in equatorial regions, while also creating less drag and fuel burn as compared to other satellite alternatives. 2Ku is capable of delivering peak speeds in excess of 70 Mbps. Following the introduction of spot beam satellites, we expect 2Ku to provide peak speeds in excess of 100 Mbps with no antenna swap required. Because of the spectral efficiency of the 2Ku antenna, we believe that 2Ku will be the best solution in the market for delivering live television and other IP-based services to passengers, crews and airline operations.

<u>Ku</u>: Our first generation Ku-band satellite service utilizes the same satellite network as 2Ku and provides peak speeds of up to 40 Mbps. Our Ku system is currently installed on more than 200 aircraft operated by both foreign and domestic airlines, with approximately 40 additional aircraft under contract. We believe that our Ku system leads the industry in passenger experience with international coverage and predictable performance.

## Global Satellite Solutions for BA

<u>Iridium, SwiftBroadband (SBB)</u> and <u>Inmarsat s Global Xpress Jet ConneX (JX)</u>: Our satellite telecom services for business aircraft are currently comprised of our Iridium-based, SBB based and JX-based systems. We are the largest reseller of Iridium satellite service to the business aviation market, with 66 satellites and service capable of delivering peak speeds of up to 2.4 Kbps. The SBB satellite network provides near global coverage and is supported by three geostationary Inmarsat satellites in orbit and is capable of delivering peak

data transmission rates of up to 432 Kbps. JX, which will be supported by three satellites and is anticipated to offer peak transmission speeds of up to 33 Mbps, is expected to become operational in 2016. North American Solutions for CA-NA and BA

<u>ATG-4/ATG</u>: Our proprietary air-to-ground ( ATG ) broadband Internet connectivity services are available through our CA-NA and BA segments to commercial and business aircraft flying routes in the continental United States, Alaska and portions of Canada using our ATG-4 and ATG technologies. ATG-4 and ATG provide peak speeds to the aircraft of 9.8 Mbps and 3.1 Mbps, respectively. Our ATG/ATG-4 technologies offer a number of advantages as compared to satellite technologies for aircraft not flying over large bodies of water and requiring relatively low amounts of bandwidth, in particular smaller commercial aircraft, including regional jets, and business aircraft. These advantages

include a lower equipment profile and less weight, which reduce aircraft drag, fuel burn and associated operating costs, as well as lower equipment and installation costs. Our BA business provides ATG broadband Internet connectivity service, marketed as Gogo Biz, with equipment small and light enough for virtually any aircraft. As of December 31, 2015, we had 1,439 aircraft in CA-NA equipped with ATG and 948 aircraft equipped with ATG-4.

Airborne Equipment and Related Services. We offer a complete package of airborne equipment for our ATG-4/ATG and satellite services. For commercial aviation, we also offer installation, certification and maintenance services. We are required by the Federal Aviation Administration (FAA) to secure the necessary Supplemental Type Certificates (STC) for each aircraft type operated by each airline partner on whose aircraft our equipment will be installed on a retrofit basis, and foreign aviation authorities have similar requirements. Our ATG-4/ATG equipment can be installed overnight on a retrofit basis, so the aircraft does not go out of service, and we believe that we complete satellite installations more quickly than our competitors. We offer equipment repair and replacement services for all of our airline partners and are available to provide maintenance services on the aircraft upon request.

Although we have experienced robust growth to date conducting retrofit installations, our long term goal is to have factory installation ( line-fit ) available as an option for our major technology solutions. We are currently working with both mainline commercial aircraft original equipment manufacturers ( OEMs ) to qualify our wireless in-cabin network, our in-flight entertainment system ( Gogo Vision ) and our 2Ku solution for installation during aircraft manufacture.

Our BA business offers a number of hardware solutions, including the Universal Cabin System (UCS) 5000, business aviation is first all-in-one smart router and media server, which is a single system that manages and delivers connectivity, entertainment and information services, while managing multiple networks. UCS 5000 works with Gogo Biz and supports Gogo Text & Talk, which allows passengers to use their own smartphones to send and receive text messages, as well as make and receive phone calls (where permitted) while in flight. BA also offers Gogo OnePhone, a product that provides superior voice quality and noise reduction, is easy to use and is designed to complement business aircraft interiors.

## Passenger Services

<u>Passenger Connectivity</u>. Our connectivity service ( Passenger Connectivity ) allows passengers in the commercial and business aviation markets to connect to the Internet in-flight from their personal Wi-Fi enabled devices to browse the web, send and receive email and instant messages, access corporate VPNs and utilize other connectivity-based applications, including Gogo Text & Talk. We offer a variety of passenger access, billing and pricing options tailored to various devices, routes and session durations, in addition to monthly and annual subscriptions. Additionally, Gogo works with airlines, media partners and application providers to provide passengers access to a broad range of media content and connectivity-enabled applications.

<u>Passenger Entertainment</u>. Through Gogo Vision, our video-on-demand product accessible from passengers personal Wi-Fi enabled devices, we offer passengers in the commercial and business aviation markets the opportunity to enjoy a selection of in-flight entertainment options, which currently include on-demand movies and television shows. Our Gogo Vision product permits business aircraft operators in North America

to receive automatic content updates via our nationwide content delivery network, Gogo Cloud, or via a removable USB flash memory drive. In 2015, we introduced Gogo TV, which delivers live television content to passengers Wi-Fi enabled devices using our in-cabin network. Gogo TV will be available on aircraft installed with our 2Ku solution.

## Airline/Owner/Operator Services

Account Support. Our equipment sales and in-flight connectivity and entertainment services are accompanied by robust customer support. In CA, we have dedicated account and program management teams to support each airline partner s objectives, increasing passenger usage and providing regular reports of system performance and key service statistics. In BA, we have dedicated customer service,

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technical support and sales and engineering support teams committed to supporting our global customer base. In 2015, our BA business was recognized by Aviation International News for the fifth year in a row for its industry leading customer support. In a survey of cabin electronics manufacturers completed by business aviation customers, Gogo received first place awards in multiple customer support categories.

Network Monitoring and Management Services. We provide end-to-end solutions to our airline partners, saving them time and money. Our Network Operations Center (NOC) is the central location monitoring daily network operation and provides management and surveillance of network performance 24 hours a day, 365 days a year. Irrespective of the technology employed, our customized airborne network components, together with our data center network nodes, allow us to actively manage data traffic in order to maintain the speed and quality of the Gogo service through sophisticated bandwidth management.

<u>Passenger Support Services</u>. Our Passenger Connectivity services are supported by a variety of services and expertise, such as designing and implementing passenger access and pricing options and serving as the merchant of record for customer payments, including credit card processing. We are the only in-flight connectivity or entertainment provider to provide in-flight customer support. Our customer care contact center provides real-time support and customer service to passengers in-flight and consumers and enterprise customers on the ground 24 hours a day, 365 days a year, via real-time chat or email.

<u>Portal Design</u>, <u>Development and Hosting</u>. We are able to develop, deliver, maintain and host customized multi-language, multi-currency portals for our airline partners. We have developed a real-time, in-flight ad serving solution which enables us to provide destination specific content, messaging and merchandising through our customized portals.

<u>Connected Aircraft Services</u>. Our Connected Aircraft Services ( CAS ) consist of three distinct services designed to support the operational requirements of commercial airlines and business aircraft owners and operators and enable applications that improve the passenger experience and enhance operational efficiency.

Connectivity Services. Gogo has developed and is providing airline operational services (Connectivity Services) that benefit airline partners, aircraft owners and operators and passengers. For example, in CA our network currently supports real-time credit card processing for passenger food and beverage purchases on commercial aircraft and enables flight crews to access real-time weather information, electronic flight bags and voice services in the cockpit. Further, our BA business offers next generation Future Air Navigation System (FANS) over Iridium, which allows flight crews and air traffic controllers to exchange safety-sensitive information via a digital data link and enables automated position reporting via the aircraft s flight management system. FANS assists flight crews in obtaining preferential altitudes and routing to improve efficiency, reduce fuel consumption and save flight time. Our commercial airline partners and business aircraft owners and operators are increasingly demanding new applications that collect, analyze and transmit real-time performance and other data and view them as a competitive advantage. Going forward, we anticipate that flight and cabin crews, flight operation and maintenance teams will be able to utilize our Connectivity Services for their own operational purposes and to develop market-leading applications for functions such as network segmentation, encryption, performance management and usage auditing. As the

range and capabilities of such applications further develop and become available, we believe that we will be well-positioned to capitalize on this market demand. We generally charge for these Connectivity Services on a per Mb basis.

*Hosting Services*. Gogo provides application hosting capabilities on its airborne server, which enable airlines, business aircraft owners and operators, and select third parties to install software on the aircraft which can operate during flight. Hosting services provide airlines and aircraft owners and operators with a combination of processing, storage and access to key aircraft data, enabling advanced aircraft calculations and optimized flight performance.

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*Data Services*. Gogo enables airlines, aircraft owners and operators and industry suppliers access to key data from aircraft sensors, databases and crew inputs via application program interfaces in real-time. Such airborne access is combined with ground network input to provide comprehensive visibility into operations. These services are available for all aircraft types.

## **Our Business Segments and their Customers**

Our business is conducted through three segments: CA-NA, CA-ROW and BA.

<u>CA-NA</u>. Through CA-NA, we offer our broad range of connectivity and entertainment services to commercial airlines flying routes that generally begin and end within North America, which for this purpose includes the United States, Canada and Mexico, on commercial aircraft operated by Delta Air Lines, American Airlines, Alaska Airlines, Virgin America, United Airlines, AeroMexico (in testing phase) and Air Canada pursuant to long-term agreements. As of December 31, 2015, we had approximately 250 aircraft currently installed with ATG and ATG-4 that are contracted to be upgraded to 2Ku, our next generation satellite solution.

As of December 31, 2015, CA-NA had 2,387 aircraft online, 948 of which were equipped with ATG-4 and 1,439 with ATG, and Gogo Vision was in operation on approximately 1,800 of such aircraft. This segment generated revenue of \$310.7 million, \$250.8 million and \$199.1 million for the years ended December 31, 2015, 2014 and 2013, respectively. CA-NA segment profit was \$41.9 million and \$26.0 million for the years ended December 31, 2015 and 2014 respectively, and segment loss was \$1.3 million for the year ended December 31, 2013.

<u>CA-ROW</u>. Through CA-ROW, we offer our satellite-based connectivity and entertainment services to foreign-based commercial airlines and North American-based commercial airlines when flying routes outside of North America. We are currently providing Ku service on Delta Air Lines and Japan Air Lines and we plan to commence 2Ku service on Virgin Atlantic Airways and SBB service on Vietnam Airlines in 2016. In June 2015, we signed a long-term agreement with GOL, a Brazilian airline and Gogo s first South American airline partner, pursuant to which our 2Ku system will be installed on its entire fleet and in September 2015, Japan Transocean Air, a member of Japan Airlines group, selected Gogo to provide 2Ku and in-flight entertainment services for its new Boeing 737-800 aircraft fleet.

As of December 31, 2015, our CA-ROW segment had approximately 200 aircraft online and in operation with Gogo Vision. This segment generated revenue of \$11.6 million, \$2.1 million and \$1.6 million for the years ended December 31, 2015, 2014 and 2013, respectively. CA-ROW segment loss was \$76.4 million, \$78.1 million and \$41.0 million for the years ended December 31, 2015, 2014 and 2013, respectively. These results reflect that our CA-ROW business is still in the start-up phase, as we launched commercial international service in March 2014.

<u>BA</u>. Through BA, we offer a broad suite of in-flight Internet connectivity and other voice and data communications products and services under our Gogo Business Aviation brand to the business aviation market. We are the only provider of both equipment and services for three of the primary connectivity network services in the business aviation market: Gogo Biz, which delivers broadband Internet connectivity over our proprietary ATG network, and the Iridium and SBB satellite networks. In addition, we offer JX, which we expect to become operational in 2016. BA s customers include OEMs of business aircraft such as Cessna, Gulfstream, Bombardier, Learjet, Dassault Falcon, Embraer and Beechcraft, leading aftermarket dealers and all of the largest fractional jet operators including NetJets, Flexjet and Flight Options. We have a distribution network of approximately 170

independent certified dealers that serve locations in the U.S., Europe, Africa, South America and Asia. Since 2009, BA has evolved from primarily a hardware sales business to a provider of integrated equipment, network and services solutions. As of December 31, 2015, we had 3,477 Gogo Biz broadband systems online and 5,454 satellite systems online. This segment generated revenue of \$178.7 million, \$155.6 million and \$127.5 million for the years ended December 31, 2015, 2014 and 2013, respectively. BA segment profit was \$71.9 million, \$63.0 million and \$50.7 million for the years ended December 31, 2015, 2014 and 2013, respectively.

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### **Growth Strategy**

Our mission is to advance aviation by connecting every aircraft, using the following strategies:

### **Increase Number of Gogo-connected Aircraft**

Commercial Aviation. As of December 31, 2015, we provided our services on 2,589 of the approximately 19,900 existing global commercial aircraft. We have contracts to install our equipment and provide our services on approximately 800 additional aircraft (with approximately 220 deinstallations expected to occur over the next few years due to aircraft retirements). We plan to leverage our unique ability to cost-effectively equip each commercial aircraft type in an airline s fleet to increase the number of Gogo-equipped aircraft, targeting full-fleet availability of the Gogo service for all of our airline partners. We continue to pursue this significant global growth opportunity by leveraging our strong commercial aviation partnerships, broad and innovative technology platform and operational expertise. We also expect to increase the number of aircraft on which we provide service once we qualify for line-fit installation with Boeing and Airbus, as having connectivity as a factory option is desirable for many airlines because it avoids taking aircraft out of service for installation. We have started the technical review process for our 2Ku solution with Boeing, and in 2015, the parties jointly approved Gogo s in-cabin network and Gogo Vision for Boeing 737, 777 and 787 aircraft. With respect to Airbus, we are working towards obtaining approval as a qualified supplier, the first step in achieving line-fit capabilities for our 2Ku solution. Upon approval as an Airbus qualified supplier, we plan to pursue initial line-fit positions for our major equipment onboard A350 and A320 aircraft. We also have a global sales force and an operational near-global Ku-band network that currently provides coverage to more than 240 countries and territories. We received our first 2Ku STC in late 2015 and we expect 2Ku to become commercially available in the first half of 2016.

Further, we offer attractive business models to our airline partners, giving them the flexibility to determine the connectivity solution that meets the unique demands of their business. These solutions include a turnkey solution, an airline-directed model and various hybrid options. In our turnkey solution, we provide the airline with the full range of our services and we manage the bandwidth to the aircraft, with the goal of maximizing joint profitability and collecting passenger fees. Under the airline-directed model, the airline has the ability to determine which of our many end-to-end solutions it wants us to provide and which services it wants to provide itself. Under this model, the airline collects the passenger fees and we charge the airline based on the amount of bandwidth used and other services provided by Gogo.

Business Aviation. As of December 31, 2015, the business aviation market was comprised of more than 22,800 business aircraft in North America and approximately 7,300 business aircraft in the rest of the world. As of December 31, 2015, we had approximately 7,000 business aircraft online. We believe our integrated combination of equipment, networks, services and support is unmatched in its breadth by any competitor. We plan to leverage our existing ATG network to expand in North America and to use Inmarsat SBB and JX to grow our business internationally. In 2015, we continued to expand our Gogo Biz product line and our target market by adding systems designed for smaller aircraft, such as ATG 1000, which provides voice, high-performance e-mail, calling and texting with passengers own smartphones and mobile numbers and support for select cockpit and operational applications through partnerships with various application providers. In 2015, we also expanded our airtime pricing options by introducing additional monthly plans and bundling programs and debuted a number of additional customer support capabilities. We are also working with all major business aviation OEMs to qualify our wireless in-cabin network, which will offer Gogo Vision as well as our ATG solutions, for installation during

aircraft manufacture and we expect that this offering will increase the number of Gogo connected aircraft. **Increase Revenue per Aircraft** 

We believe the needs of connected aircraft will continue to drive average revenue per aircraft ( ARPA ) and that passenger connectivity is currently the most important component in this calculation. Over time, we expect ARPA will also be driven by the use of operational applications as they become a more important factor in total revenue. We believe additional capacity is critical to growing ARPA.

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Our strategies for increasing passenger revenue include the following:

<u>Increase Passenger Use of Connectivity</u>. Our Passenger Connectivity is compatible with a broad range of Wi-Fi enabled devices, including tablets, laptops, notebooks, smartphones and e-readers. We intend to increase our connectivity take rate through the following:

Increase Network Capacity. We have been executing on our technology roadmap through our on-going deployment of ATG-4, which increases CA-NA network capacity and supports greater passenger use and the growing demand for our connectivity-based services. As of February 21, 2016, we expect to install 2Ku on approximately 800 aircraft (approximately 240 of which are awarded, but not yet subject to a definitive contract or amendment to an existing contract), with the majority of installations expected by the end of 2018, and this technology will provide increased capacity to our overall network. As many of such aircraft will operate in our ATG network area, once installed or upgraded, we also expect 2Ku to provide relief from our ATG capacity constraints.

Increase Flexible Pricing and Payment Options. In our CA business, in order to appeal to a broad spectrum of travelers, we intend to continue to tailor our pricing and access options to various devices, routes, session durations and products. In CA, passengers can utilize Passenger Connectivity by registering and paying for in-flight connectivity sessions that are offered in a variety of formats: time-based passes, route-based passes, day passes or subscription products. We offer the ability to purchase in-flight, on the ground through our website and certain of our airline partners—websites, and through other third parties. Passenger Connectivity is also available to airline passengers through third parties sponsoring complimentary Passenger Connectivity, roaming partners (Passenger Connectivity sold to ground-based Wi-Fi Internet providers or gateways who resell to their customers) and on a wholesale basis (Passenger Connectivity sold to companies who in turn make Passenger Connectivity available through customer loyalty programs). Additionally, we accept alternative payment methods in addition to credit cards, which gives passengers additional flexibility.

Through BA, we expect to continue to offer flexible pricing for our broadband and voice services, allowing aircraft operators and owners various options based on data usage, flight frequency and number of aircraft serviced. For example, we provide our Gogo Biz service to business aircraft operators and owners on fixed usage or unlimited monthly service plans, and in 2015 we introduced new airtime programs, which include multi-network data bundling plans, multi-aircraft discount plans, unlimited data plans and the Gogo Biz 100 data plan, an additional option for lighter bandwidth users.

Increase Deployment and Usage of Entertainment and Other Content Services. We currently plan to increase the number of commercial aircraft equipped with Gogo Vision from more than 2,000 aircraft at December 31, 2015 to more than 2,500 aircraft by the end of 2016. We offer our airline partners the choice of sourcing their own content or having us source it for them. We intend to continue to expand the library of on-demand movies and television shows available through Gogo Vision by further collaborating with movie studios, television networks and other content providers. Depending on the airline, Gogo Vision may be purchased directly from Gogo or provided by the airline on a paid or complimentary basis (such as Delta Air Lines Delta Studio offering). From time to time, third parties may sponsor complimentary access to Gogo Vision on one or more airlines.

Grow Revenue from New Services. We will continue to innovate and introduce new services and product offerings. For example, in 2014 we began offering Gogo Text & Talk. This low bandwidth service is expected to generate incremental revenue with minimal additional operating costs or investments in our existing technology infrastructure and can be offered at a lower price than Passenger Connectivity. Accordingly, we expect the service will expand our user base and create a new revenue stream, including through sponsored campaigns. For example, in 2014, we entered into an agreement with T-Mobile to deliver free in-flight texting and voicemail to its customers on all Gogo equipped U.S. commercial airlines. The term of the agreement was extended in 2015 and its initial term will expire in September 2017. In addition, we offer our media partners opportunities that include digital marketing campaigns on our portal, sponsorships, and e-commerce, where we generate revenue from ad placement and we earn revenue share on transactions made through the portal.

Expand Connected Aircraft Services. Our Connectivity Services can be used to provide connectivity to the cabin crew and cockpit and enable remote diagnostics of aircraft components, engines avionics and hydraulics. We intend to continue to expand our Connected Aircraft Services to support airlines—use of what we expect to be a growing number of increasingly sophisticated applications designed to improve the passenger experience and operational efficiency. By enabling airlines and aircraft operators to integrate their aircraft with their ground-based information technology infrastructure, we expect our Connected Aircraft Services will facilitate the use of connectivity-based applications that collect, analyze and use real-time data, disseminate critical flight data to pilots in-flight and direct communication with passengers and crew, and provide real time diagnostics for the airline and aircraft. Additionally, because of our close connection to the aircraft and our application platform, we believe that we are well-positioned to support suppliers of certain aircraft components and systems that seek to monitor and transmit data related to the performance of their products.

## **Innovate and Evolve Our Technology and Operations**

We will continue to innovate and evolve our technology platform to support global capacity demands, facilitate the roll-out of new service offerings and improve the performance and reliability of our existing offerings. To this end, we will continue to:

Innovate and Deploy New Solutions. We offer the broadest and most innovative array of in-flight connectivity technologies currently available in the market, including 2Ku, our next generation satellite technology, ATG-4/ATG and other satellite technologies so that our airline and aircraft customers can select the best solution for a given fleet based on aircraft sizes and routes. We received our first STC for 2Ku in late 2015 and expect to install 2Ku on over 800 aircraft (approximately 240 of which are awarded, but not yet subject to a definitive contract or amendment to an existing contract), with the majority of such installations expected to be completed by the end of 2018. We will continue to roll-out ATG-4 to more aircraft, expand the number of cell sites in our ground network and otherwise optimize the network. In 2015, our BA segment announced the introduction of ATG 1000, which enables bandwidth solutions for light jets, turboprops and owner-flown aircraft, to further expand its catalog of Gogo Biz products.

We will continue to expand our global satellite network coverage through the purchase of additional Ku-band and SBB capacity, and install more aircraft with our satellite solutions, while continuing to invest in research and development of satellite antenna and modem technologies. We will also continue to work with satellite service providers to influence the design and performance parameters of next generation satellites to provide near global coverage and increased satellite redundancy. We also continue to invest in research and development for next generation, spectrally efficient ATG solutions.

Invest in Operational Excellence. Gogo s technology supports the largest fleet of connected aircraft in the world and we have acquired significant technological and operational know-how and developed long-term and robust supplier relationships. We plan to enhance our ability to install new equipment and upgrade our installed equipment and software, including installation of Gogo Vision, overnight upgrades to our ATG-4 technology, and installations and upgrades to Ku-band satellite technology, through our strategically located installation and maintenance teams and our advanced monitoring and remote software management capabilities.

### **Contracts with Airline Partners**

In our CA business we enter into connectivity agreements with our airline partners that allow our ATG, satellite equipment and/or entertainment services to be installed, and the Gogo service provided, on their aircraft. Under these

agreements, the airlines commit to have our equipment installed on some or all of the aircraft they operate, and we commit to provide Passenger Connectivity and/or entertainment services on such aircraft and to remit to the airlines a specified percentage of the service revenue that we generate. Under certain of our connectivity agreements, our airline partners will also become obligated to pay us monthly service fees for satellite-based connectivity service once the service becomes available on their aircraft. We have the exclusive

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right to provide Internet connectivity services on Gogo-installed aircraft throughout the term of the agreement in contracts with airline partners from which we derive a substantial majority of our CA revenue. The majority of our contracts with our airline partners have 10-year staggered terms, with expiration occurring on a fleet by fleet basis based on installation dates or on a contract basis, depending on the contract. Under our current contracts, the first expiration will occur in 2017 and the last in 2027.

Historically, our CA business has offered our airline partners a turnkey model, under which we provide the airline with the full range of our services, charge the passenger for Passenger Connectivity or Gogo Vision services and remit to the airline a specified percentage of passenger revenue. Under such model, for satellite-based connectivity services, the airline typically pays Gogo a monthly fee for network monitoring and management services. We have recently begun to offer and provide the airlines the additional option of an airline-directed model, whereby the airline partner has flexibility to determine which of the many end-to-end services it wants Gogo to provide and which services it wants to provide itself. For example, the airline may elect to assume responsibility for directly distributing in-flight connectivity and entertainment services to its passengers rather than using us as the distributor; in such case, we and the airline will determine a fee structure that compensates us for connectivity and the bandwidth consumed and any other services for which Gogo has responsibility.

Depending on the contract, installation and maintenance services may be performed by us and/or the airline. The agreements also vary as to who pays for installation and maintenance of the equipment. In addition, under contracts with airline partners from which we derive a substantial majority of our CA revenue, we are obligated, subject to certain limitations, to upgrade or improve the equipment installed on each such airline s fleet, at our expense, if we provide connectivity services to another airline that constitute a material improvement with respect to the functionality and/or reliability of the connectivity service offered at that time to such airline partners. Under certain contracts, we may also incur additional obligations or our airlines may be entitled to greater portions of connectivity revenue based on the number of aircraft installed with our equipment and the timing of such installations. Our contracts with certain of our airline partners set forth specified timelines for the installation of certain equipment, and our failure to meet such timelines requires us to credit or pay our airline partners liquidated damages and/or cover a portion or all of the costs of installing alternative equipment on certain aircraft. See Risk Factors Risks Related to Our CA Business A failure to maintain airline satisfaction with our connectivity equipment or the Gogo service could have a material adverse effect on our revenue and results of operations. Our connectivity agreements with one of our airline partners, from which we derive a significant portion, but less than a majority, of our CA-NA segment revenue, entitles our airline partner to a higher connectivity revenue share if our service is available on a specified number of aircraft in our airline partner s fleet.

The connectivity agreements require that Gogo and the airline engage in independent and joint marketing efforts intended to increase awareness and usage of our services. As of December 31, 2015, under agreements with five of our airline partners, the scope of the services that we provide has been expanded to include Gogo Vision and we are discussing with other airline partners the possibility of providing Gogo Vision on their installed fleets. We also provide under certain agreements content filtering and CAS, such as real-time credit card processing for passenger food and beverage purchases, flight crew access to real-time weather information, electronic flight bags and voice services in the cockpit.

Revenue from passengers using our service while flying on aircraft operated by Delta Air Lines accounted for approximately 28% of our consolidated revenue for the year ended December 31, 2015. We have three contracts with Delta. The contracts for ATG service on Delta Air Lines mainline and regional jet fleets expire on the 13-year anniversary of specified installation milestones. The mainline fleet expiration will occur in 2022 and the regional jet expiration will occur in 2025. Our contract with Delta Air Lines for Ku-band satellite service on its international fleet expires on March 1, 2027. Our contract with Delta Air Lines for 2Ku service expires on the earlier of the 10-year

anniversary of a specified installation milestone that has not yet occured and February 2027. Revenue from passengers using the Gogo service while flying on aircraft operated by American Airlines

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(including legacy US Airways aircraft) accounted for approximately 22% of our consolidated revenue for the year ended December 31, 2015. While American Airlines and US Airways have combined into one entity, we still have separate contracts for each legacy airline. Our contract with American Airlines for its domestic aircraft has different expiration dates for different fleet types. Generally the contract with respect to each fleet type expires on the 10-year anniversary of the date on which 90% of such fleet type has been installed with our ATG equipment, with the first expiration date occurring in 2018 and the last in 2025. Our contract with American Airlines for ATG-4 and Ku-band satellite service on its Airbus A320 and Boeing 737 fleets contract expires on the 10-year anniversary of the date on which we first charge passengers on its Airbus A320 fleet in connection with their use of our connectivity services. Our contract with US Airways for ATG-4 on its domestic aircraft expires in 2022. No other contract accounted for more than 10% of our consolidated revenue for the year ended December 31, 2015. Each of our contracts with Delta Air Lines and American Airlines allows the airline to terminate the contract should the percentage of passengers using the Gogo service on the airline s flights not meet certain thresholds. We currently experience, and for the last four years have experienced, connectivity take rates in excess of those thresholds. Our contracts with Delta Air Lines and American Airlines also permit these airlines to terminate their contracts prior to expiration upon the occurrence of other certain contractually stipulated events, including the circumstance in which another company provides an alternate connectivity service that is a material improvement over Passenger Connectivity, such that failing to adopt such service would likely cause competitive harm to the airline, and we are unable to match the competitive offer in terms of price, technology and schedule. See Risk Factors Risks Related to Our CA Business We are dependent on agreements with our airline partners to be able to access the passengers. Payments by these passengers for our services have provided, and we expect will continue to provide, a significant portion of our revenue. Our failure to realize the anticipated benefits from these agreements on a timely basis or to renew any existing agreements upon expiration or termination could have a material adverse effect on our financial condition and results of operations, Factors Risks Related to Our CA Business If we are unable to successfully implement planned or future technology enhancements to increase our network capacity, or our airline partners do not agree to such enhancements, our ability to maintain sufficient network capacity and our business could be materially and adversely affected and Risk Factors Risks Related to Our CA Business A failure to maintain airline satisfaction with our equipment or the Gogo service could have a material adverse effect on our revenue and results of operations. If our contracts with Delta Air Lines or American Airlines were to be terminated for any reason, it would have a material adverse effect on our CA-NA segment.

## Manufacturing, Installation and Maintenance

We have two manufacturing and assembly facilities and have fostered manufacturing, installation and maintenance relationships to provide quality service in our product offerings. Our CA and BA manufacturing activities take place at FAA-certified manufacturing and production facilities in Bensenville, Illinois and Broomfield, Colorado, respectively. The facilities are FAA-certificated repair stations and are operating in accordance with FAA-issued ratings and quality control systems, pursuant to FAA regulations. The repair stations—authorized activities include receiving, inspecting, equipment and system testing, kitting, warehousing and completion of regulatory shipping documentation. We work with our airline partners and third-party vendors to install and maintain our equipment on aircraft. Some of our airline partners choose to use their own mechanics to provide installation and maintenance services, in which case we provide training and on-site installation support and logistics. Other airlines look to us for these services as all of our installation and maintenance vendors meet the certification requirements established by the airlines and the FAA.

## **Technology Infrastructure**

Our proprietary ATG network and technology platform, consisting of both hardware and software in the aircraft and on the ground, have been designed and developed to create highly compelling user experiences and enable future

domestic and international service and product growth, while managing the bandwidth and regulatory constraints associated with in-flight media and content delivery. We have developed sophisticated custom software and hardware that optimizes the air-to-ground link (direct air-to-ground and satellite-based) and traffic through the ability to monitor end-to-end network performance from the ground. Our network and systems

architecture was designed to evolve with best of breed technologies and enable us to employ new technological innovations across our own ATG network and third-party satellite networks using Ku-band satellite service.

Our expenditures for research and development are charged to expense as incurred and totaled \$50.1 million, \$40.1 million and \$32.7 million for the years ended December 31, 2015, 2014, and 2013, respectively.

### Our ATG Network

Since winning the FCC auction for the broadband (3 MHz) portion of the ATG spectrum in 2006, we have held the exclusive spectrum license that allows us to be the sole provider of in-flight broadband services in the United States based on a direct aircraft to ground link using spectrum reserved for ATG services. In the second quarter of 2013, we consummated the acquisition of LiveTV Airfone, LLC ( Airfone ), through which we acquired the FCC license for 1 MHz of ATG spectrum ( 1 MHz FCC License ) held by LiveTV, LLC ( LiveTV ). In 2012, Industry Canada issued to our Canadian subsidiary the exclusive rights to use Canadian ATG spectrum for which SkySurf is the primary licensee (the License Agreement ). The License Agreement has an initial term of ten years and is renewable at our option for an additional 10-year term following the initial expiration and thereafter for a further five-year term.

We have coverage over the continental United States and Canada. As of December 31, 2015, our ATG network in the continental United States and Canada consisted of approximately 250 cell sites (approximately 1,465 sectors). We expect to add more cell sites in each of the next several years to maintain efficient delivery of our growing mobile broadband services.

These sites are connected to our data centers, which are in turn connected to the Internet. This connectivity is provided by a state-of-the-art Multi-protocol Label Switching (MPLS) network and a flexible and scalable IP-based infrastructure. The cell sites were originally connected to the MPLS network using last mile copper (T1) facilities and microwave link where last mile copper-based facilities were not available. In 2012, we began converting the backhaul network from the cell sites to our data center to a fiber optic-based network (from copper T1 network) and by the end of 2014, the majority of the cell sites were converted to fiber.

On May 9, 2013, the FCC issued a notice of proposed rulemaking to designate spectrum in the 14.0-14.5 GHz band (the 14 GHz spectrum) for the purpose of providing broadband connectivity, or ATG service, to aircraft flying within the contiguous United States. As a result of this rulemaking process, the FCC has prepared a draft order to auction off spectrum for ATG use, which spectrum would have greater capacity than our current spectrum and could be licensed to multiple parties. It is unclear whether and when the FCC will issue an order designating the 14 GHz spectrum for ATG use. If an auction of such spectrum is held, we may elect to participate.

We are currently exploring various options with respect to developing and implementing a next generation air-to-ground technology in order to increase bandwidth speeds and provide additional capacity in the contiguous United States. Our development and implementation of a next generation air-to-ground technology will require that we obtain rights to sufficient 14 GHz spectrum or other spectrum.

### Our Satellite Networks

We have near-global Ku-band satellite service using service provided by our satellite capacity providers. We obtained our first 2Ku STC in late 2015, and 2Ku is expected to be commercially available to passengers in the first half of 2016. 2Ku employs two low-profile, highly efficient satellite antennas (one for transmission to the aircraft and the other for transmission from the aircraft) that provide twice the spectral efficiency of our Ku-band service and significantly improves coverage in equatorial regions and results in less drag and fuel burn as compared to other

satellite alternatives. Our 2Ku satellite antennas can be used in conjunction with all Ku-band satellites in operation today. Additionally, today s 2Ku is designed to be ready for the future with the ability to operate with spot beams and certain other Ku-band high throughput satellites (HTS), which have started to launch in 2016, and is compatible with approximately 180 Ku satellites operated by a variety of satellite operators.

Our Iridium service is supported by a network of 66 Iridium satellites in low-earth orbit. In addition, we launched SBB service in 2014, which is supported by three geostationary (Inmarsat I-4) satellites in orbit. Supported by three satellites, our high bandwidth JX offering is expected to become operational in 2016.

### Our Airborne Network

Onboard the aircraft, users are connected to our service through the aircraft-based Wi-Fi network that is created by our installed airborne system. Our airborne network includes core module components (including an onboard server, or ACPU, wireless access points, or WAP, and optionally a content loading device, or CLD, and handsets for cockpit/crew use) and technology-specific communication components (including a modem, amplifier, antenna and radome). We leverage standard technology and components in our system where available and design our system by selecting, assembling and packaging components that can withstand temperature, pressure and vibration on aircraft in-flight. We are continuing to innovate and develop advanced technologies for storage, processing and connectivity for the in-cabin airborne network.

Our customized airborne network allows us to actively manage data traffic in order to mitigate capacity constraints through sophisticated bandwidth management, including by placing cached content directly on the airborne network, which increases the speed and quality of our service.

### Our Ground Network (Data Centers and NOC)

Our primary data center, which services our ATG and satellite technologies, with redundant telecommunications connections to the Internet, also contains numerous servers associated with hosting our in-flight and ground portals and the network nodes that enable the rich set of features offered through the Gogo platform. Most of the data center nodes are common to various technologies, including ATG/ATG-4 and satellite links to an aircraft, while some nodes are technology specific.

The NOC, located in our Chicago, Illinois facility, serves as the central location that monitors daily network operation, conducts network diagnostics and coordinates responses to any performance issues on the ground or in the air. The NOC provides 24 hours a day, 365 days a year management and surveillance of network performance and activities through the use of network management and reporting systems that interface with all network elements and have the ability to track the progress and status of all our equipped aircraft in-flight, regardless of the technology used to provide in-flight connectivity.

### **Competition**

### **Commercial Aviation**

Our key competitors include ViaSat, Panasonic Avionics Corp., Global Eagle Acquisition Corp./Row 44, Inc., OnAir, Thales/LiveTV, Inmarsat, Zodiac Inflight Innovations and Rockwell Collins/ARINC, all of which provide different technologies and strategies to provide in-flight connectivity and/or entertainment. Regardless of the delivery mechanism(s) used by us or our competitors, the in-flight Internet connectivity industry as a whole faces, and is expected to continue to face capacity constraints, which are expected to increase due to increased demand for in-flight Internet. We believe we are the only telecommunications company focused exclusively on the global aviation industry and addressing the connectivity requirements unique to an aircraft by building a global telecommunications infrastructure. We believe the key differentiating factors between us and our competitors include: technology solutions, geographical coverage, operational excellence, and service models offered to airlines. Specifically, the strategic priorities of each of our competitors varies, including technologies available for various aircraft types, the

ability to offer in-flight Internet solutions as well as entertainment offerings, such as live television and traditional hard-wired in-flight entertainment systems, the ability to cost-effectively provide offerings on a global basis, the ability to manage capacity constraints, and the ability to offer, incorporate and manage new in-flight connectivity technologies and solutions as they become available.

### **Business Aviation**

Gogo is the only equipment and service provider of all three networks: ATG, SBB and Iridium. We compete against both equipment and telecommunications service providers to the business aviation market, including International Communications Group and True North Avionics for Iridium hardware business, Rockwell Collins and Honeywell Aerospace for Inmarsat SBB hardware business, Satcom Direct for both Iridium and Inmarsat SwiftBroadband service, as well as for cabin router equipment, and ViaSat for Ku service. SmartSky Networks, Global Eagle Acquisition Corp. and Panasonic Avionics Corp. (with Astronics Aerosat Corporation) all recently announced their intention of entering the business aviation market.

## **Licenses and Regulation**

### Federal Aviation Administration

The FAA prescribes standards and certification requirements for the manufacturing of aircraft and aircraft components, and certifies and rates repair stations to perform aircraft maintenance, preventive maintenance and alterations, including the installation and maintenance of aircraft components. Each type of aircraft operated in the United States under an FAA-issued standard airworthiness certificate must possess an FAA Type Certificate, which constitutes approval of the design of the aircraft type based on applicable airworthiness standards. When a party other than the holder of the Type Certificate develops a major modification to an aircraft already type-certificated, that party must obtain an FAA-issued STC approving the design of the modified aircraft type. We regularly obtain an STC for each aircraft type operated by each airline partner on whose aircraft our equipment will be installed and separate STCs typically are required for different configurations of the same aircraft type, such as when they are configured differently for different airlines.

After obtaining an STC, a manufacturer desiring to manufacture components to be used in the modification covered by the STC must apply to the FAA for a Parts Manufacturing Authority, or PMA, which permits the holder to manufacture and sell components manufactured in conformity with the PMA and its approved design and data package. In general, each initial PMA is an approval of a manufacturing or modification facility—s production quality control system. PMA supplements are obtained to authorize the manufacture of a particular part in accordance with the requirements of the pertinent PMA, including its production quality control system. We routinely apply for and receive such PMAs and supplements.

Certain of our FCC licenses are conditioned upon our ability to obtain from the FAA a No Hazard Determination for our cell sites which indicates that a proposed structure will not, if built as specified, create a hazard to air navigation. When proposing to build or alter certain of our cell sites we may first be required to obtain such a determination.

Our business depends on our continuing access to, or use of, these FAA certifications, authorizations and other approvals, and our employment of, or access to, FAA-certified individual engineering and other professionals.

In accordance with these certifications, authorizations and other approvals, the FAA requires that we maintain, review and document our quality assurance processes. The FAA may also visit our facilities at any time as part of our agreement for certification as a manufacturing facility and repair station to ensure that our facilities, procedures, and quality control systems meet FAA approvals we hold. In addition, we are responsible for informing the FAA of significant changes to our organization and operations, product failures or defects, and any changes to our operational facilities or FAA-approved quality control systems. Other FAA requirements include training procedures and drug and alcohol screening for safety-sensitive employees working at our facilities.

## Foreign Aviation Regulation

According to international aviation convention, the airworthiness of FAA-certified Gogo equipment installed on U.S.-registered aircraft is recognized by civil aviation authorities ( CAAs ) worldwide. As a result, Gogo does not expect to require further airworthiness certification formalities in countries outside of the United

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States for U.S.-registered aircraft that already have an STC issued by the FAA covering Gogo equipment. For aircraft registered with a CAA other than the United States, the installation of Gogo equipment requires airworthiness certification from an airworthiness certification body. Typically, the CAA of the country in which the aircraft is registered is responsible for ensuring the airworthiness of any aircraft modifications under its authority.

The FAA holds bilateral agreements with a number of certification authorities around the globe. Bilateral agreements facilitate the reciprocal airworthiness certification of civil aeronautical products that are imported/exported between two signatory countries. A Bilateral Airworthiness Agreement (BAA) or Bilateral Aviation Safety Agreement (BASA) with Implementation Procedures for Airworthiness (IPA) provides for airworthiness technical cooperation between the FAA and its counterpart civil aviation authorities. Under a BAA or BASA, the CAA of the aircraft s country of registration generally validates STCs issued by the FAA and then issues a Validation Supplemental Type Certificate (VSTC). For countries with which the FAA does not have a BAA or BASA, Gogo must apply for certification approval with the CAA of the country in which the aircraft is registered. In order to obtain the necessary certification approval, Gogo will be required to comply with the airworthiness regulations of the country in which the aircraft is registered. Failure to address all foreign airworthiness and aviation regulatory requirements at the commencement of each airline partner s service in any country in which they register aircraft when there are no applicable bilateral agreements may lead to significant additional costs related to certification and could impact the timing of our ability to provide our service on our airline partners fleet.

To date, we have received the foreign aviation regulatory approval required to install and operate Gogo Vision systems onboard aircraft of two non-U.S. airlines with aircraft fleets registered in two different countries. We will pursue such additional approvals as and when necessary.

### Federal Communications Commission

Under the Communications Act of 1934, as amended (the Communications Act ), the FCC licenses the spectrum that we use and regulates the construction, operation, acquisition and sale of our wireless operations. The Communications Act and FCC rules also require the FCC s prior approval of the assignment or transfer of control of an FCC license, or the acquisition, directly or indirectly, of more than 25% of the equity or voting control of Gogo by non-U.S. individuals or entities.

Our various services are regulated differently by the FCC. Our BA business provides some of its voice and data services by reselling the telecommunications services of two satellite operators. Because we provide these services on a common carrier basis, we are subject to the provisions of Title II of the Communications Act, which require, among other things, that the charges and practices of common carriers be just, reasonable and non-discriminatory. In addition, our BA division has launched an interconnected voice over Internet protocol (VoIP) service. The FCC applies many, but not all, of the same regulatory requirements to interconnected VoIP service as it does to common carrier telecommunications services.

We provide broadband Internet access to commercial airlines and passengers as Passenger Connectivity and to our Business Aviation customers as Gogo Biz. We offer this service in the continental United States through our own facilities, using a nationwide commercial air-ground radiotelephone license that operates in the 800 MHz band (the ATG license). We obtained and paid for this spectrum through an auction conducted by the FCC. See ATG License Terms and Conditions.

Previously, our mobile wireless broadband Internet access services, including Passenger Connectivity and Gogo Biz, were classified as information services, and not as telecommunications services. Therefore, these services were not subject to FCC common carrier regulation. However, effective June 12, 2015, the FCC has reclassified mobile (and

fixed) broadband Internet access services as Title II telecommunications services in an order released March 12, 2015 ( Open Internet Order ). The Open Internet Order also adopted broad new net

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neutrality rules. For example, broadband providers may not block access to lawful content, applications, services or non-harmful devices. Broadband providers also may not impair or degrade lawful Internet traffic on the basis of content, applications, services or non-harmful devices. In addition, broadband providers may not favor some lawful Internet traffic over other lawful traffic in exchange for consideration of any kind, and they may not prioritize the content and services of their affiliates. Other than for paid prioritization, the rules contain an exception for reasonable network management. The Open Internet Order recognizes that whether a network management practice is reasonable varies according to the broadband technology involved, and provides more flexibility to implement network management practices in the context of Gogo s capacity-constrained air-to-ground and satellite broadband networks.

The FCC order also imposes new disclosure requirements on broadband providers, including more granular network performance reporting requirements. These new requirements have not gone into effect and are subject to further Executive Branch review. Moreover, the FCC has temporarily exempted smaller providers, such as Gogo, from its enhanced disclosure requirements. The Consumer and Government Affairs Bureau released an order on December 15, 2015, extending the exemption until December 15, 2016. Until the disclosure requirements are finalized, we cannot assess what impact they will have on Gogo s practices.

Our Internet access service has also been covered by the FCC s data roaming rules, which require commercial mobile data service (CMDS) providers like Gogo to negotiate roaming arrangements with any requesting facilities-based, technologically compatible providers of CMDS. The rules do not give other providers the right to install equipment on Gogo-equipped aircraft, and do not require the Gogo service to be provided on a discounted basis, although the arrangement must be commercially reasonable. The rules allow us to take reasonable measures to safeguard the quality of our service against network congestion that may result from roaming traffic. The Open Internet Order did not alter Gogo s obligations with respect to data roaming, but the FCC has committed to revisiting data roaming rules in the near term.

In addition, most of our services are subject to various rules that seek to ensure that the services are accessible by persons with disabilities, including requirements related to the pass-through of closed captioning for certain IP-delivered video content offered through our Gogo Vision service.

In addition to the ATG license, we hold other FCC licenses, including microwave licenses that are used for backhaul in our terrestrial network, two experimental licenses used for testing equipment, a non-exclusive license at 3650 MHz, which currently does not authorize operational use and would require registration with the FCC of transmitter site locations prior to commencing use, and the 1 MHz FCC License acquired in our acquisition of Airfone. We also hold a license for blanket authority to operate Ku-band satellite transceivers on up to 2,000 aircraft, which allows us to provide domestic and international broadband service (although some countries require additional authorizations of their own).

### ATG License Terms and Conditions

The FCC issued our ATG license on October 31, 2006, for an initial 10-year term. We have satisfied our obligation under the license to provide substantial service to aircraft. Upon the expiration of the initial term of our license in October 2016, we may renew our license for additional ten-year terms at no additional cost. At the end of each term, to renew the license, we are required to file an application for renewal. If that application is challenged, the FCC will apply a preference, commonly referred to as a renewal expectancy, if we can demonstrate that we have both provided substantial service during the past license term and substantially complied with applicable FCC rules and policies and the Communications Act. In 2010, the FCC proposed to amend its license renewal rules to require more detailed renewal showings. That proposal remains pending.

Our 1 MHz FCC License obtained in 2013 from LiveTV was also originally issued on October 31, 2006, for a renewable ten year term, although there is no substantial service obligation that attaches to this license.

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Our ATG license and our 1 MHz FCC License both contain certain conditions that require us to comply with all applicable FCC and FAA rules as well as all bilateral agreements between the U.S. and Canada and the U.S. and Mexico regarding the frequencies that are allocated for ATG services. These agreements apply to our use of the spectrum in areas adjacent to the United States northern and southern borders and in and out of Canadian and Mexican airspace.

A bilateral ATG spectrum coordination agreement between the U.S. and Canada has been negotiated and approved and a similar agreement between the U.S. and Mexico is in the process of being negotiated. In 2012, Industry Canada issued to our Canadian subsidiary a subordinate license that allows us to use Canadian ATG spectrum of which SkySurf Communications Inc. is the primary licensee. In 2012, we entered into the License Agreement with SkySurf, which has an initial term of ten years commencing on August 14, 2012, and, provided that the primary spectrum license agreement issued by Industry Canada to SkySurf remains in effect at such dates, is renewable at our option for an additional 10-year term following the initial expiration and thereafter for a further five-year term. The renewal of the primary spectrum license will depend upon the satisfaction by Gogo and SkySurf of certain conditions set forth in the license, including, without limitation, a network build-out requirement. The term of the License Agreement, including the initial 10-year term and any renewals, is contingent on the effectiveness and renewal of the primary spectrum license, issued by Industry Canada to SkySurf on June 30, 2009, which expires on June 29, 2019.

Prior to spectrum coordination with the ATG licensee in Mexico, the coordination agreement could affect our ability to provide our broadband Internet service in the border areas using our current cell sites at current operating power levels, and could affect our ability to establish or maintain ATG service in the border areas as aircraft fly into and out of Mexican airspace. Once a provider of air-to-ground services is licensed in Mexico, we hope to negotiate an arrangement that will provide seamless connectivity on flights between Mexico and the U.S.

## **Equipment Certification**

We may not lease, sell, market or distribute any radio transmission equipment used in the provision of CA or BA services unless such equipment is certified by the FCC as compliant with the FCC s technical rules. All certifications required for equipment currently used in the provision of our services have been obtained.

## Privacy and Data Security-Related Regulations

As noted above, the Open Internet Order reclassified mobile (and fixed) broadband Internet access services as Title II telecommunications services. Certain statutory provisions of Title II now apply to broadband Internet access services, including provisions that impose consumer privacy protections such as Customer Proprietary Network Information (CPNI) requirements. The FCC is expected to initiate a separate rulemaking proceeding to adopt new CPNI and other privacy rules to govern broadband Internet access services. Until the rulemaking proceeding is complete, we cannot assess what impact, if any, it may have on our current practices, including our privacy and data security practices.

The services offered through our BA segment are also subject to CPNI rules that require carriers to comply with a range of marketing and privacy safeguards. These obligations focus on carriers access, use, storage and disclosure of CPNI. We believe we are in compliance with these rules and obligations, and we certify annually, as required, that we have established operating procedures adequate to ensure our compliance.

We are also subject to other federal and state consumer privacy and data security requirements. For example, Section 5 of the Federal Trade Commission (FTC) Act prohibits—unfair or deceptive acts or practices in or affecting commerce. Although the FTC s authority to regulate the non-common carrier services offered by communications common carriers has not been clearly delineated, FTC officials have publicly stated that they view the FTC as having

jurisdiction over Internet service providers non-common carrier services. Some of our services are subject to the FTC s jurisdiction. The FTC has brought enforcement actions under the FTC Act

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against companies that, *inter alia*: (1) collect, use, share, or retain personal information in a way that is inconsistent with the representations, commitments, and promises that they make in their privacy policies and other public statements; (2) have privacy policies that do not adequately inform consumers about the company s actual practices; and (3) fail to reasonably protect the security, privacy and confidentiality of nonpublic consumer information.

We collect personally identifiable informati