

АССОЦИАЦИЯ "АЭРОНЕТ"

SKYEEER.

Взгляд одной компании



Москва, 13 декабря 2018 года



ПЛАН

О чем мы поговорим?

Международный рынок и наше место в нём

Регулирование

Что дальше?



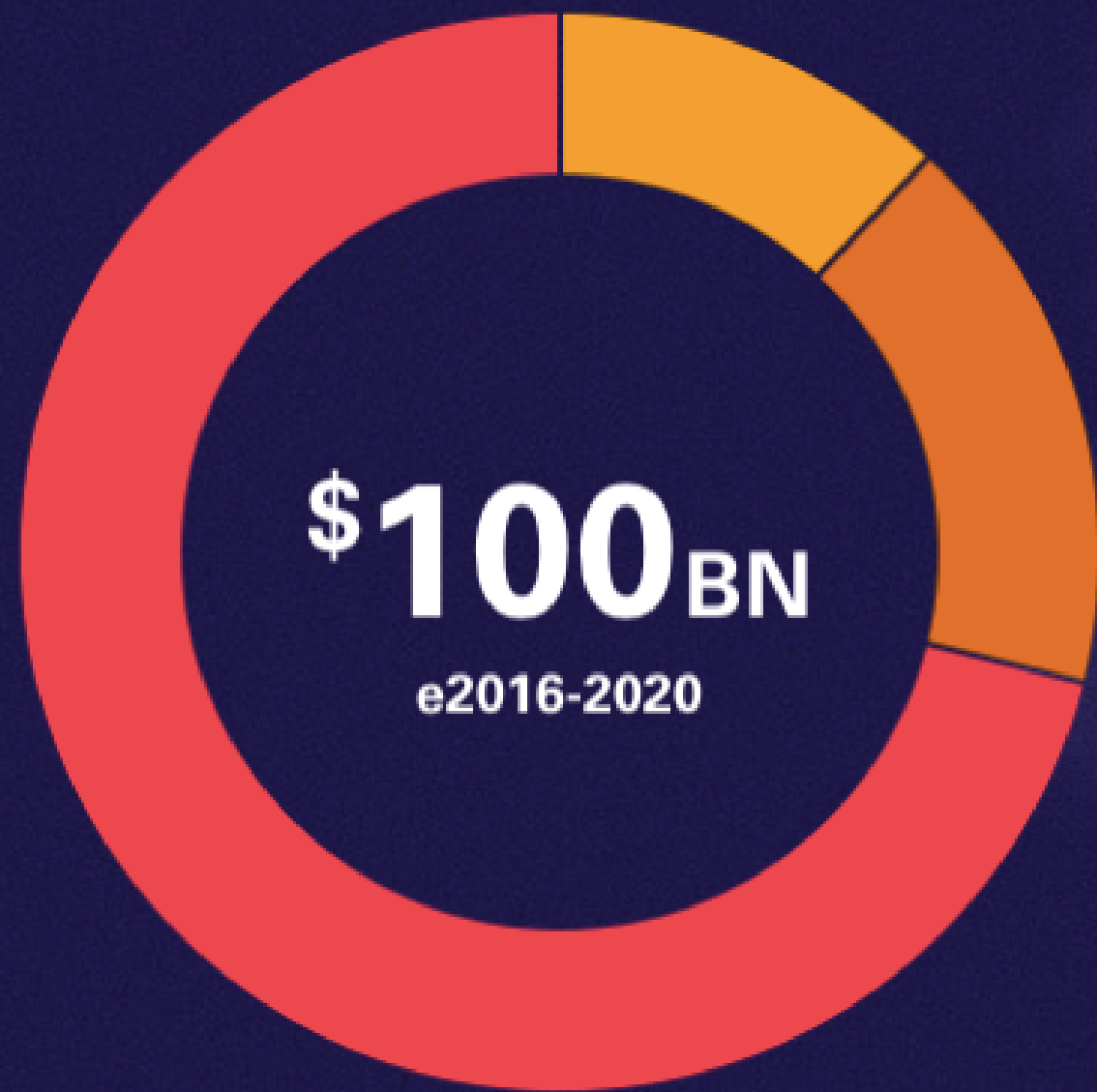
РЫНОК И НАШЕ МЕСТО В НЁМ

никогда такого не было и вот опять



GOING GLOBAL

Across the globe, demand is increasing for drone technology.



THE OPPORTUNITY AHEAD

Between now and 2020, we forecast a \$100 billion market opportunity for drones—helped by growing demand from the commercial and civil government sectors.

Source: Goldman Sachs Research

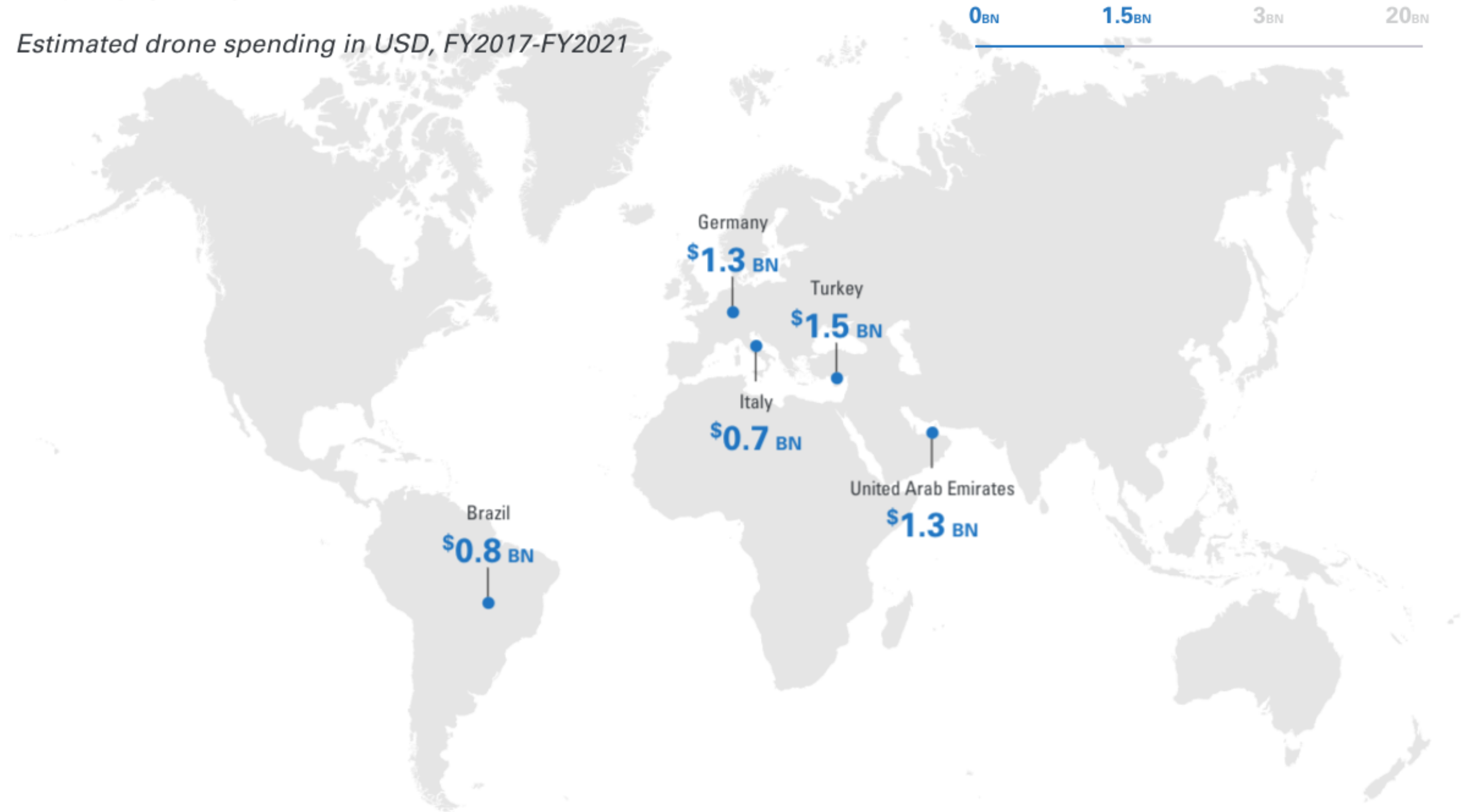
The Drone Market Environment 2018

This infographic displays a wide array of logos for companies and organizations in the drone industry, categorized into several key sectors:

- Agriculture:** Includes logos for AgriDrone, AR, and YAMAHA.
- Delivery Systems:** Features logos for Atechsys, Griff, and Skyf.
- Safety & Security:** Lists companies like DroneShield and SkyEye.
- VTOL Fixed-Wing:** Shows logos for AeroVee and Altair.
- Unmanned Platform Manufacturer:** A large section containing logos for major manufacturers like DJI, Parrot, and Yuneec.
- Recreational:** Includes logos for hobbyist and consumer drone brands.
- Maintenance & Market Research:** Lists service providers and research firms.
- Services:** Encompasses various service-oriented companies.
- Business Accelerators & Supplier/Retailer:** Shows logos for entities that support the drone ecosystem.
- Education, Simulation, Training:** Lists companies providing educational and training solutions.
- Drone Show Provider & Logistics:** Includes logos for show providers and logistics companies.
- Launch & Recovery:** Shows logos for companies specializing in drone launch and recovery systems.
- Components & Systems:** Lists manufacturers of drone components and systems.
- Counter Drone:** Includes logos for companies developing counter-drone technology.
- Flight Planning & Computer Vision & Navigation:** Lists software and navigation companies.
- Software:** Shows logos for various software providers.
- Data Processing, Workflow & Analytics:** Lists companies in data processing and analytics.
- Camera & Vision Systems:** Includes logos for camera and vision system manufacturers.
- Navigation & Guidance Systems:** Lists companies in navigation and guidance.
- Data & Communication:** Shows logos for data and communication companies.
- Media, News, Blogs & Magazines:** Lists media and publication outlets.
- Insurance:** Includes logos for drone insurance providers.
- Test Sites:** Lists companies providing test sites.
- Marketplace:** Shows logos for drone marketplaces.
- User Groups, Networks:** Lists drone user groups and networks.
- Coalitions, Organizations & Initiatives:** Includes logos for industry coalitions and organizations.
- Shows, Conferences, Events:** Lists drone shows, conferences, and events.

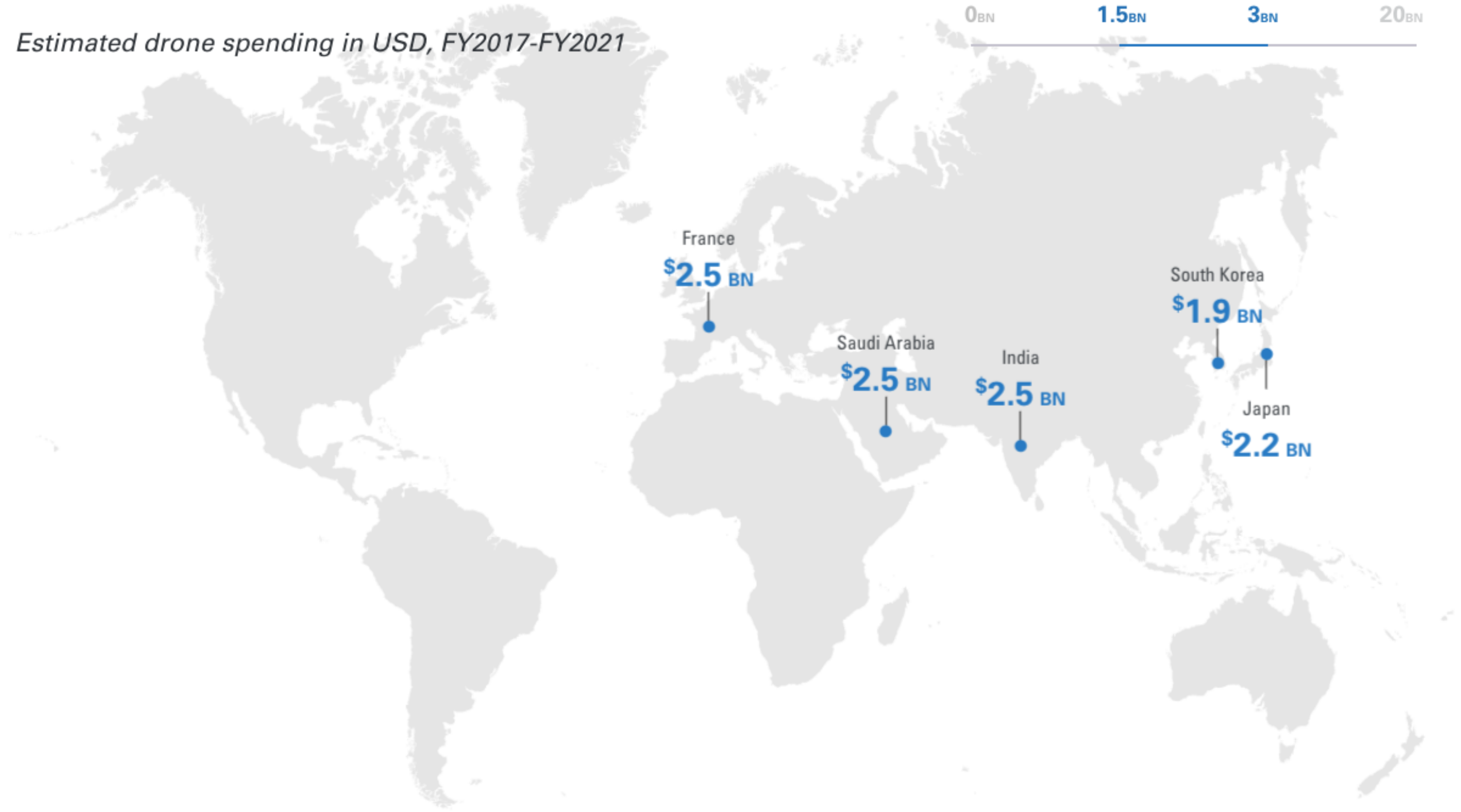
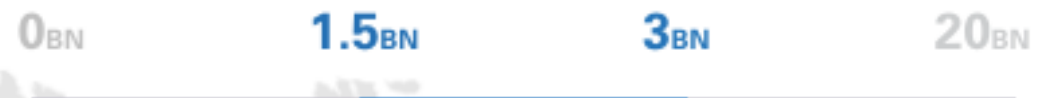
REACHING FOR THE SKY

Estimated drone spending in USD, FY2017-FY2021



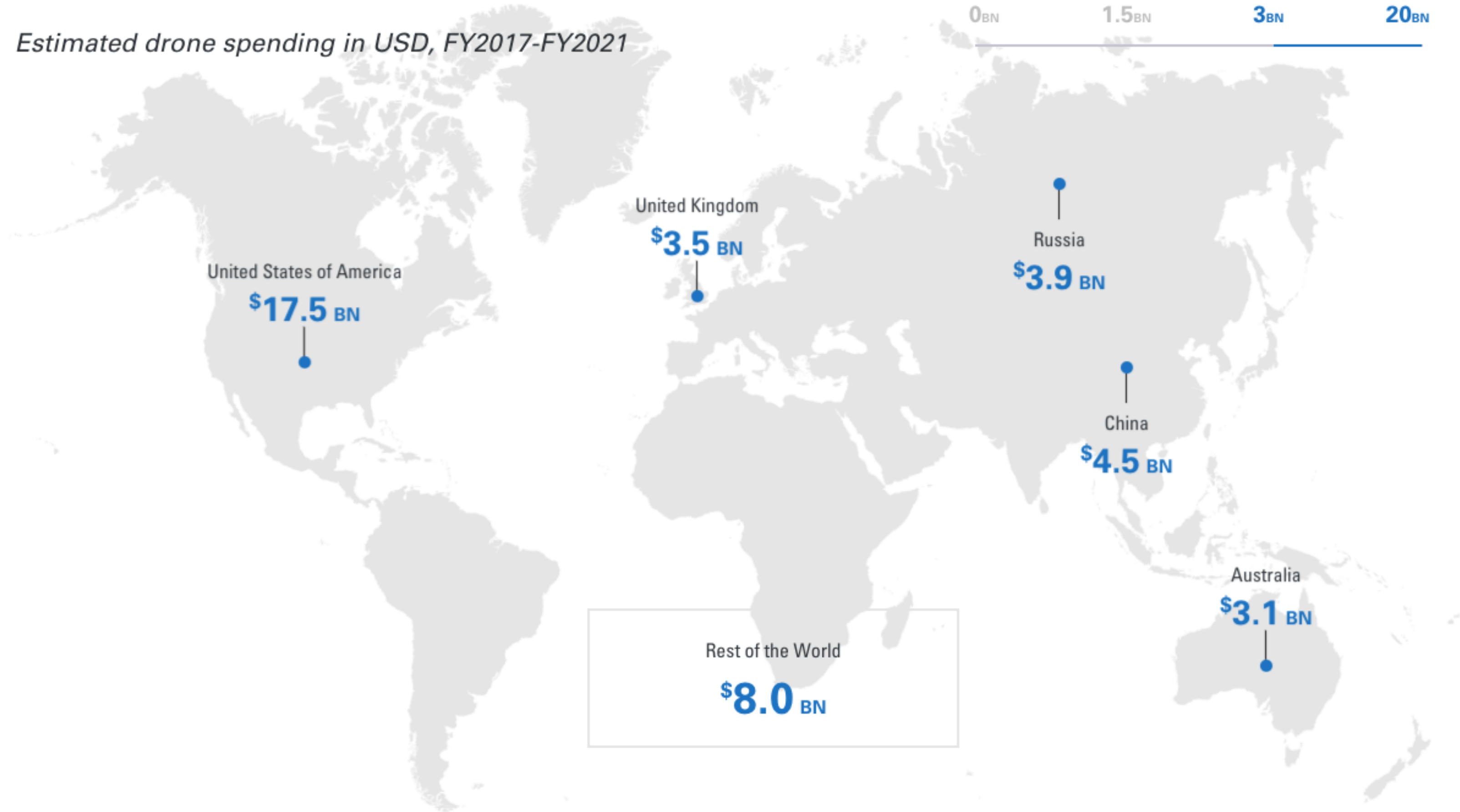
REACHING FOR THE SKY

Estimated drone spending in USD, FY2017-FY2021



REACHING FOR THE SKY

Estimated drone spending in USD, FY2017-FY2021



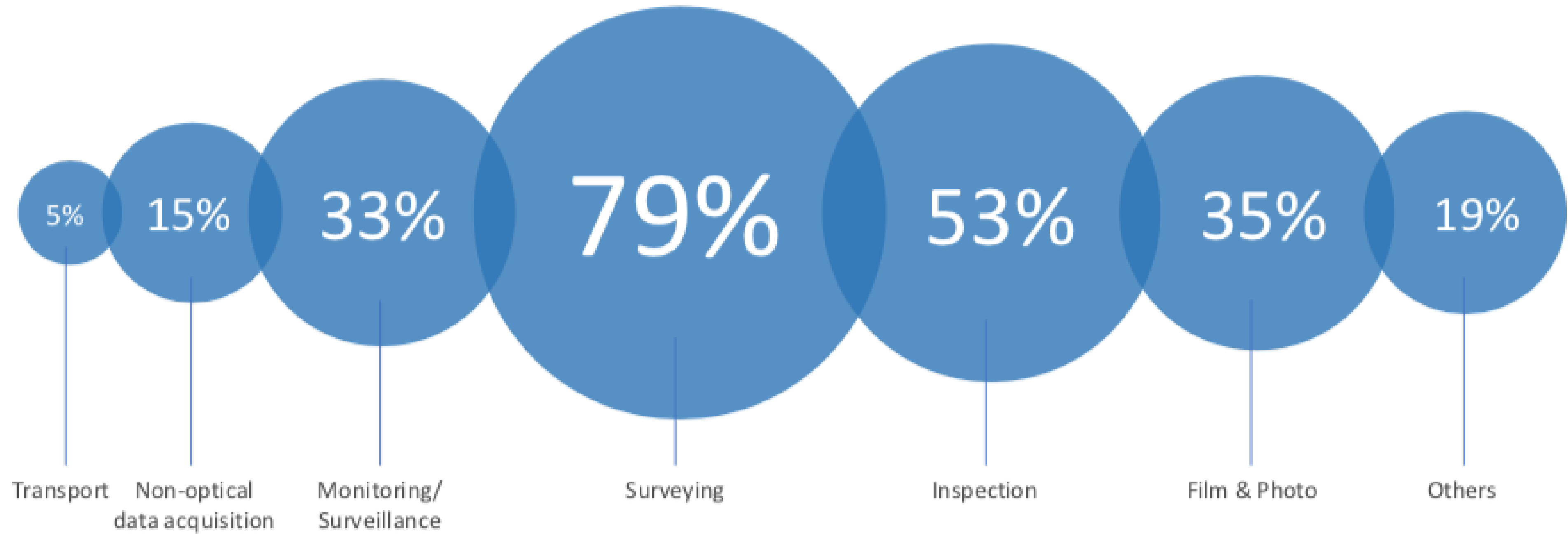
Source: DoD, Government of the UK, SIPRI, Defense News, Goldman Sachs Research



COMMERCIAL/CIVIL

The fastest growth opportunity comes from businesses and civil governments. They're just beginning to explore the possibilities, but we expect they'll spend \$13 billion on drones between now and 2020, putting thousands of them in the sky. Here's where you might see them.

Source: Goldman Sachs Research



1: Use of drones by commercial users

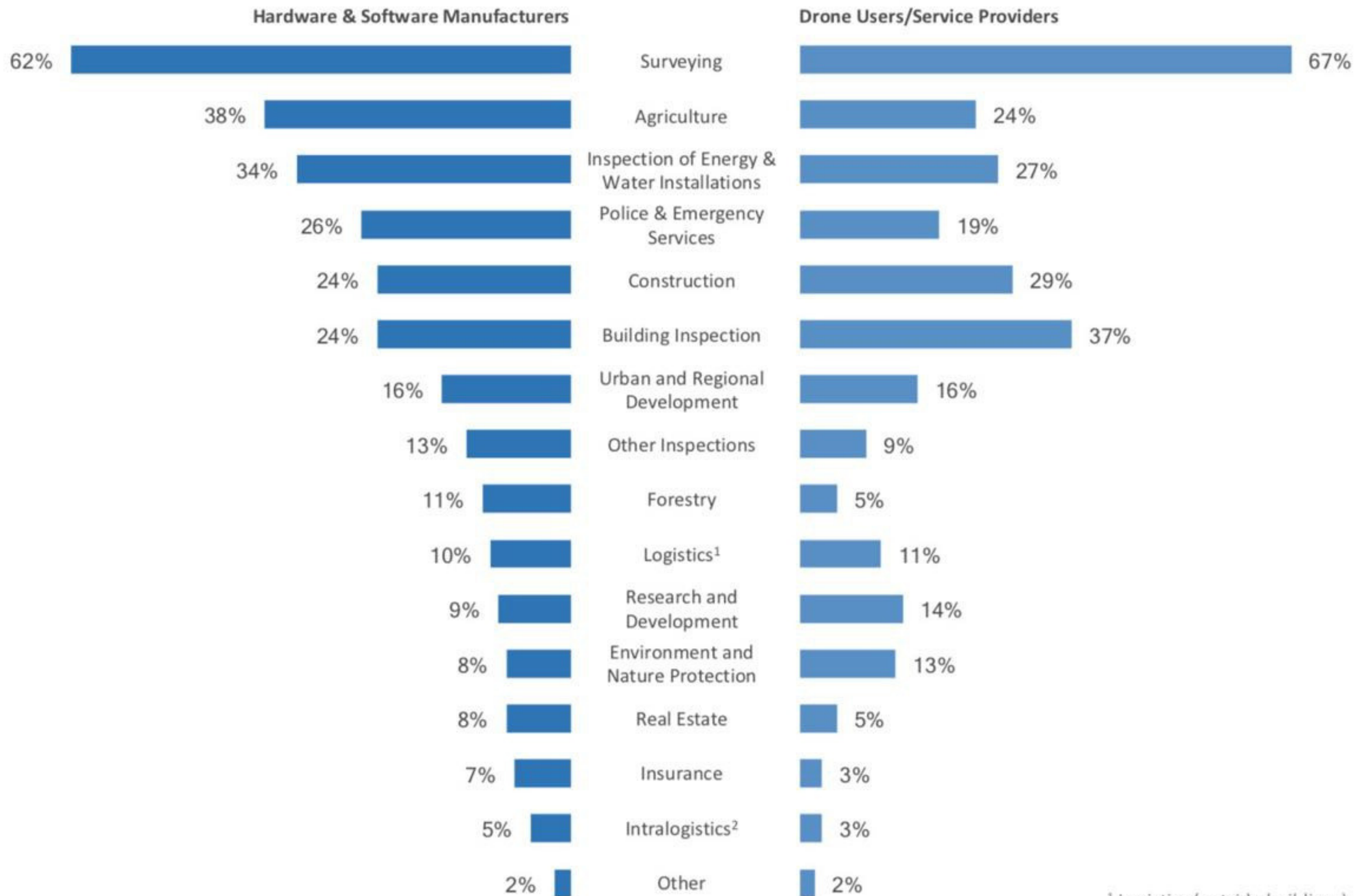


Fig. 2: Areas of application with the greatest growth in the next 12 month

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



CONSUMER

The consumer drone market was the first to develop outside the military. Demand has taken off in the last two years and hobbyist drones have become a familiar sight, but there is plenty of room for growth.

Source: Goldman Sachs Research

TOP20 Drone Operator Ranking 2018



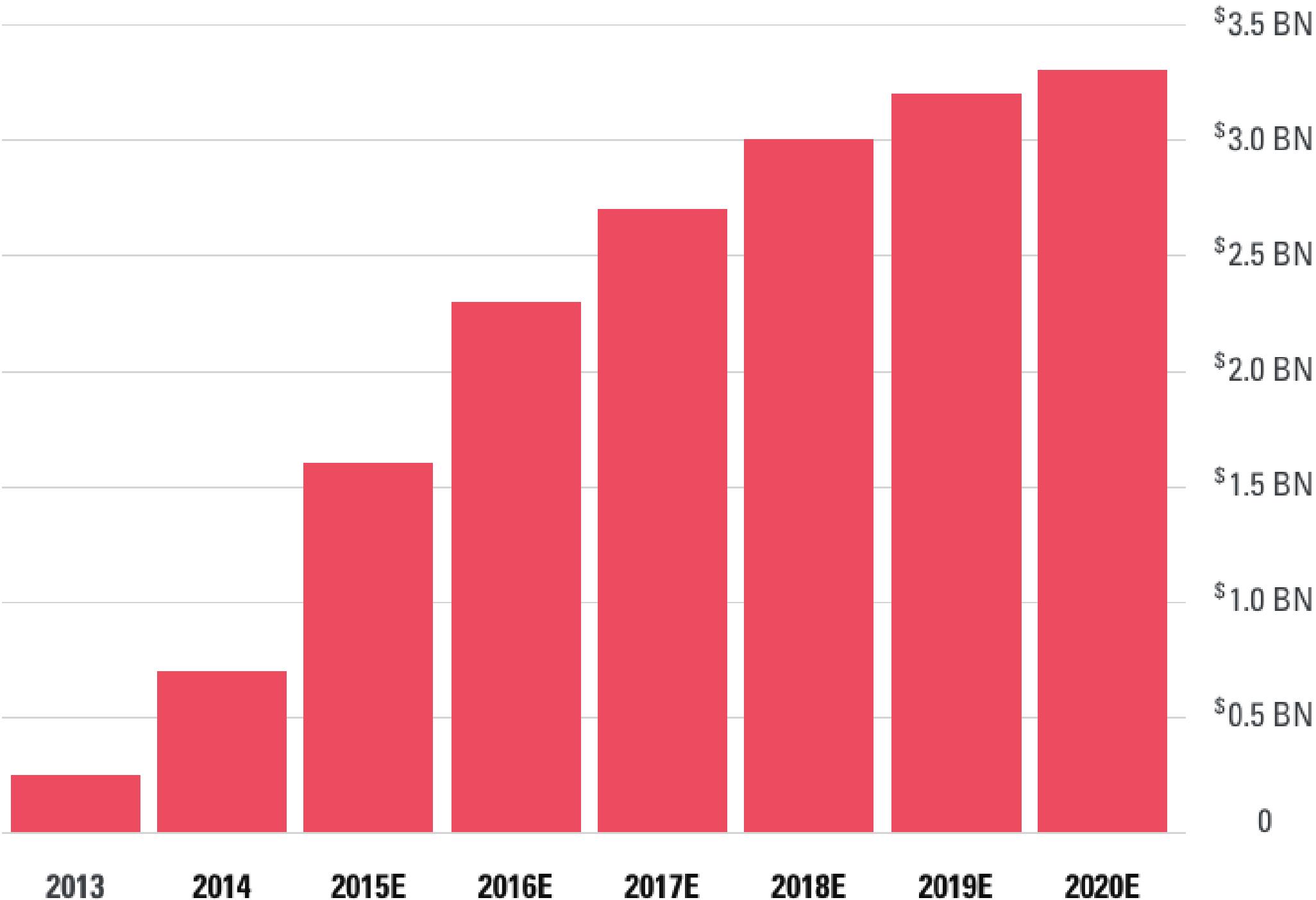
BUT READY TO GROW

Over the next few years, we expect consumer demand will continue to build. By 2020, we expect 7.8 million consumer drone shipments and \$3.3 billion in revenue, versus only 450,000 shipments and \$700 million in revenue in 2014.

Source: Goldman Sachs Research

DJI holds around 72-75% of the market = \$2.83 bln in 2017

Global Sales Set to Increase
Retail/Consumer Drone Market



Пользователь в РФ



**KILLER
DRONE!**



РЕГУЛИРОВАНИЕ

ПРОЙДЕННЫЙ ПУТЬ

ФФ НТИ

05/2015

РФ

ДК НТИ разработана на 80%,
Обозначены рынки, применения, цели

USA LAUNCH

12/2016

США

Регистрирует все беспилотники в стране, определяет правила игры, получает срез по рынку США

CHINA LAUNCH

11/2018

КИТАЙ

Запускает регистрацию на платформе в Шеньчжене,

INDIA LAUNCH

01/2019

ИНДИЯ

1 января 2019 года

США - №1

Могу зарегистрироваться и купить страховку онлайн. Через AppStore и GooglePlay.

400 Feet

ALTITUDE

Drones cannot fly over 400 feet

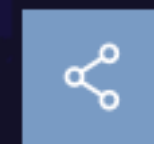


RANGE

Drone flight is currently limited to a pilot's line of sight

OPERATIONS

Drones cannot operate over people and must be flown by someone with a remote pilot certificate



Ситуация в Европе

REGULATORY

1. SEVERAL COUNTRIES, WHICH HAVE ALREADY IMPLEMENTED A REGULATORY FRAMEWORK, SHOW A SIGNIFICANT INCREASE IN UAV MARKET ACTIVITIES AND INVESTMENT SHARES.



Country	Altitude limit	Commercial operation permission	Operation up to 150kg MTOW ¹	UAV pilot certificate required	BVLOS ² operation	Night operation	Operations manual required	e-application
Australia (CASA)	120m (400ft.)	✓	✓	✓	✓ ³	✓ ³	✓	-
Canada (TC)	90m (300ft.)	✓	✓	✓	✓ ³	✓ ³	✓	-
Japan (JCAB)	150m (400ft.)	-	-	-	✓ ³	✓ ³	✓	-
USA (FAA)	120m (400ft.)	-	-	✓	✓ ³	✓ ³	-	✓

Exhibit 5: Comparison of standard UAV regulation for commercial applications by country

General requirements							
country		altitude limit	operation permission	UAV pilot certificate	critical MTOW ¹	BVLOS	no. of permission holder ²
Australia (CASA) ³		120m (400ft.)	✓	✓	150kg	-	550
EU (EASA) ³		120m (400ft.)	✓	-	25kg	✓	N/A
France (DGAC)		120m (400ft.)	✓	✓	25kg	✓	2160
Germany (LBA)		100m (300ft.)	✓	-	25kg	-	not published
Singapore		60m (200ft.)	✓	-	7kg	-	not published
Spain (AESA)		120m (400ft.)	✓	✓	25kg	✓	1288
Sweden (TS)		120m (400ft.)	✓	✓	7kg	✓	not published
UK(CAA)		120m (400ft.)	✓	✓	20kg	-	1557
USA (FAA) ³		120m (400ft.)	✓	-	25kg	-	not published

1) maximum takeoff weight: every MTOW above requires manned aviation requirements | 2) demonstrates the UAV traffic | 3) proposal only – not published conditions



ЧТО ДАЛЬШЕ?

ПЕРСПЕКТИВЫ

небо поможет вам

США

Развитый рынок,
Доступные деньги
Венчур,
Хорошие
специалисты

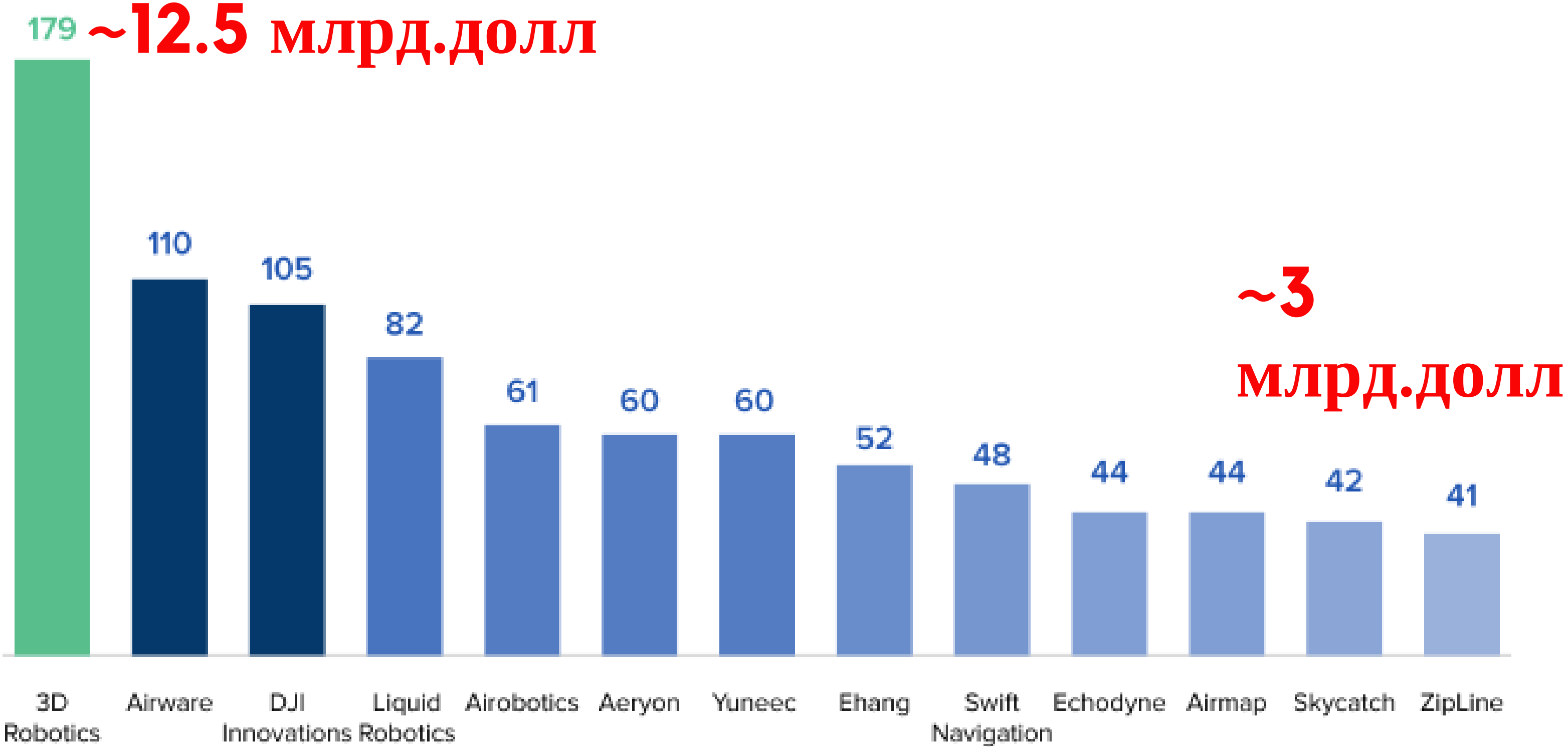
КИТАЙ/ ИНДИЯ

Огромный рынок
Производство
Финансирование
Немного
специалистов

РОССИЯ

Специалисты
Надежда

Chart 6: Most Well-Funded Drone Startups (\$M)



Source: Crunchbase, CB Insights

МИР

КАК-ТО И СЕЙЧАС

РФ

**ИДЕАЛЬНО И
НИКОГДА**

FIN



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