

АССОЦИАЦИЯ "АЭРОНЕТ"

# SKYEEER.

## Взгляд одной компании



Москва, 13 декабря 2018 года



# ПЛАН

О чем мы поговорим?

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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



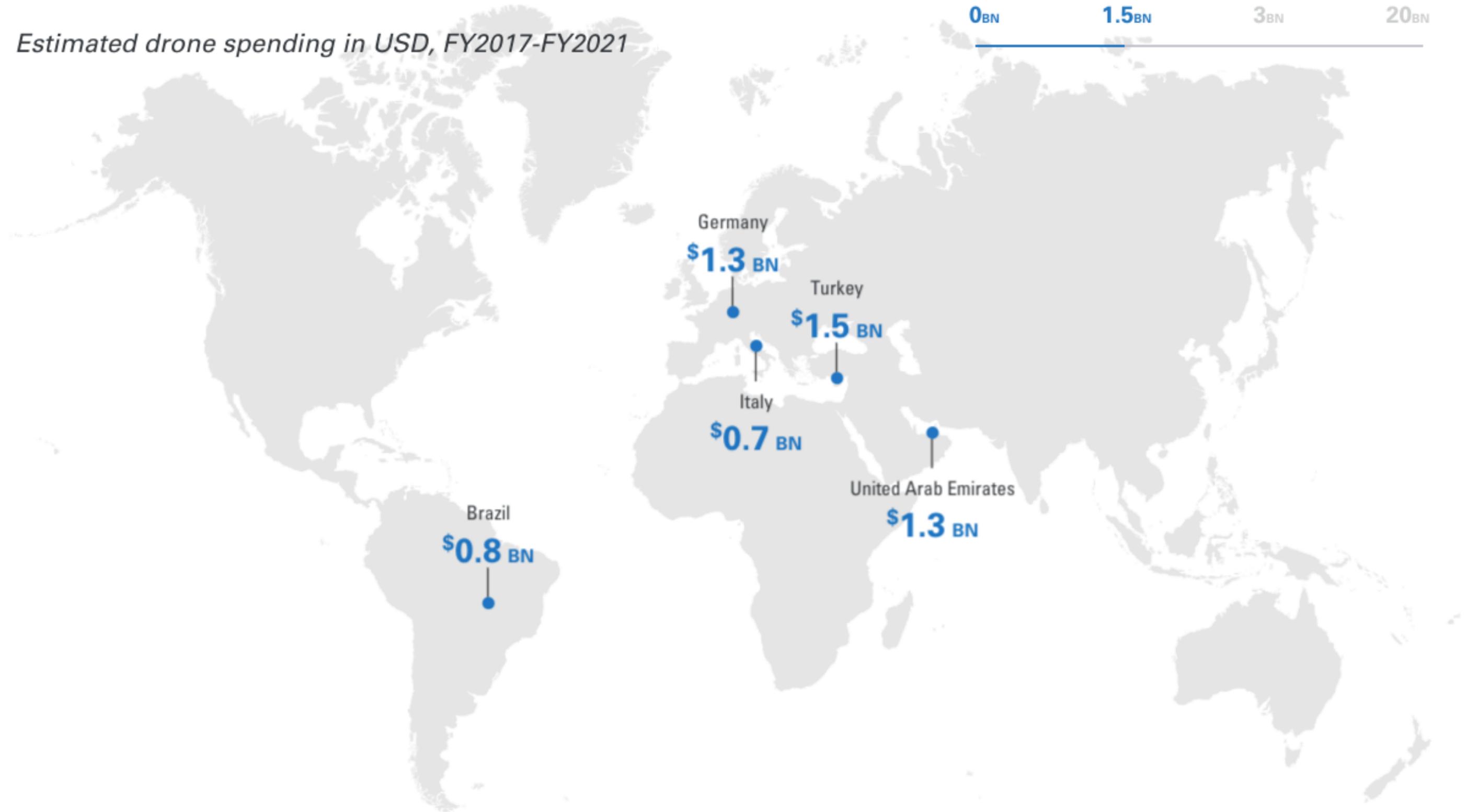
# The Drone Market Environment 2018

This infographic displays a wide array of logos from the drone industry in 2018, organized into several key categories:

- Unmanned Platform Manufacturer:** Includes major players like DJI, Parrot, and Autel, along with numerous smaller manufacturers.
- Recreational:** Features brands such as HobbyKing, E-flite, and Blade.
- Maintenance & Market Research:** Lists companies like DroneLogix and DroneMarket.
- Services:** Encompasses a broad range of service providers, including those in agriculture, delivery, and business acceleration.
- Business Accelerators & Supplier/Retailer:** Shows entities like BizLab and various drone retailers.
- System Integration, Engineering, Advisory:** Includes firms like Axis and DroneLogix.
- Education, Simulation, Training:** Lists companies like DroneRules and Drone Academy.
- Drone Show Provider & Logistics:** Features ArrowDrones and Skyways.
- Autonomous Air Taxis / Flying Cars:** Includes Joby Aviation and others.
- Launch & Recovery:** Lists companies like APELIX and SkyCat.
- Components & Systems:** Encompasses a wide range of drone parts and systems manufacturers.
- Cases:** Shows various drone applications and case studies.
- Counter Drone:** Lists companies like Dedrone and others.
- Flight Planning & Computer Vision & Navigation:** Includes DroneCloud and others.
- Software:** Lists various drone software solutions.
- Data Processing, Workflow & Analytics:** Includes companies like Bentley and others.
- Camera & Vision Systems:** Lists companies like FLIR and others.
- Navigation & Guidance Systems:** Includes companies like AAdvantage and others.
- Data & Communication:** Lists companies like Agilis and others.
- Media, News, Blogs & Magazines:** Includes DroneMag and others.
- Insurance:** Lists companies like Allianz and others.
- Test Sites:** Includes companies like ATLAS and others.
- Marketplace:** Lists companies like DroneBase and others.
- User Groups, Networks:** Includes various drone user groups.
- Coalitions, Organizations & Initiatives:** Lists various industry coalitions.
- Shows, Conferences, Events:** Includes DroneExpo and others.

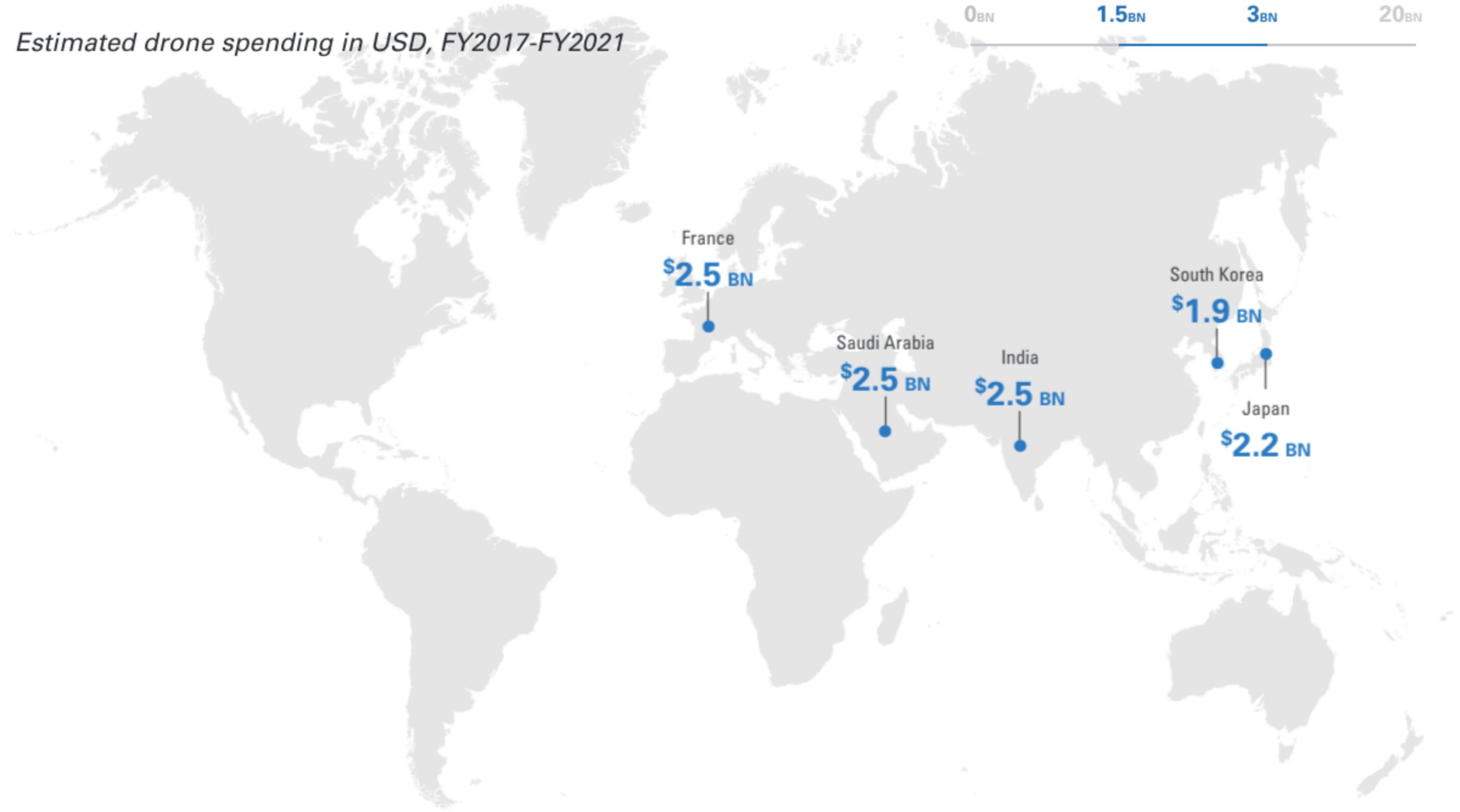
## REACHING FOR THE SKY

*Estimated drone spending in USD, FY2017-FY2021*



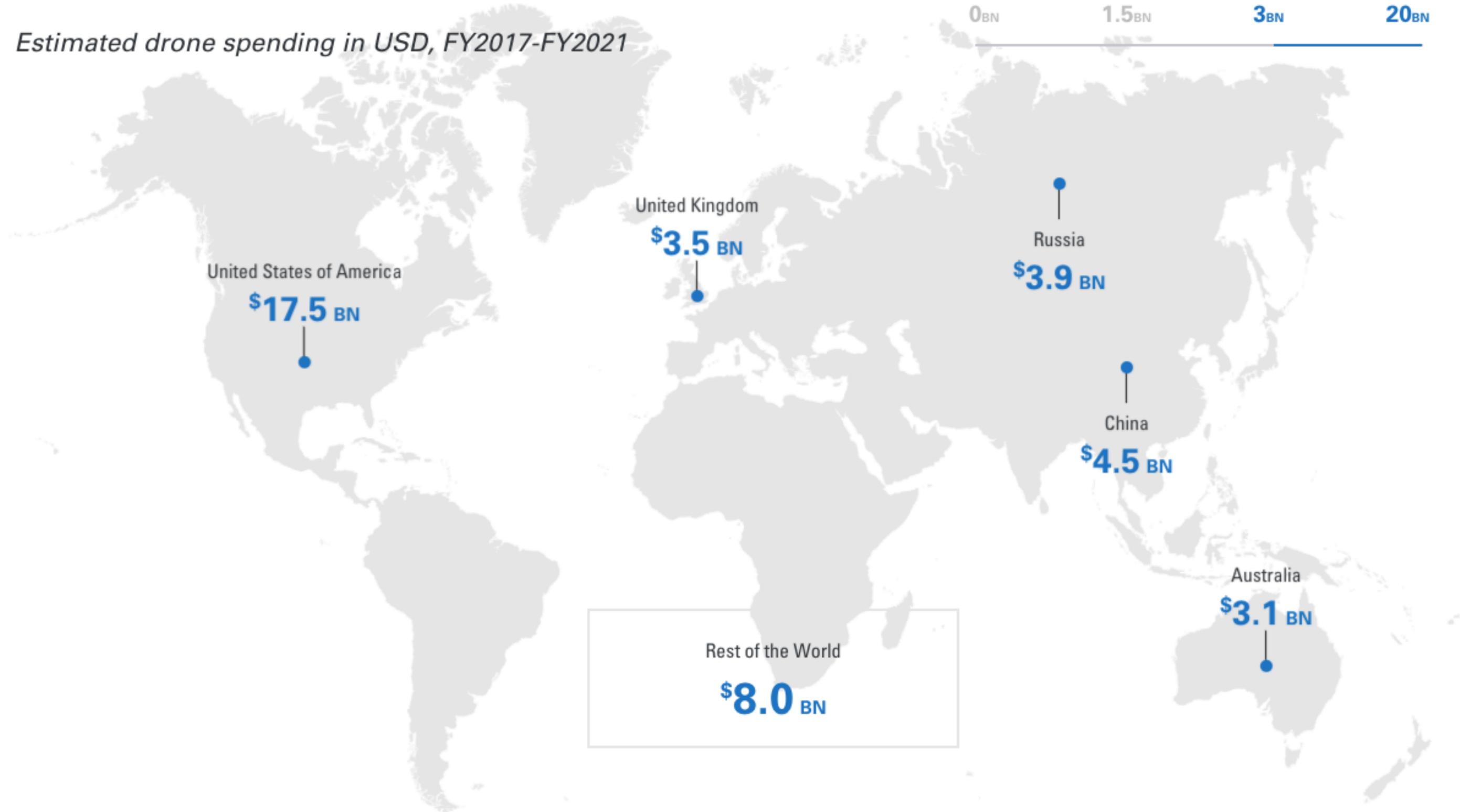
# REACHING FOR THE SKY

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Estimated drone spending in USD, FY2017-FY2021



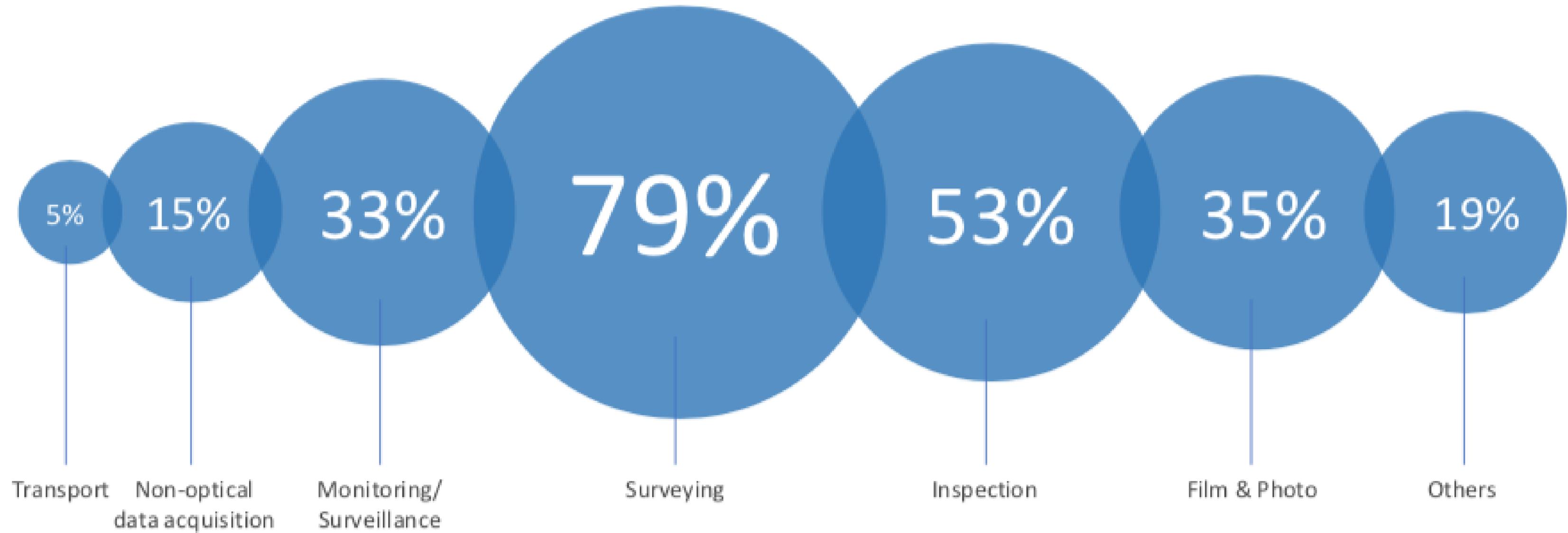
Source: DoD, Government of the UK, SIPRI, Defense News, Goldman Sachs Research



## 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

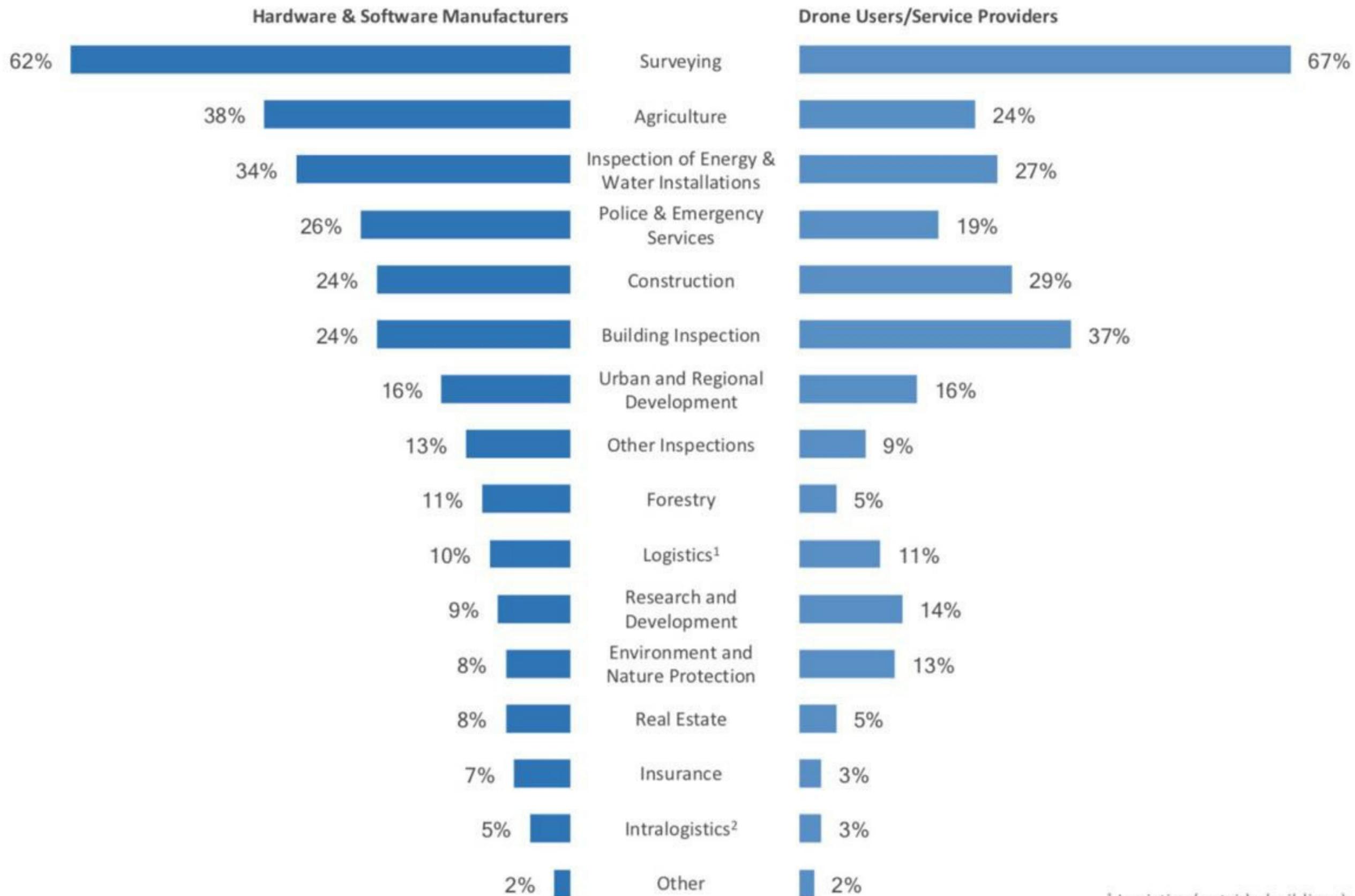


Fig. 2: Areas of application with the greatest growth in the next 12 month

<sup>1</sup> Logistics (outside buildings)

<sup>2</sup> 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



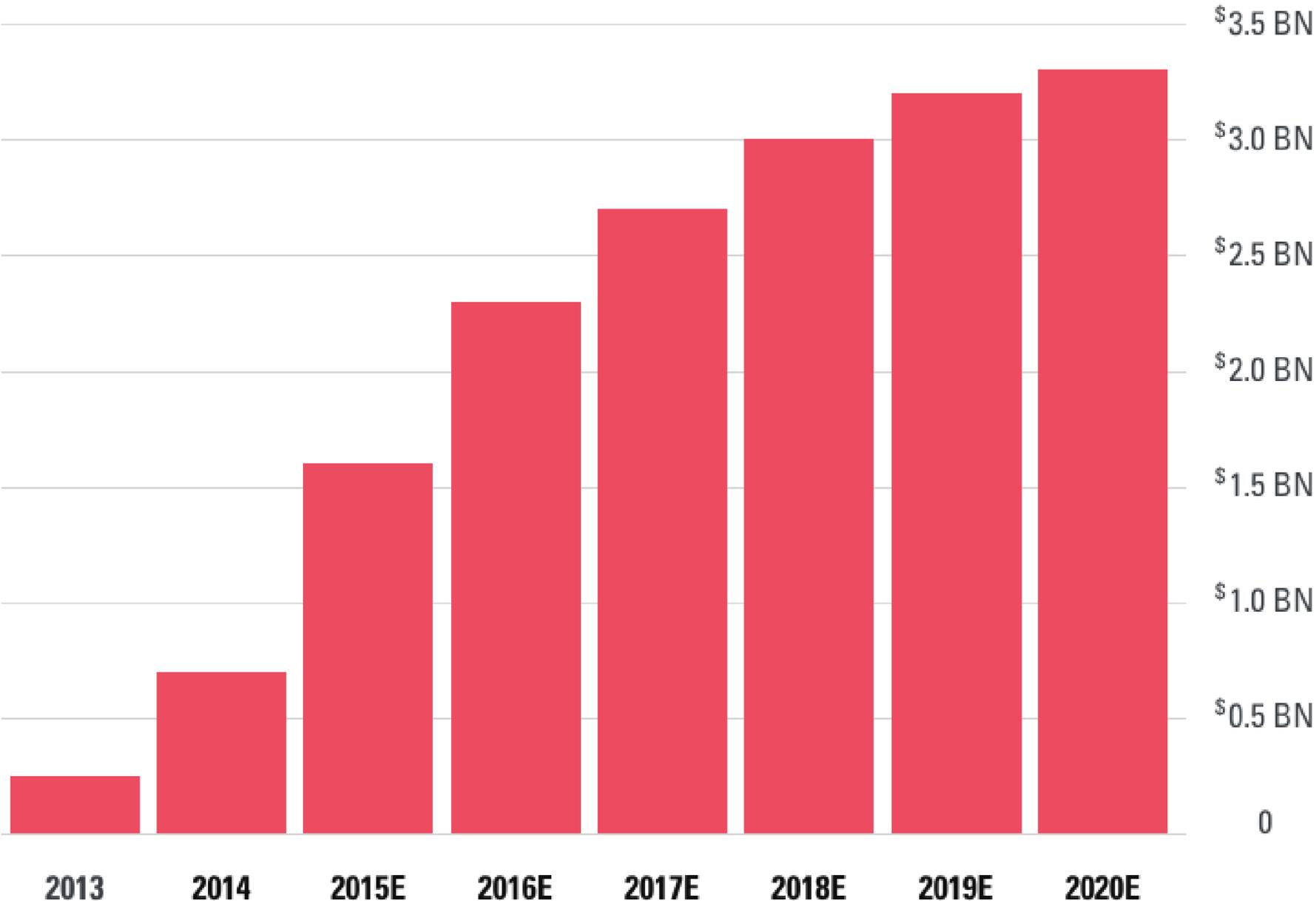
# BUT READY TO GROW

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

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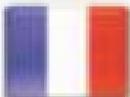
## REGULATORY

**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 <sup>1</sup>	UAV pilot certificate required	BVLOS <sup>2</sup> operation	Night operation	Operations manual required	e-application
Australia (CASA)	120m (400ft.)	✓	✓	✓	✓ <sup>3</sup>	✓ <sup>3</sup>	✓	-
Canada (TC)	90m (300ft.)	✓	✓	✓	✓ <sup>3</sup>	✓ <sup>3</sup>	✓	-
Japan (JCAB)	150m (400ft.)	-	-	-	✓ <sup>3</sup>	✓ <sup>3</sup>	✓	-
USA (FAA)	120m (400ft.)	-	-	✓	✓ <sup>3</sup>	✓ <sup>3</sup>	-	✓

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

General requirements							
country		altitude limit	operation permission	UAV pilot certificate	critical MTOW <sup>1</sup>	BVLOS	no. of permission holder <sup>2</sup>
Australia (CASA) <sup>3</sup>		120m (400ft.)	✓	✓	150kg	-	550
EU (EASA) <sup>3</sup>		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) <sup>3</sup>		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

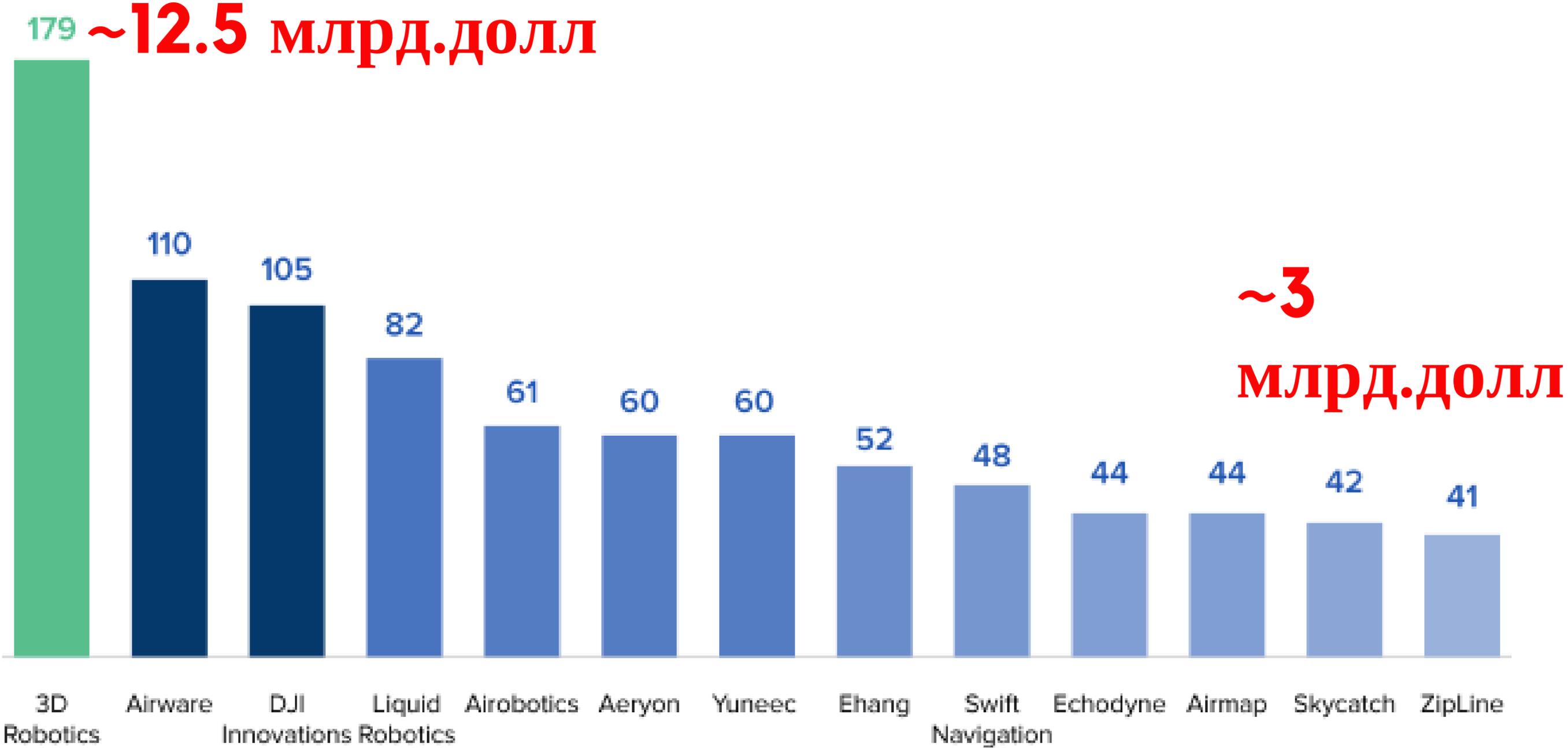
## КИТАЙ/ ИНДИЯ

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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