

2017 - 2023 CALIFORNIA AIR CLEANING UNITS MARKET

BY CATEGORY TYPE, COMPETITION,
FORECAST & OPPORTUNITIES



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MARKET INTELLIGENCE . CONSULTING



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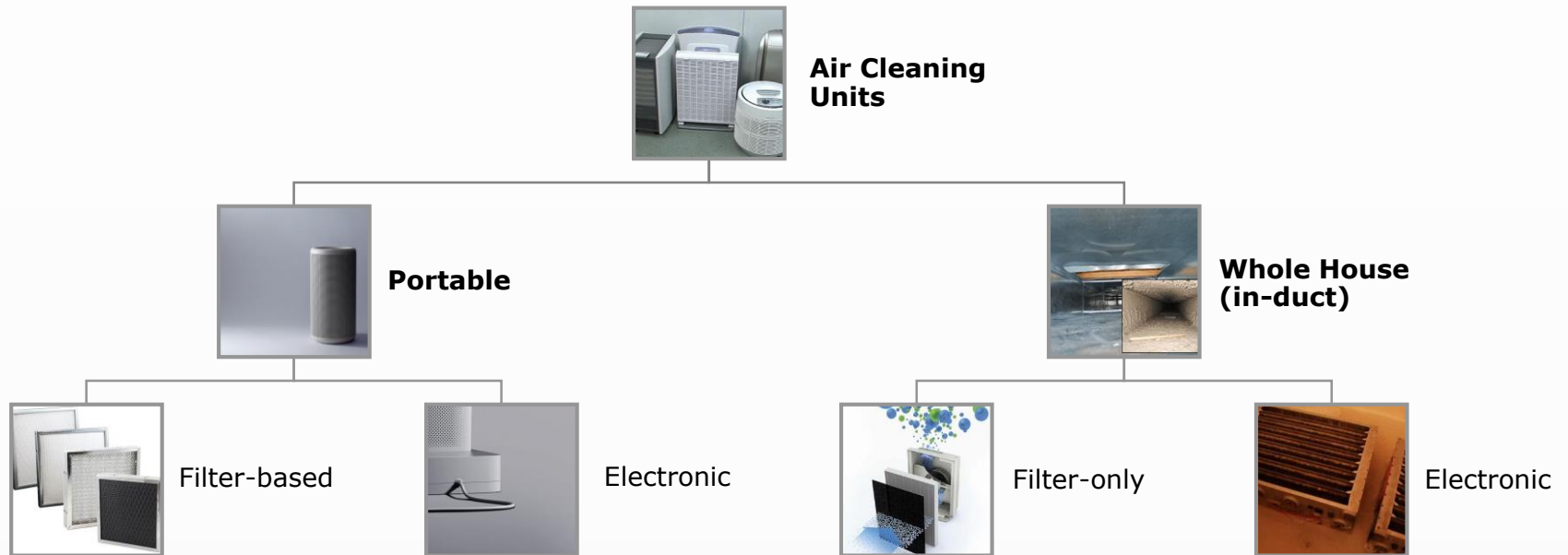
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Product Overview

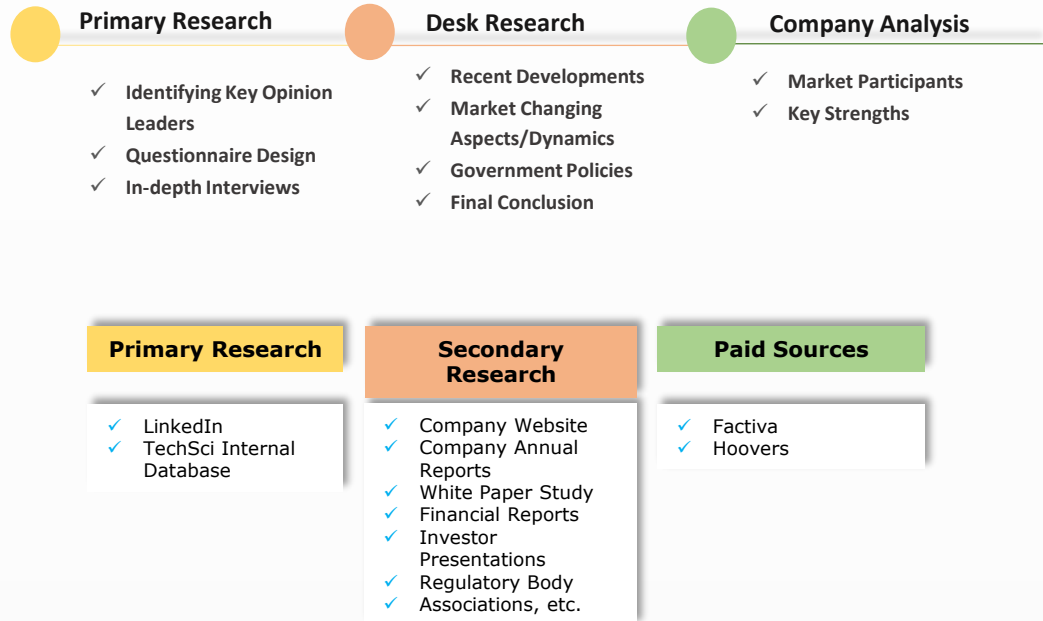
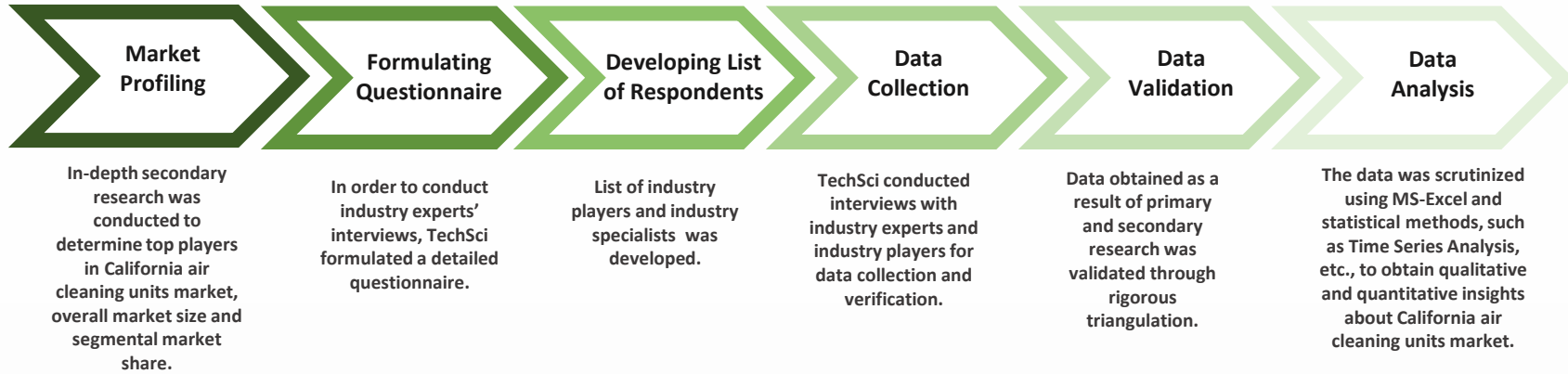


Air purifier or air cleaner is a device which removes pollutants from the air in a room. These devices are commonly used in households to clean the polluted air by effectively removing bacteria, viruses and particulate matter present in the surroundings.



Research Methodology





OBJECTIVE: *The primary objective of the study is to analyze and forecast the size of California air cleaning units market and identify the market share by category type and by company.*

APPROACH & SOURCES: In order to extract, analyze and project California air cleaning units market, both top down and bottom-up approaches were used. Multiple employees from following companies were interviewed through telephonic and face-to-face meetings in order to extract and verify collected information.

Partial List of Companies/Associations Interviewed

Austin Air Systems Ltd.	IQAir North America, Inc.
Blueair Inc.	Honeywell International, Inc.
Whirlpool Corporation	Winix America Inc.
Alen Corporation	Sharp Electronics Corporation

TechSci Research has scrutinized various published documents from following key sources in order to fill the data gaps and verify information being collected through primary research surveys.

Partial List of Secondary Sources

UN Comtrade	United States Census Bureau
Annual Report and Company Websites	Centers for Disease Control and Prevention
California Air Resources Board (CARB)	IEA
World Bank	International Monetary Fund
Industry Reports	American Cancer Society

Methodology Followed for Calculation of Market Shares:

- Market shares by category type and by company were calculated based on the responses received through primary surveys with industry experts, in which the respondents were asked about the market shares or revenue generated from various segments. The final shares were calculated by taking the geometric mean of the responses gathered from key opinion leaders after eliminating the outliers.

Methodology Followed for Forecasting:

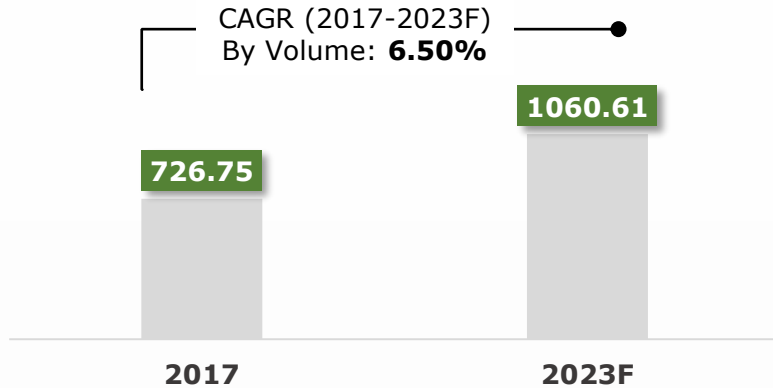
- TechSci Research performed periodical checks on data collected through the surveys with logic checks and analyzed the survey results in SPSS/Tableau Software.
- Data triangulation techniques were applied to fill the gaps and to present a more meaningful picture of the market. To forecast California air cleaning units market, TechSci Research used various forecast techniques such as:
 - Moving Average
 - Time Series Analysis
 - Regression Analysis
 - Econometric and Judgmental Analysis
- TechSci Research used its own forecast tool, which is based on the growth of various allied industries in respective regions. TechSci Research also used the impact analysis during short, medium and long term period to estimate the demand and to reach accurate market numbers. It should be noted that the figures compiled are only for the organized market including market share data.

Executive Summary



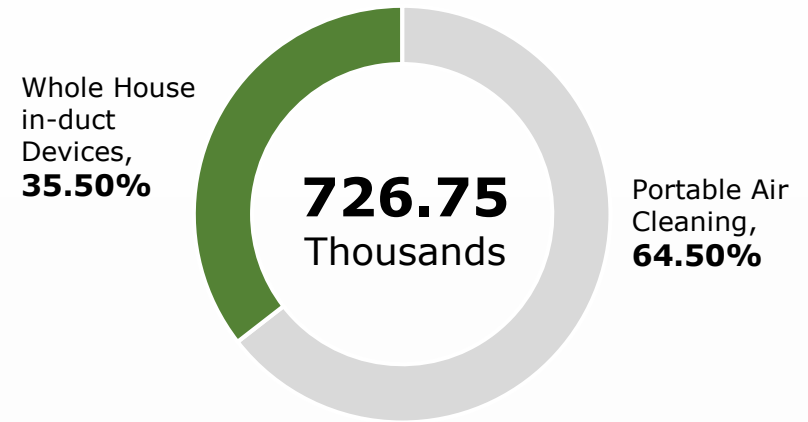
The given analytical report allows to estimate to the full a
current situation both in all company, and in its divisions separ-
ately. It will allow to predict more precisely immediate separ-
ation of development of the company at the account of pres-
ent situation of economic dynamics of growth.
As a result of investigation of period to do next: raise a
sales level, increase incomes of direct sales, reduce
costs of transportation, strengthen sale divisions, carry out

California Air Cleaning Units Market Size, By Volume, 2017 & 2023F (Thousand Unit)

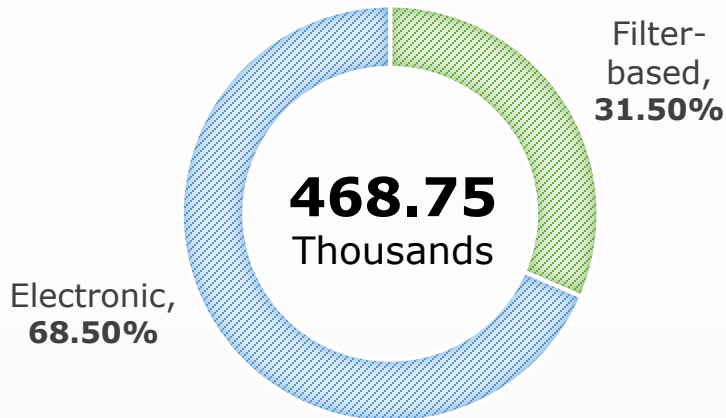


Source: TechSci Research

California Air Cleaning Units Market Share, By Category Type, By Volume, 2017

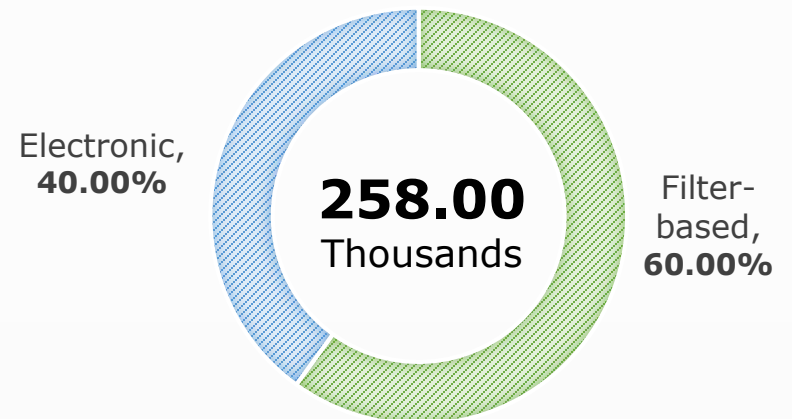


California Portable Air Cleaning Units Market Size, By Type, By Volume, 2017 (Thousand Unit)



Source: TechSci Research

California In-Duct Air Cleaning Units Market Size, By Type, By Volume, 2017 (Thousand Unit)



United States Air Cleaning Units Market Overview



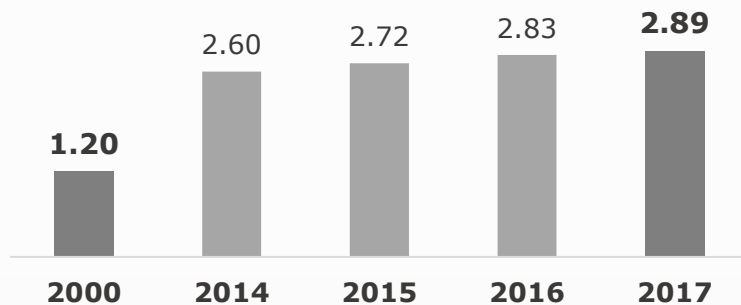
- Rising health concerns, increasing consumer spending on lifestyle products and depleting air quality across the United States are the major factors anticipated to drive air cleaning units market in the country during forecast period. Increasing pollution levels across the country is also expected to aid the air cleaning units market in the coming years. Owing to high levels of pollution in states such as Ohio, Indiana, Florida and California, air cleaning units market is likely to witness strong growth in the mentioned states.
- Growing concerns regarding the harmful effects of air pollution in various regions across the nation have increased awareness about the benefits of air cleaning units for clean indoor air. Air cleaning units are increasingly being recommended to patients suffering from lung related diseases/allergies. Increasing CO2 emissions from industries as well as from vehicles are leading to the risk of respiratory diseases, consequently propelling air cleaning units market across the country.
- Due to surging number of industries and manufacturing units across the United States, the level of air pollution is soaring at a robust pace, thereby leading to a rise in the number of deaths related to respiratory diseases. Consequently, United States air cleaning units market is expected to observe growth over the coming years.

Table 1: United States Estimated Number of New Cancer Cases of Respiratory System and Subsequent Deaths, By Gender, 2018

Cancer Type	Male (Cases)	Female (Cases)	Male (Deaths)	Female (Deaths)
Larynx	10,490	2,660	2,970	740
Lung & Bronchus	121,680	112,350	83,550	70,500
Other Respiratory Organs	4,230	1,880	680	330

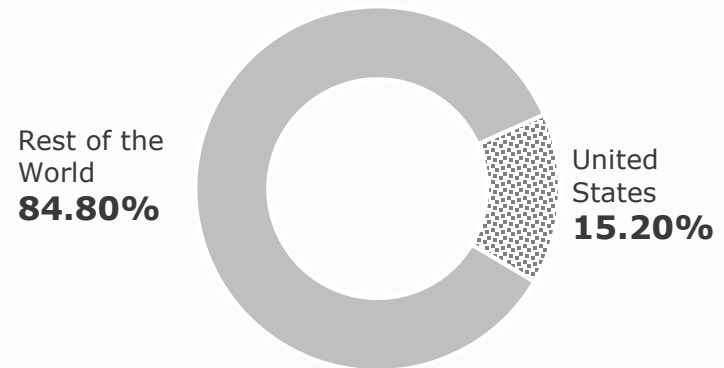
Source: American Cancer Society

Figure 1: United States Personal Healthcare Expenditure, 2000, 2014-2017 (USD Trillion)



Source: National Centre for Health Statistics, Centers for Disease Control and Prevention

Figure 2: United States Share in Global Carbon Dioxide Emissions (%), 2017

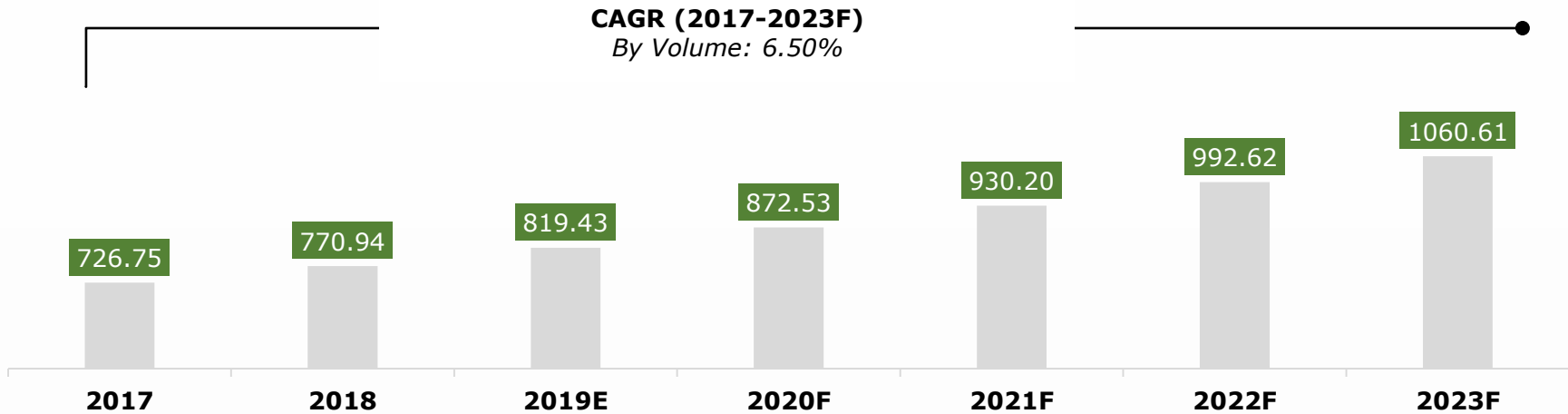


Source: BP PLC Statistical Review

California Air Cleaning Units Market Outlook

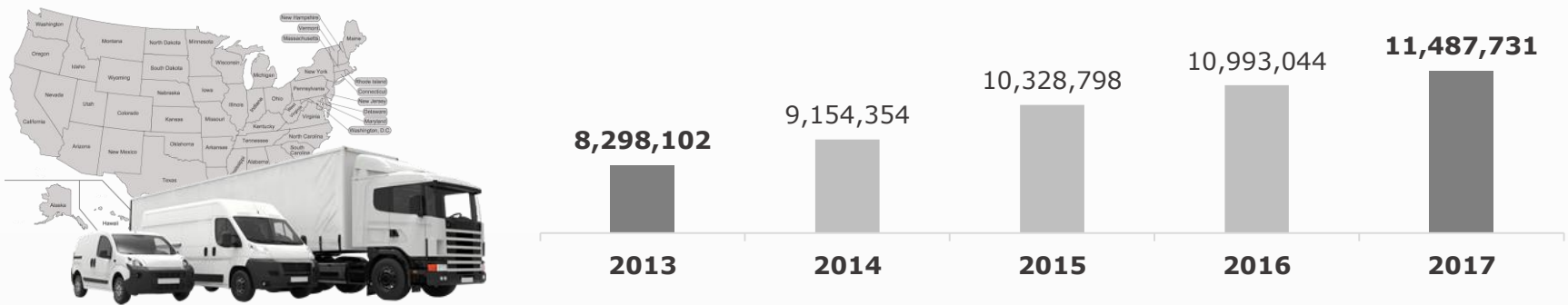


Figure 3: California Air Cleaning Units Market Size, By Volume, 2017-2023F (Thousand Unit)



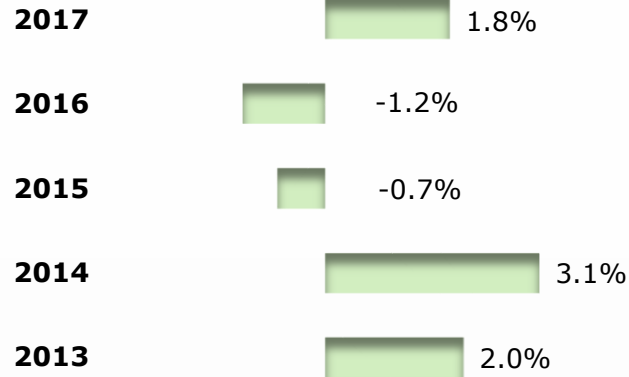
Source: TechSci Research

Figure 4: United States New Commercial Vehicle Registration or Sales, 2013-2017 (Units)



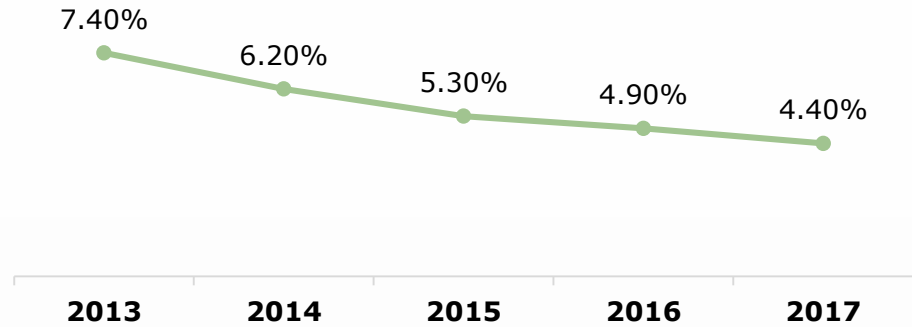
Source: OICA

Figure 5: United States Industrial Production Growth Rate, 2013-2017



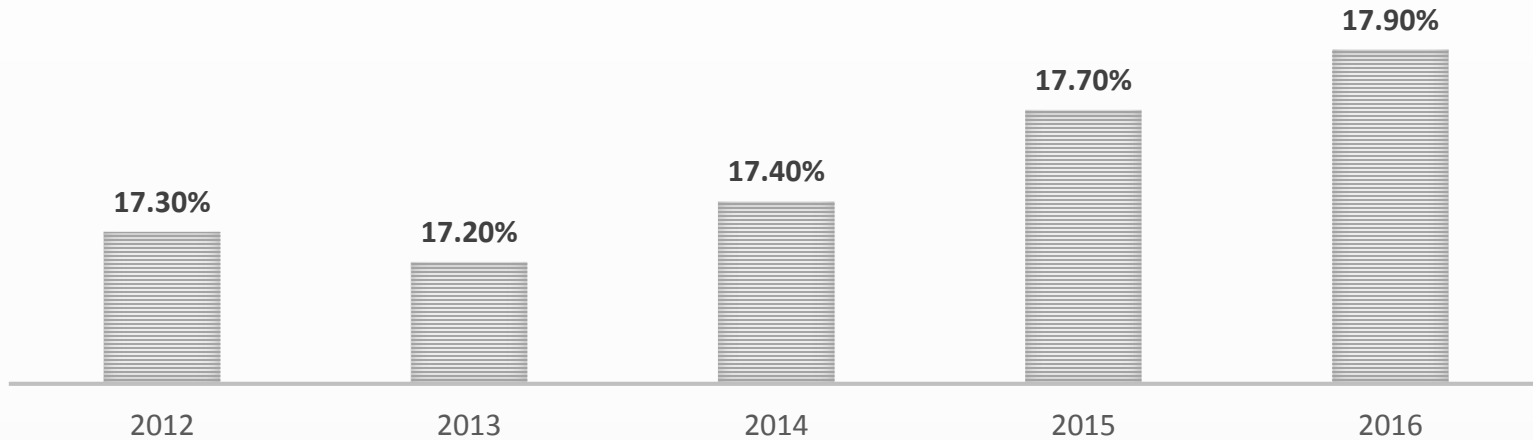
Source: OECD Stats

Figure 6: United States Unemployment Rate, 2013-2017 (%)



Source: IMF

Figure 7: United States Health Expenditures as a Percent of Gross Domestic Product, 2012-2016



Source: National Health Statistics Group

Table 2: Population at Risk in Top 25 Polluted Cities in US by Year-Round Particle Pollution (Annual PM_{2.5}), As of 2018

Rank	Statistical Area	State	Total Population	Under 18 Years	65 Years and Above	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer
1	Fairbanks,	AK	1,00,605	24,518	8,884	1,975	6,611	4,353	55
2	Visalia-Porterville-Hanford,	CA	6,10,222	1,84,746	64,889	14,204	32,845	17,612	260
3	Bakersfield,	CA	8,84,788	2,58,054	91,719	19,840	48,388	25,731	377
4	Los Angeles-Long Beach	CA	186,88,022	43,53,354	24,44,450	3,34,698	11,19,385	6,28,200	7,942
5	Fresno-Madera,	CA	11,34,612	3,23,032	1,36,983	24,836	62,984	34,873	482
6	Modesto-Merced,	CA	8,10,232	2,27,322	98,506	17,477	45,364	25,251	345
7	El Centro	CA	1,80,883	51,832	22,953	3,985	10,037	5,646	77
8	Lancaster,	PA	5,38,500	1,28,457	92,089	11,288	43,467	29,881	347
8	Pittsburgh-New Castle-Weirton,	PA-OH-WV	26,35,228	5,04,285	5,06,493	44,123	2,25,518	1,63,462	1,709

Source: American Lung Association

Table 2: Population at Risk in Top 25 Polluted Cities in US by Year-Round Particle Pollution (Annual PM_{2.5}), As of 2018 (Contd.)

Rank	Statistical Area	State	Total Population	Under 18 Years	65 Years and Above	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer
10	Cleveland-Akron-Canton,	OH	34,83,311	7,48,251	6,10,191	51,396	2,67,821	2,44,131	2,378
10	San Jose-San Francisco-Oakland,	CA	87,51,807	18,74,550	12,50,653	1,44,121	5,39,410	3,09,563	3,721
12	Philadelphia-Reading-Camden,	PA-NJ-DE-MD	71,79,357	15,83,881	11,10,738	1,35,570	5,50,637	3,80,103	4,487
13	Indianapolis-Carmel-Muncie,	IN	23,86,199	5,84,597	3,23,083	47,845	1,83,229	1,42,178	1,668
14	Detroit-Warren-Ann Arbor,	MI	53,18,653	11,85,725	8,21,616	1,05,502	4,54,845	3,66,206	3,417
15	Birmingham-Hoover-Talladega,	AL	13,61,299	3,11,799	2,15,600	41,149	1,02,388	1,00,317	911
15	Harrisburg-York-Lebanon,	PA	12,52,820	2,73,228	2,15,572	24,009	1,04,213	72,168	809
15	Houston-The Woodlands,	TX	69,72,374	18,60,373	7,39,774	1,47,214	3,89,479	2,41,094	3,688
18	Cincinnati-Wilmington-Maysville,	OH-KY-IN	22,24,231	5,29,256	3,20,887	37,633	1,72,862	1,54,509	1,637

Source: American Lung Association

Table 2: Population at Risk in Top 25 Polluted Cities in US by Year-Round Particle Pollution (Annual PM_{2.5}), As of 2018 (Contd.)

Rank	Statistical Area	State	Total Population	Under 18 Years	65 Years and Above	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer
18	Johnstown-Somerset,	PA	2,09,793	39,558	44,930	3,476	17,863	13,162	136
18	San Luis Obispo-Paso RoblesArroyo Grande,	CA	2,82,887	50,703	53,512	3,898	18,338	11,297	121
21	Louisville/Jefferson County—Elizabethtown—Madison,	KY-IN	15,10,945	3,46,116	2,26,835	27,393	1,32,104	1,25,709	1,337
22	Atlanta—Athens - Clarke County—Sandy Springs,	GA	64,51,262	16,06,983	7,60,202	1,42,134	4,20,082	3,67,638	4,180
22	Knoxville-Morristown-Sevierville,	TN	11,17,758	2,34,117	2,00,825	22,801	96,989	92,906	844
24	Las Vegas-Henderson,	NV-AZ	24,04,336	5,51,082	3,74,922	36,391	1,50,570	1,29,535	1,242
24	Little Rock-North Little Rock,	AR	9,05,847	2,13,354	1,34,142	17,186	58,559	64,878	714

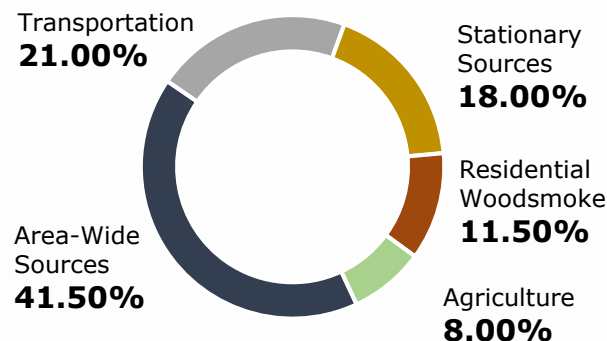
Source: American Lung Association

Table 3: California Population Statistics, By Disease, As of 2018

Particular	Number
Total Population	8,751,807
Under 18	1,874,550
65 Plus	1,250,653
Pediatric Asthma	144,121
Adult Asthma	539,410
COPD	309,563
Lung Cancer	3,721
Heart Disease	460,334
Diabetes	708,929
Poverty	857,722

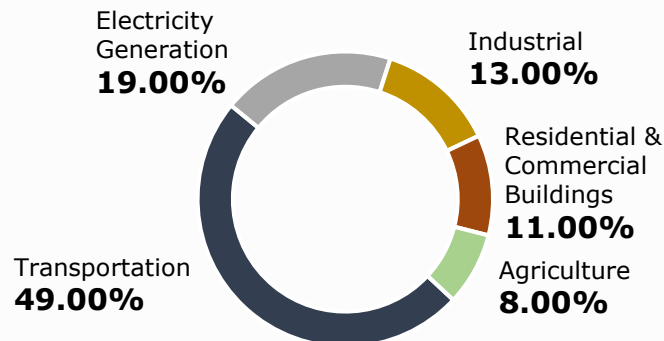
Source: American Lung Association

Figure 8: Particle Pollution Emission Sources in California, As of 2018



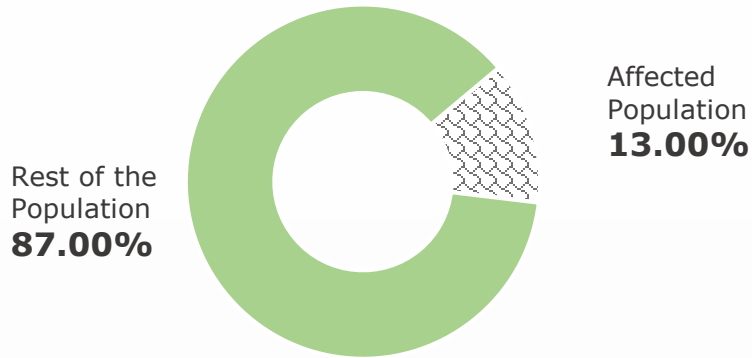
Source: American Lung Association, 2018

Figure 9: Greenhouse Gas Emission Sources in California, As of 2018



Source: American Lung Association, 2018

Figure 10: United States Share of Population Living Under Unhealthy Levels of Particle Pollution, 2018



Source: American Lung Association, 2016

Figure 11: Ozone Forming NO_x Emission Sources in California, As of 2018



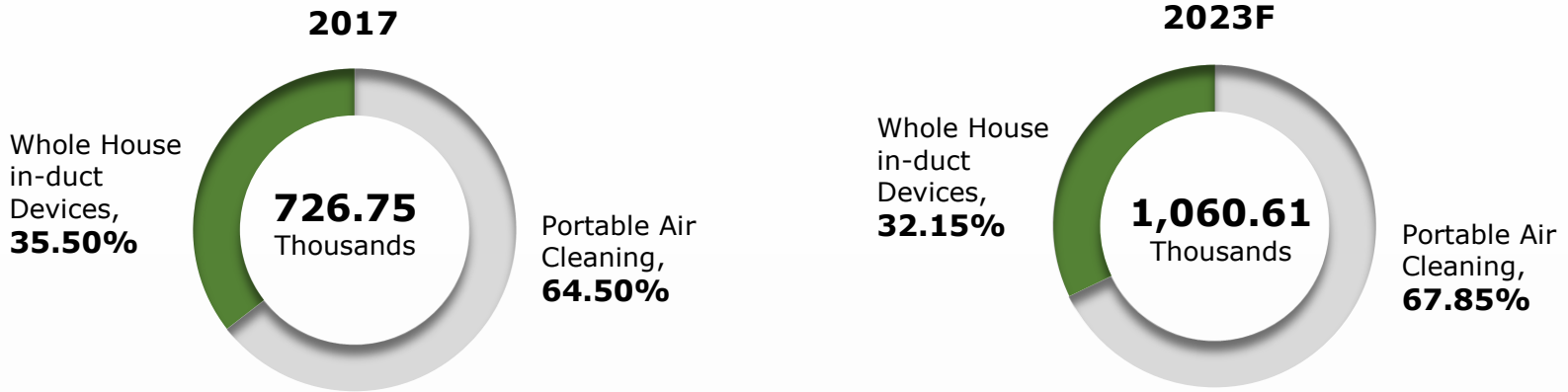
Source: American Lung Association, 2018

Table 4: Number of Wildfires Occurred in California, 2014 – 2018

Particular	2014	2015	2016	2017	2018
Number of Wildfires	7,233	8,283	6,954	7,117	6,284
Number of Acers Burned	625,540	880,899	669,534	505,956	876,147

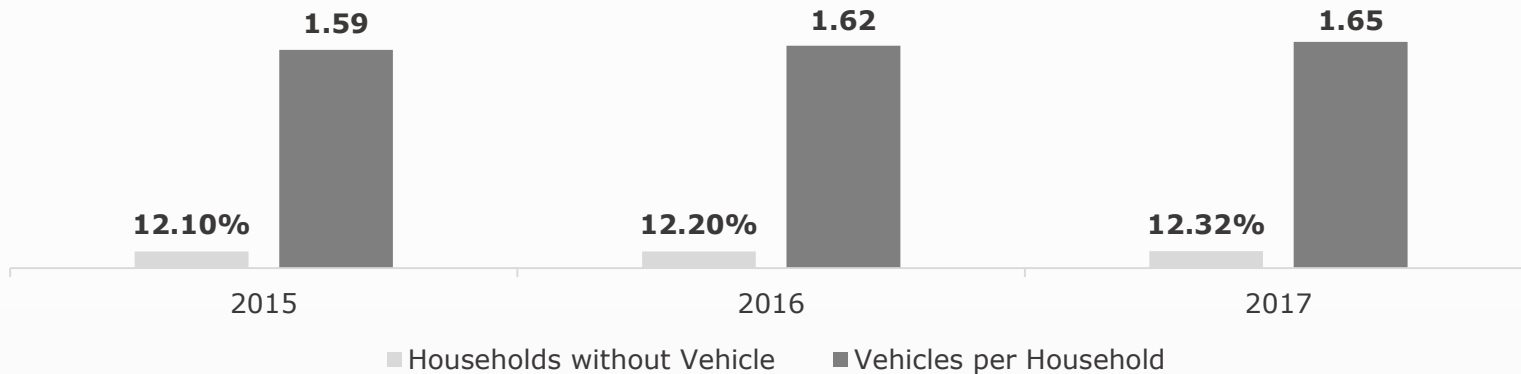
Source: California Department of Forestry and Fire Protection

Figure 12: California Air Cleaning Units Market Share, By Category Type, By Volume, 2017 & 2023F



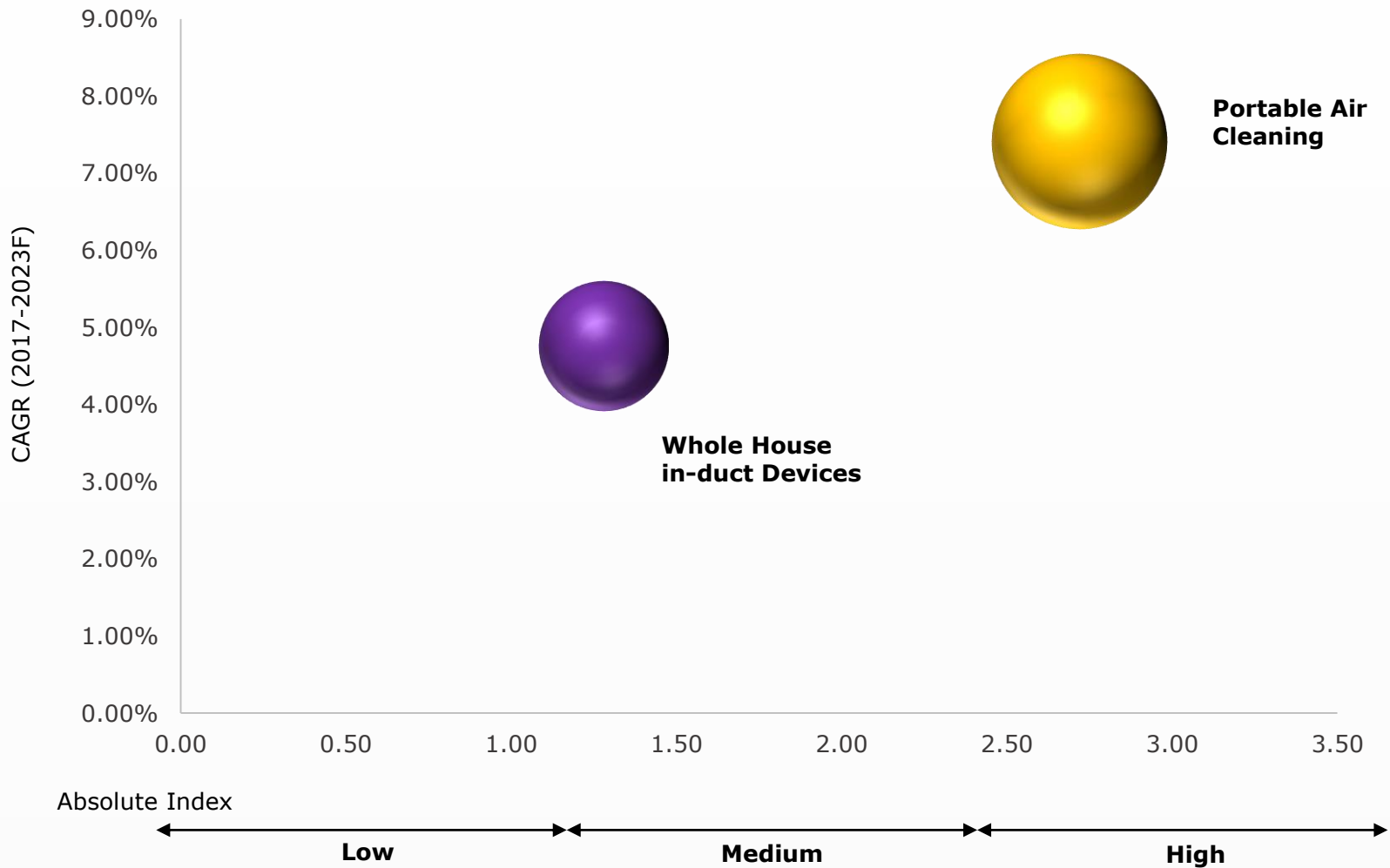
Source: TechSci Research

Figure 13: Los Angeles Households without Vehicle and Vehicles per Household, 2015-2017



Source: TechSci Research

Figure 14: California Air Cleaning Units Market Attractiveness Index, By Category Type, By Volume, 2017-2023F



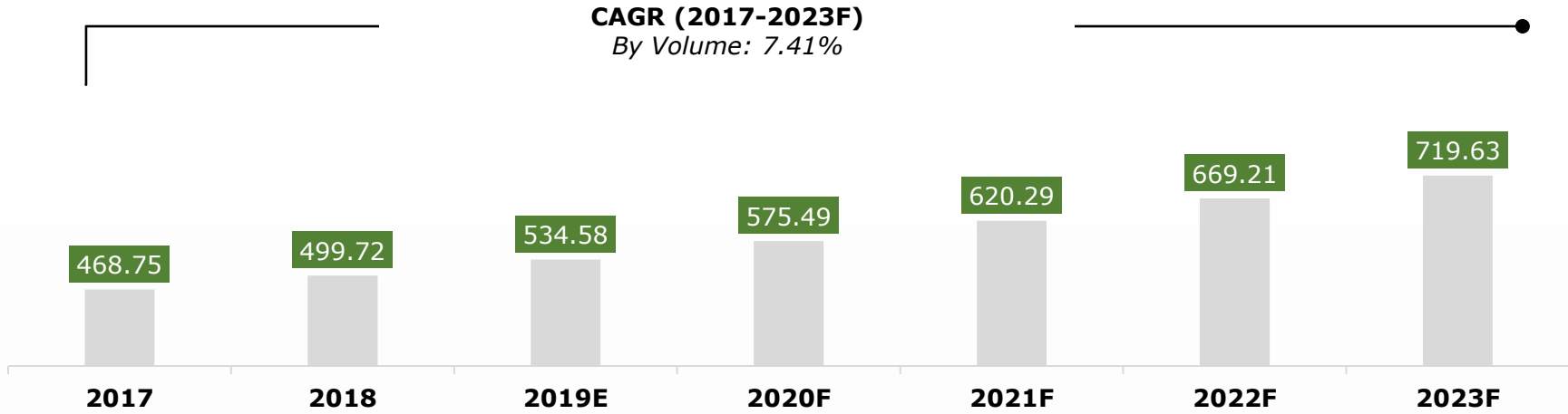
Note: The size of the bubble corresponds to the market size in 2017.

Source: TechSci Research

California Portable Air Cleaning Units Market Outlook

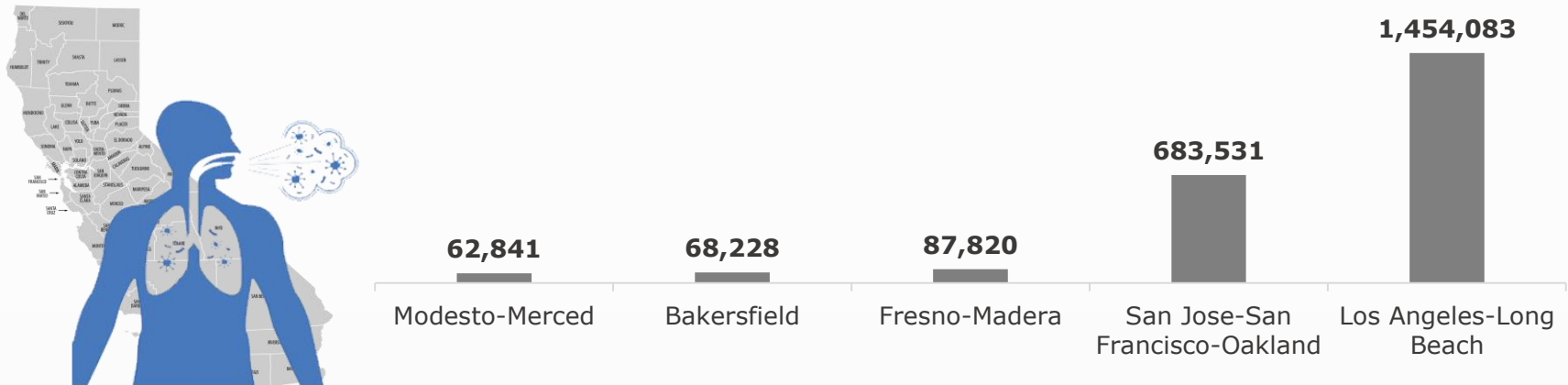


Figure 15: California Portable Air Cleaning Units Market Size, By Volume, 2017-2023F (Thousand Unit)



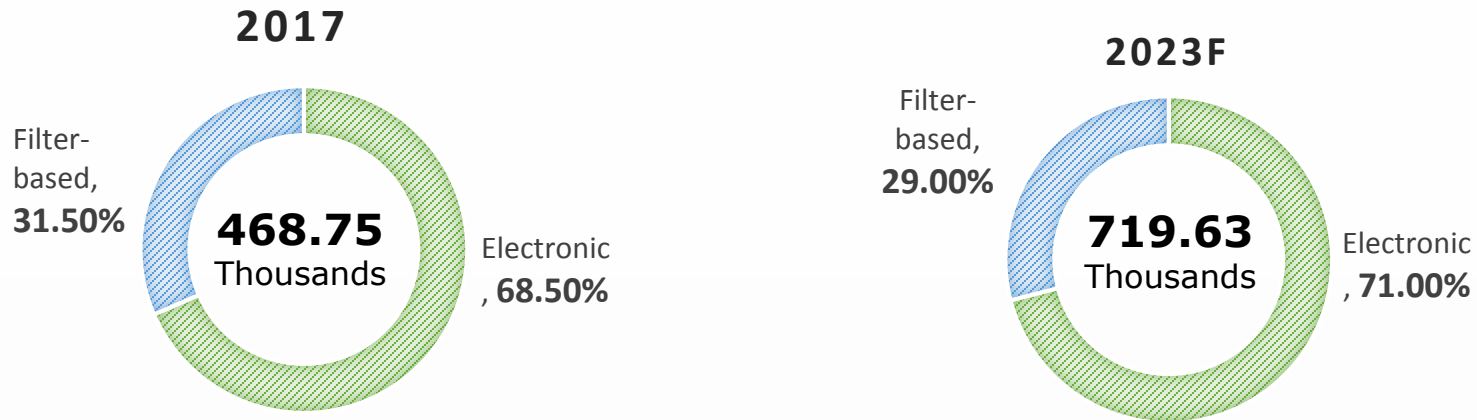
Source: TechSci Research

Figure 16: California Number of Asthma Cases in Top 5 Cities till 2016



Source: American Lung Association

Figure 17: California Portable Air Cleaning Units Market Share, By Type, By Volume, 2017 & 2023F



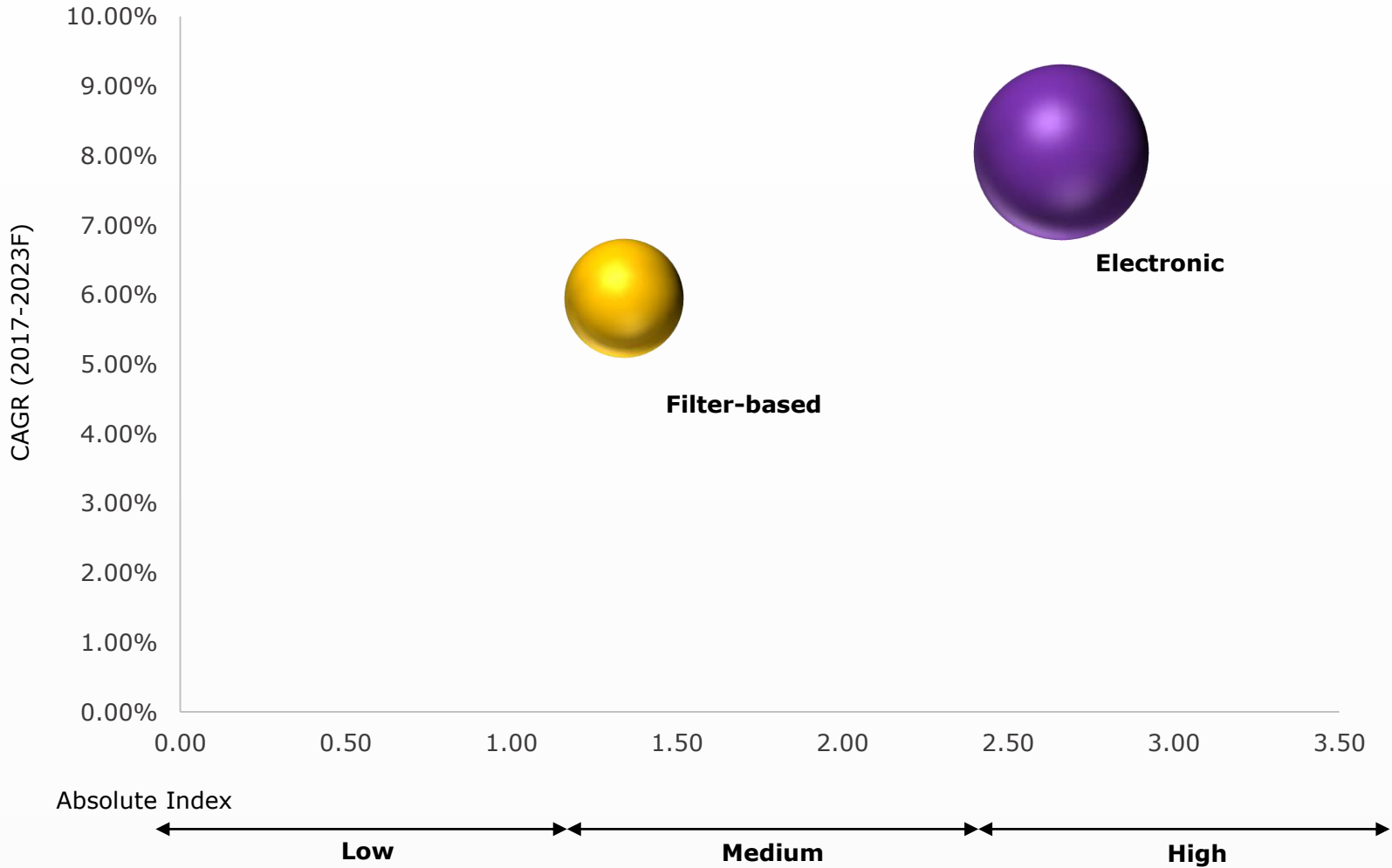
Source: TechSci Research

Table 5: California Top 5 Largest Wildfires

Fire Name (Cause)	Date	County	Acres
MENDOCINO COMPLEX (Under Investigation)	July 2018	Colusa County, Lake County, Mendocino County and Glenn County	459,123
THOMAS (Under Investigation)	December 2017	Ventura and Santa Barbara	281,893
CEDAR (Human Related)	October 2003	San Diego	273,246
RUSH (Lightning)	August 2012	Lassen	271,911
RIM (Human Related)	August 2013	Tuolumne	257,314

Source: California Department of Forestry & Fire Protection

Figure 18: California Portable Air Cleaning Units Market Attractiveness Index, By Type, By Volume, 2017-2023F



Note: The size of the bubble corresponds to the market size in 2017.

Source: TechSci Research



**California Whole House in-duct Devices
Air Cleaning Units Market Outlook**

California Whole House in-duct Devices Air Cleaning Units Market Size, By Volume

Figure 19: California Whole House in-duct Devices Air Cleaning Units Market Size, By Volume, 2017-2023F
(Thousand Unit)

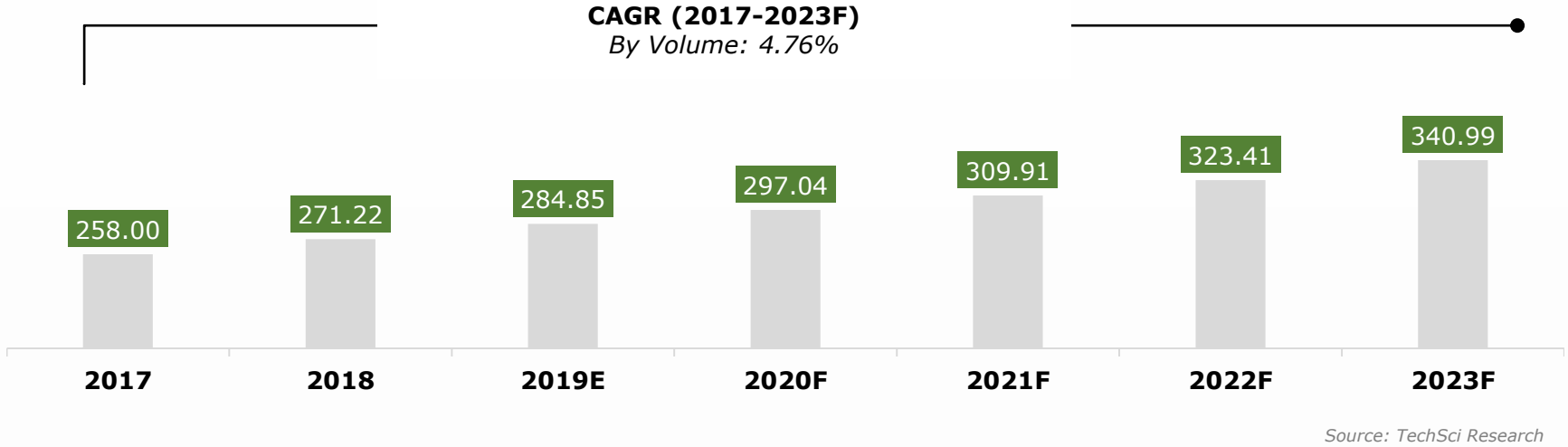
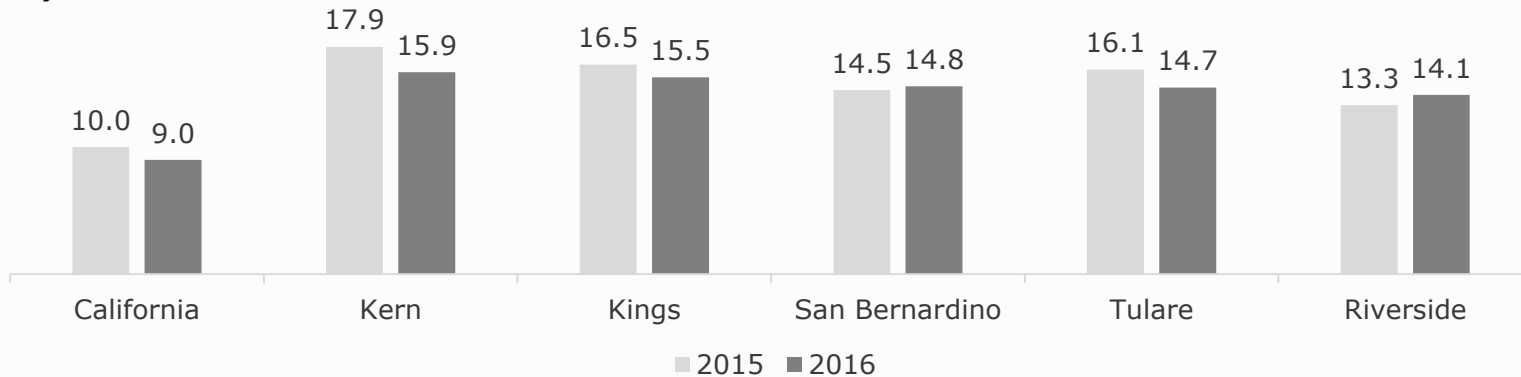


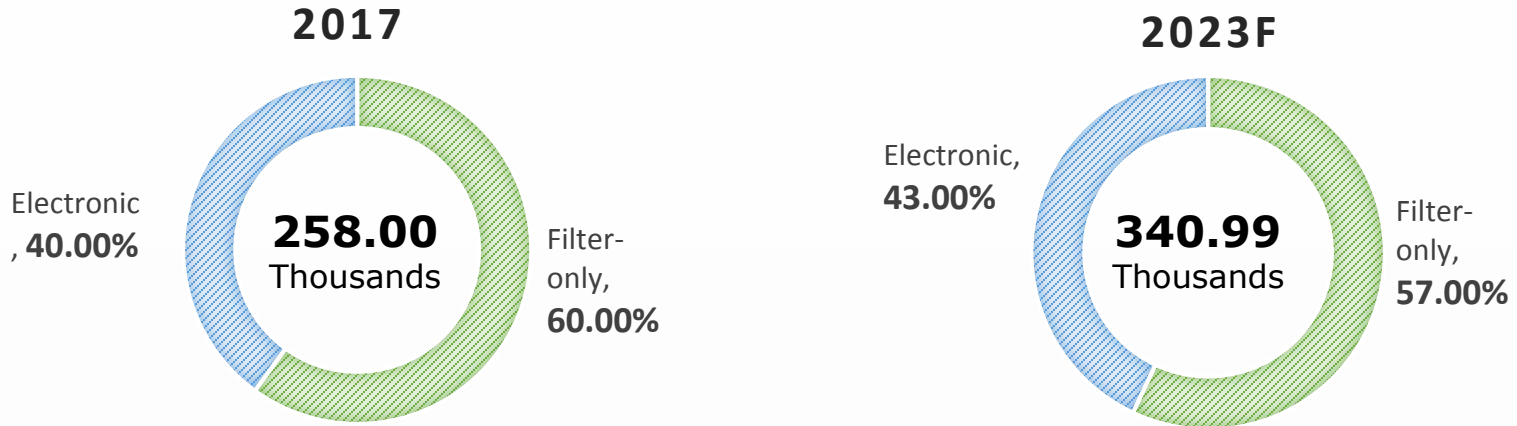
Figure 20: Annual Average Particulate Matter Concentration in California and Top 5 Counties in 2015 & 2016
($\mu\text{g}/\text{m}^3$)



Source: California Environmental Protection Agency

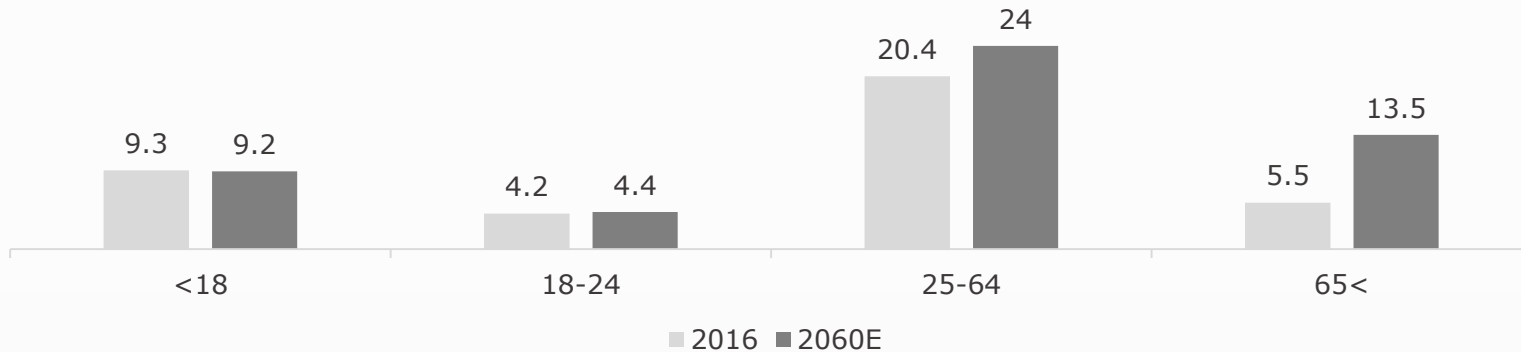
California Whole House in-duct Devices Air Cleaning Units Market Share, By Type

Figure 21: California Whole House in-duct Devices Air Cleaning Units Market Share, By Type, By Volume, 2017 & 2023F



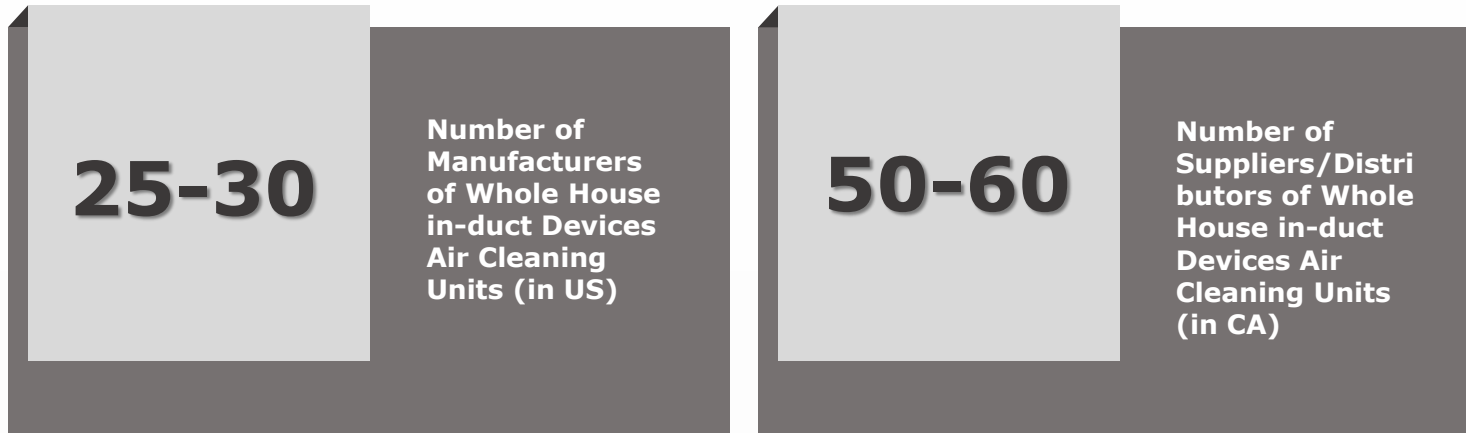
Source: TechSci Research

Figure 22: California Population in 2016 & 2060E (Million)



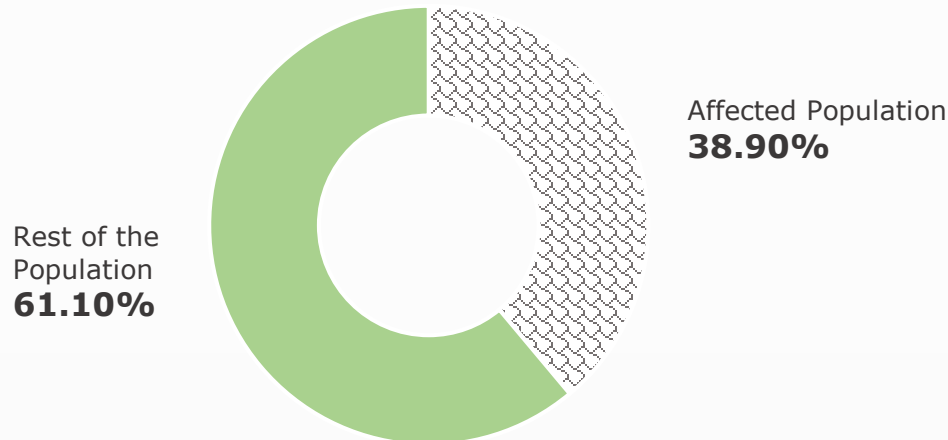
Source: California Department of Finance

Table 6: Number of Whole House in-duct Air Cleaning Unit Manufacturers in US and Suppliers/Distributors in California



Source: TechSci Research

Figure 23: United States Population Living in Unhealthy Levels of Ozone & Particle Pollution, 2017



Source: American Lung Association

Table 7: List of Manufacturers/Suppliers/Distributors of Whole House in-duct Devices Air Cleaning Units

Name	Product Offerings	Location	Contact Details
Ferguson Heating & Cooling	CleanEffects	Pomona	+1 909-517-3085
Burke Engineering Co.	Media Air Cleaner	Los Angeles	+1 626-579-6763
Andrew D Cooper Co Inc	Performance Series, Comfort Ez-Flex	Anaheim	+1 714-991-4700
Best in the West Air Conditioning & Heating	Whole House Duct Mount HEPA Air Cleaner	Bermuda Dunes	+1 760-343-1002
Dan-Son Air	Tempstar Air Purifier	Sylmar	+1 818-439-1852
Carrier (United Technologies Corp.)	Infinity Air Purifier	Connecticut	+1 800-227-7437
Goodman Air Conditioning & Heating (Daikin)	AM11 Series media air cleaners	Texas	+1 877-254-4729
Beyond by Aerus	Sanctuary	Virginia	+1 800-572-0502
Aprilaire	Model 5000	Wisconsin	+1 800-334-6011
IQAir North America, Inc	Perfect 16	La Mirada	+1 877-304-7247
Amaircare	Amaircare 10000	Canada	+1 800-268-7732
Hamilton Thorne	ZANDAIR PCOC 3	Massachusetts	+1 978-921-2050
General Filters Incorporated	MAC Series, AC Series, TERSus Series	Michigan	+1 866-476-5101
Field Controls	Media Air Cleaner	North Carolina	+1 252-522-3031
Bryant Heating & Cooling Systems (United Technologies Corp.)	Evolution Perfect Air Purifier	Connecticut	+1 800-428-4326
Trane	CleanEffects	North Carolina	+1 910-323-5131
Maytag	Maytag Electronic Air Cleaner	Michigan	+1 800-344-1274
Lennox International	PureAir Air Purification System	Texas	+1 972-497-5000
RGF Environmental Group, Inc	REME HALO whole home in-duct air purifier	Florida	+1 561-848-1826
Triatomic Environmental Inc	Fresh-Aire UV APCO	Florida	+1 561-748-4864

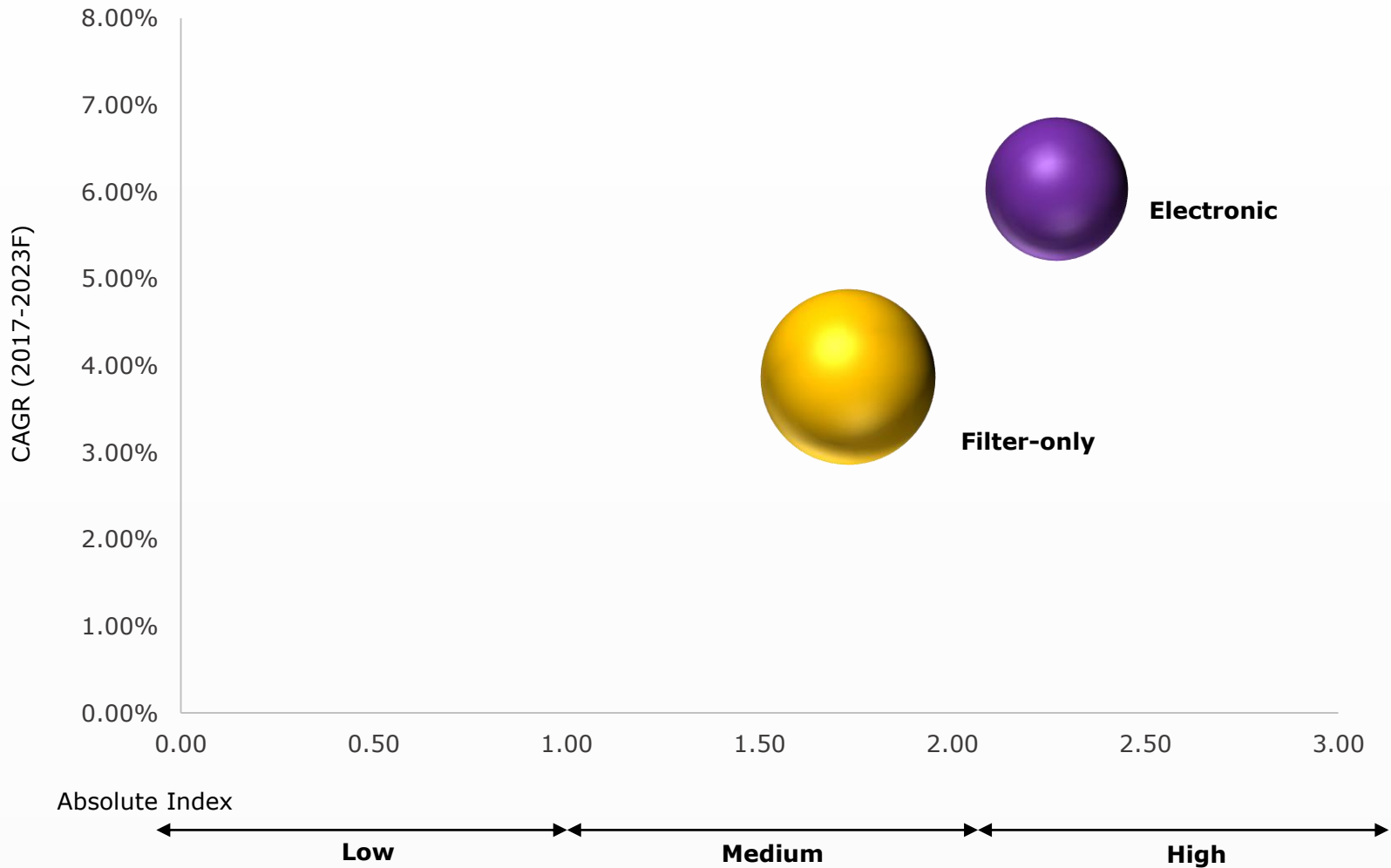
Source: TechSci Research

Table 8: List of Key Brands for Whole House in-duct Devices Air Cleaning Units

Name of Brand	Brand Owner	Price Range (USD)
CleanEffects	Trane	800 – 1000
Infinity Air Purifier	Carrier (United Technologies Corp.)	800 – 1000
AM11 Series media air cleaners	Goodman Air Conditioning & Heating (Daikin)	90 – 110
Perfect 16	IQAir North America, Inc	275 – 325
PureAir Air Purification System	Lennox International	1000 – 1200
Electronic Air Cleaner (F300)	Honeywell International, Inc	590 - 700

Source: TechSci Research

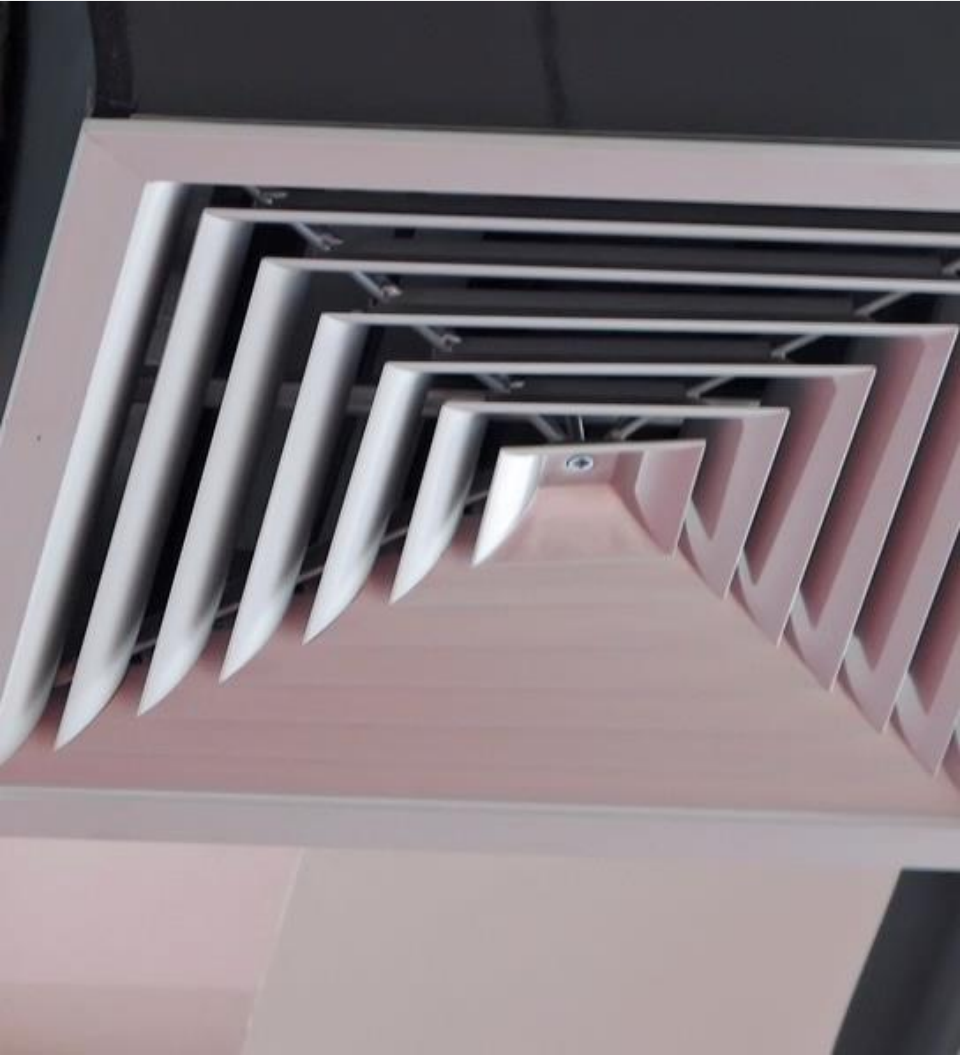
Figure 24: California Whole House in-duct Devices Air Cleaning Units Market Attractiveness Index, By Type, By Volume, 2017-2023F



Note: The size of the bubble corresponds to the market size in 2017.

Source: TechSci Research

California Electronic In-duct Vs Portable Electronic Air Cleaning Units Market Outlook



California Electronic In-duct Vs Portable Electronic Air Cleaning Units Market Size, By Value

Figure 25: California Electronic In-duct Air Cleaning Units Market Size, By Value, 2017-2023F (USD Million)

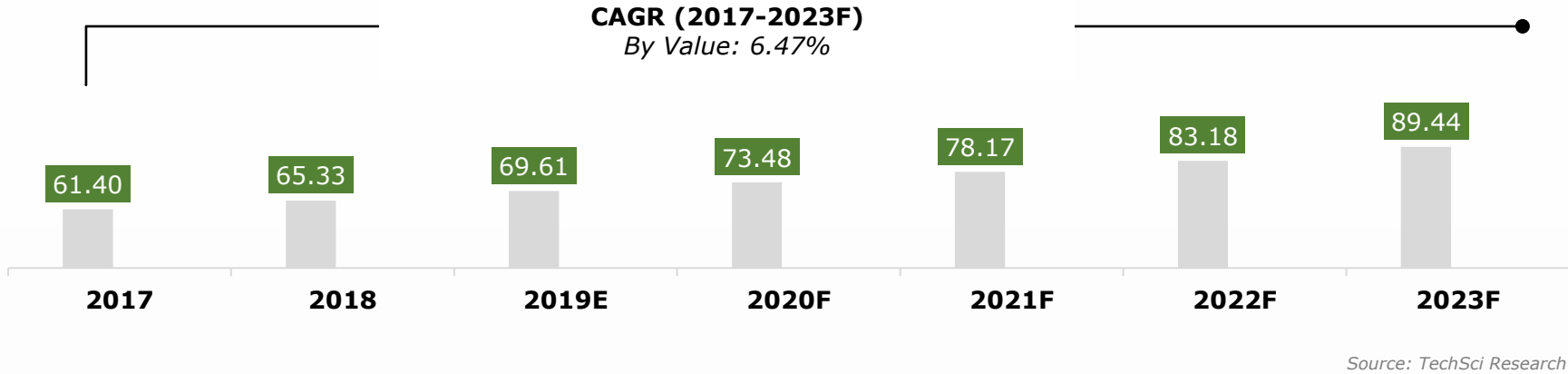
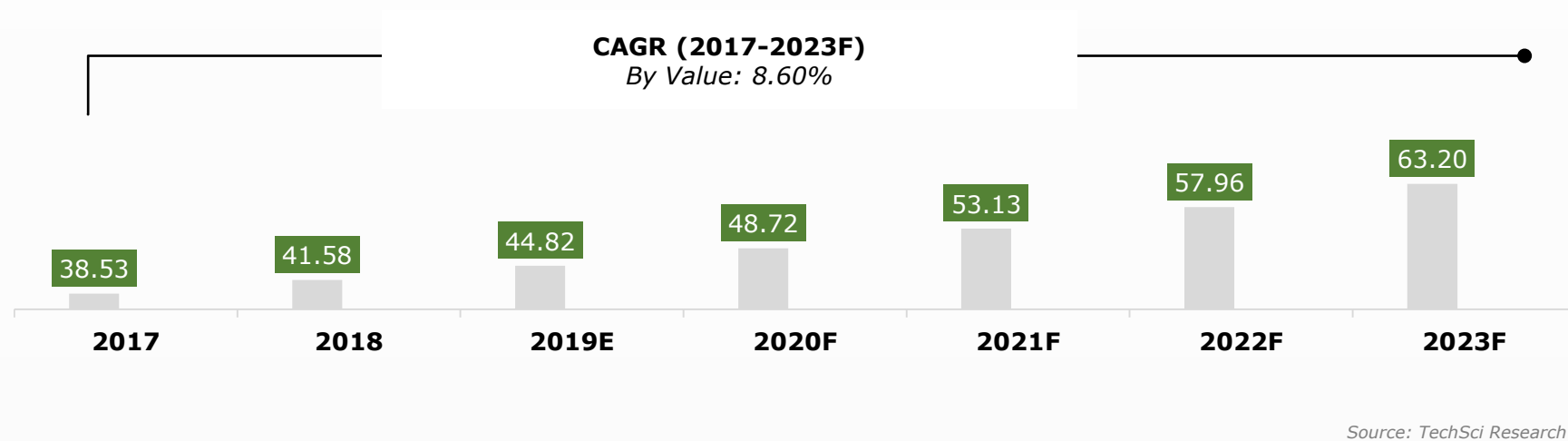
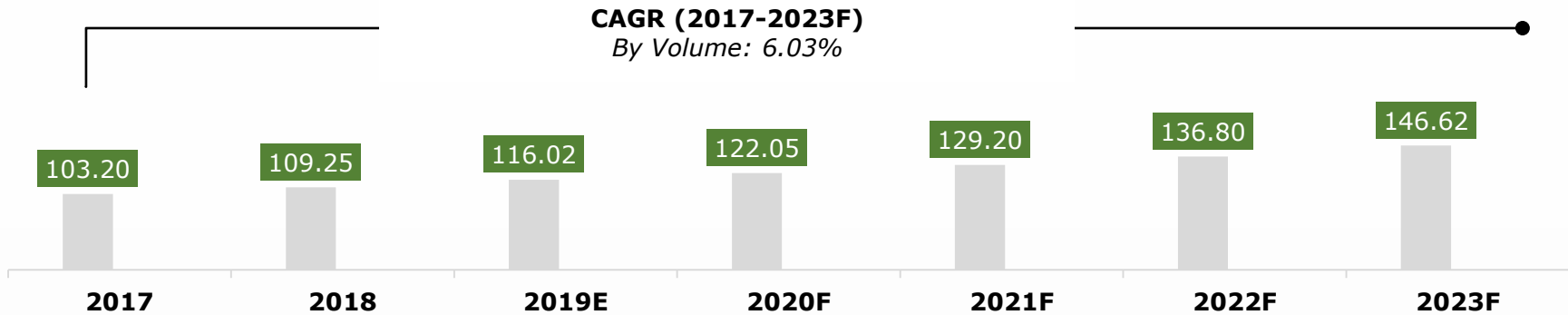


Figure 26: California Portable Electronic Air Cleaning Units Market Size, By Value, 2017-2023F (USD Million)



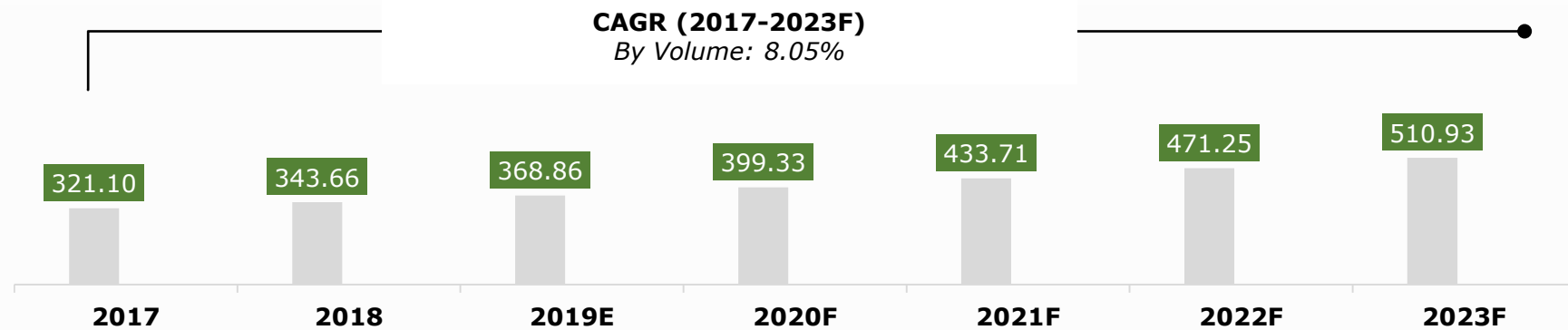
California Electronic In-duct Vs Portable Electronic Air Cleaning Units Market Size, By Volume

Figure 27: California Electronic In-duct Air Cleaning Units Market Size, By Volume, 2017-2023F (Thousand Unit)



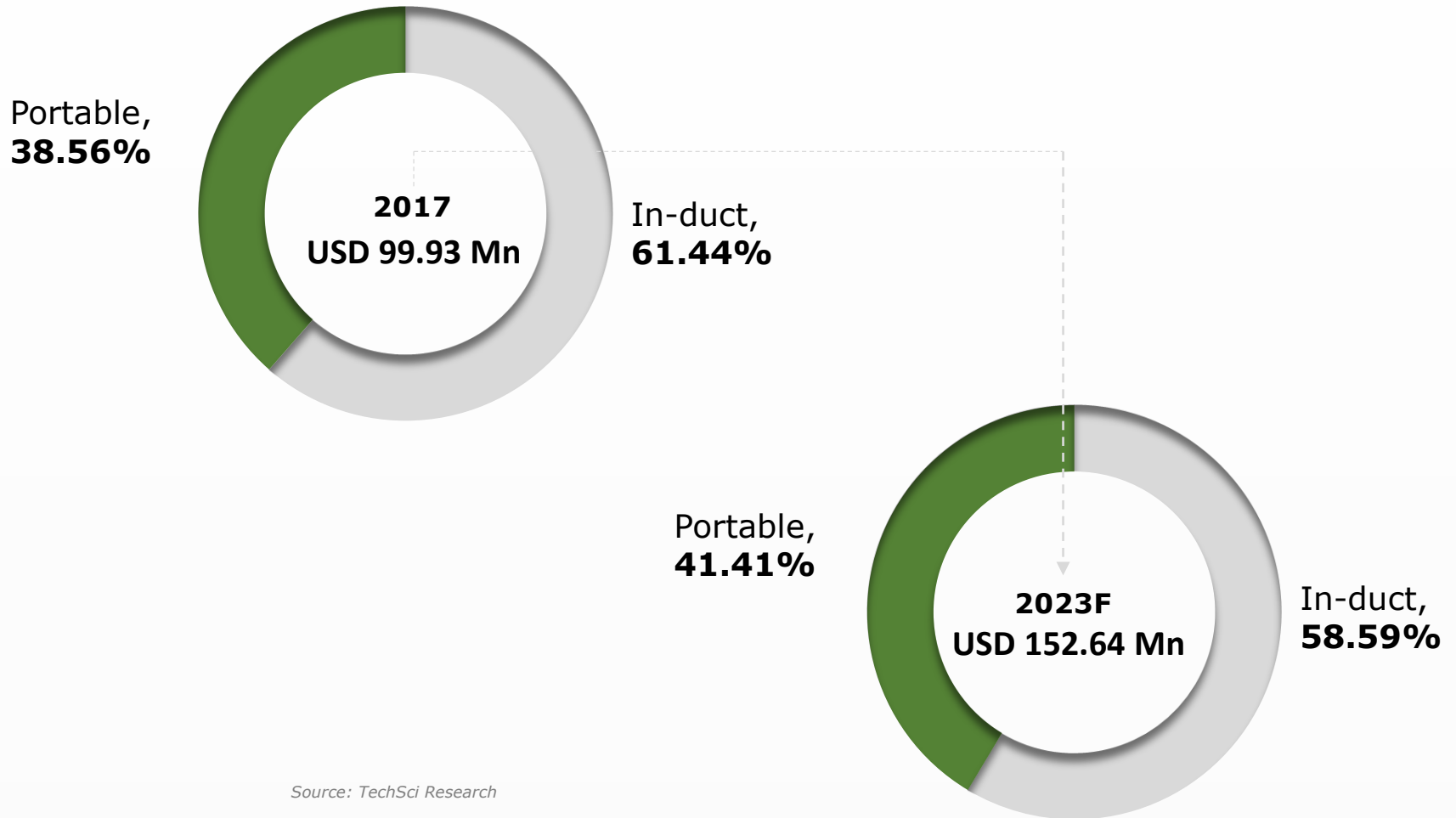
Source: TechSci Research

Figure 28: California Portable Electronic Air Cleaning Units Market Size, By Volume, 2017-2023F (Thousand Unit)



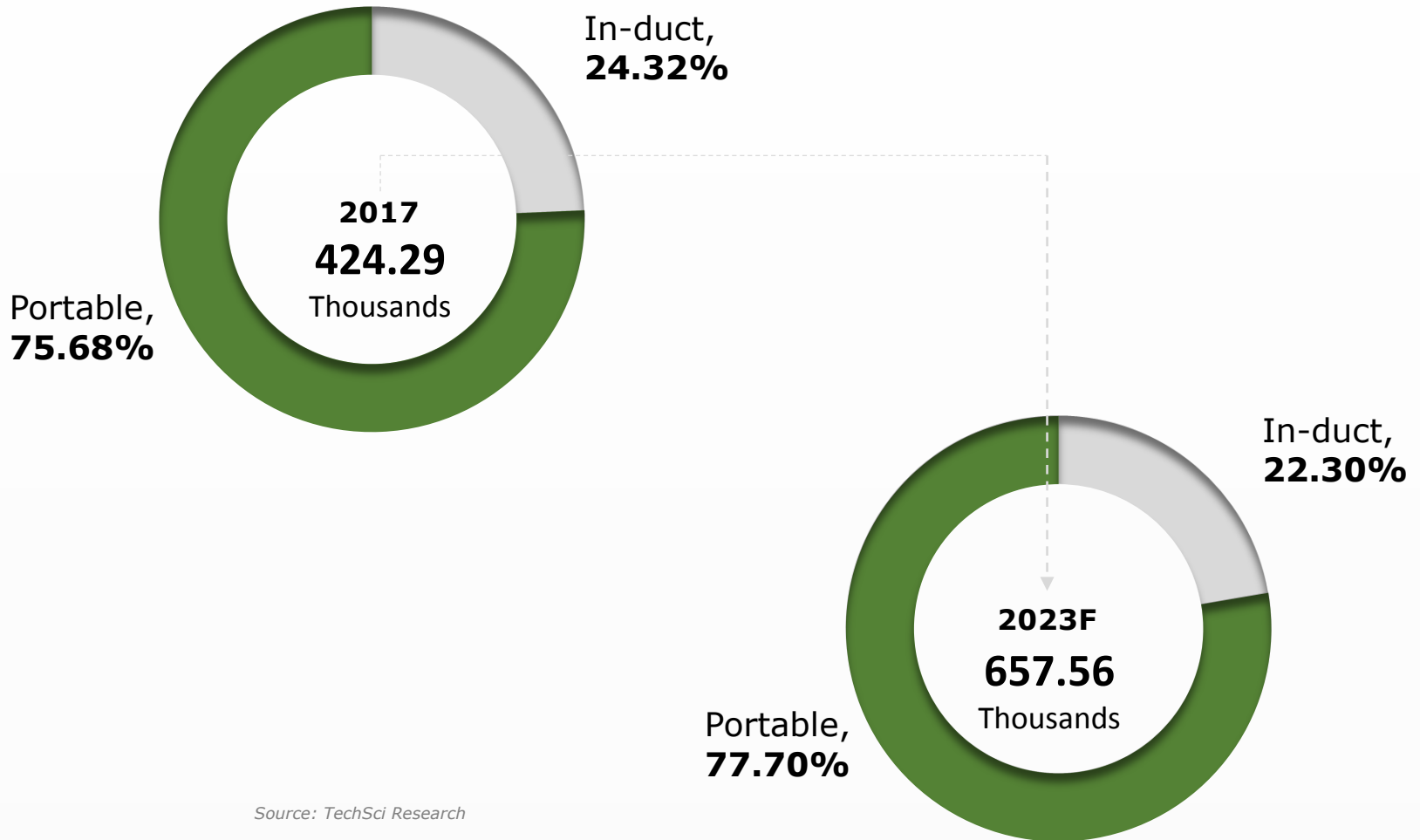
Source: TechSci Research

Figure 29: California Whole House Electronic in-duct Vs Portable Electronic Air Cleaning Units Market Share, By Value, 2017 & 2023F



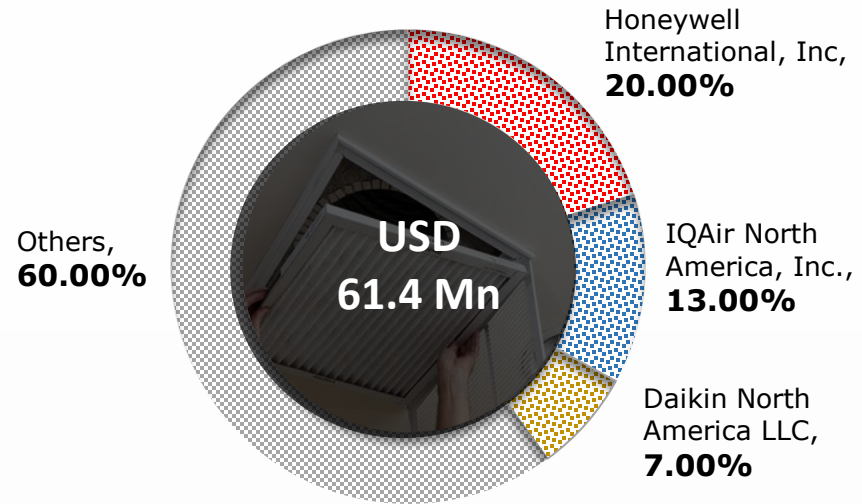
Source: TechSci Research

Figure 30: California Whole House Electronic in-duct Vs Portable Electronic Air Cleaning Units Market Share, By Volume, 2017 & 2023F



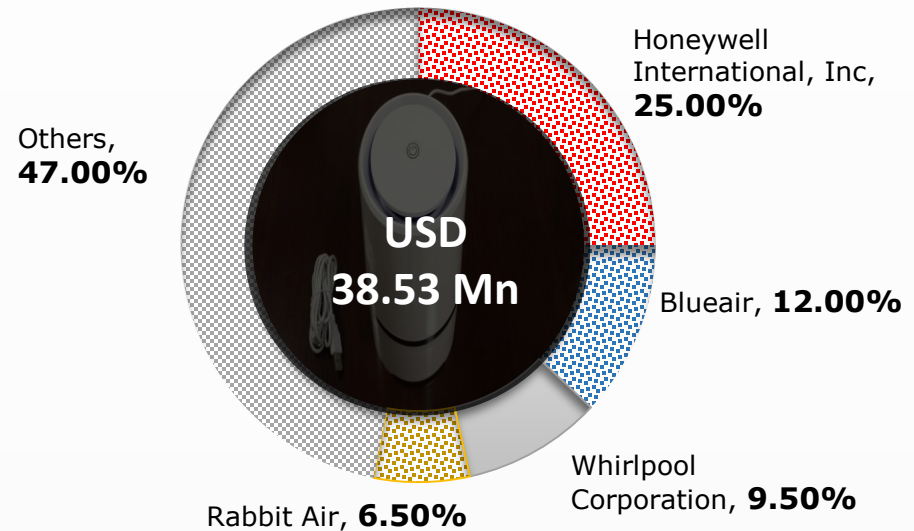
Source: TechSci Research

Figure 31: California Whole House Electronic in-duct Devices Air Cleaning Units Market Share, By Company, By Value, 2017



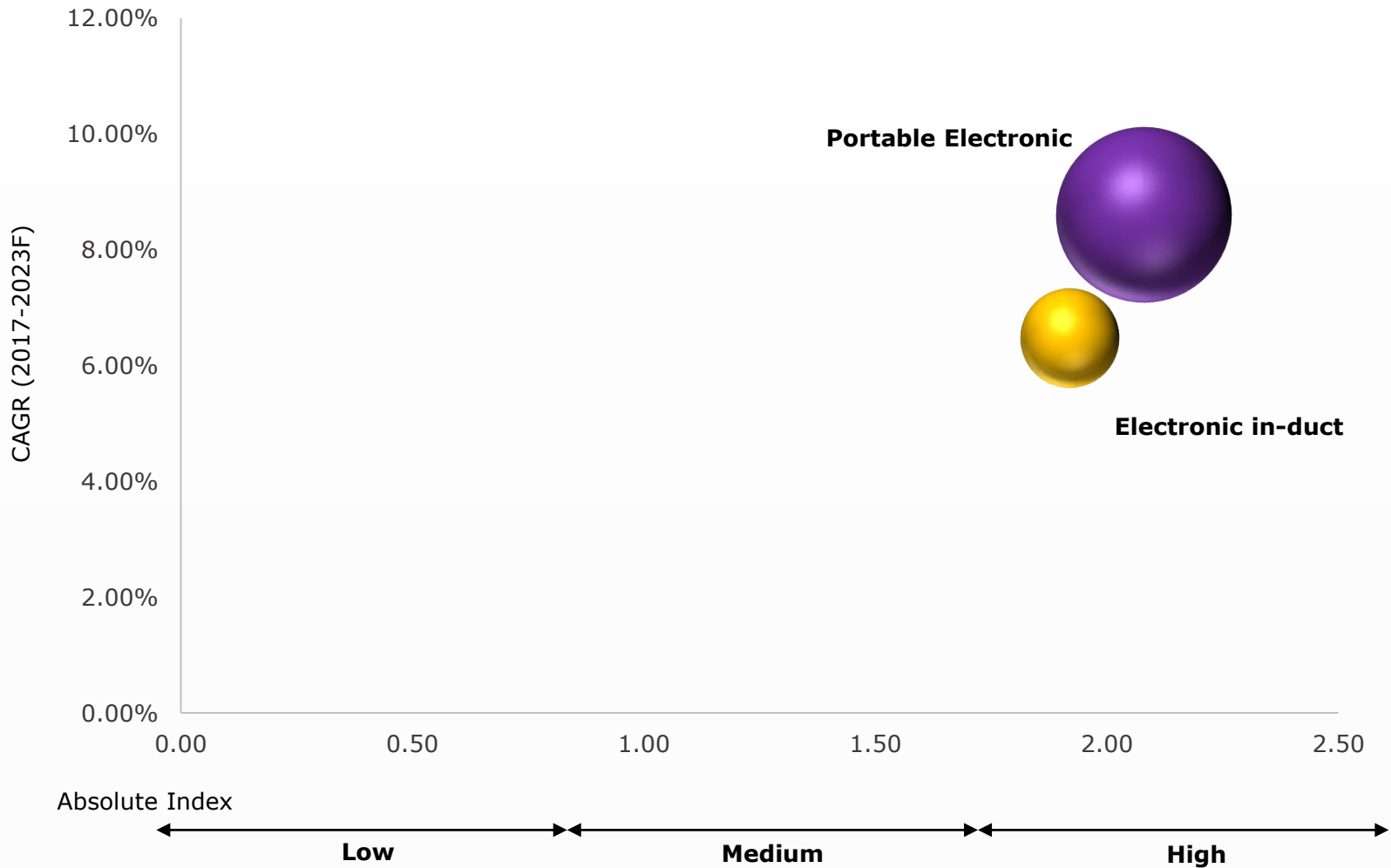
Others : Whirlpool Corporation, General Filters Inc, Aprilaire etc.

Figure 32: California Portable Electronic Air Cleaning Units Market Share, By Company, By Value, 2017



Others : GermGuardian, Austin Air, Winix, Aprilaire etc.

Figure 33: California Electronic in-duct Vs Portable Electronic Air Cleaning Units Market Attractiveness Index, By Type, By Volume, 2017-2023F



Note: The size of the bubble corresponds to the market size in 2017.

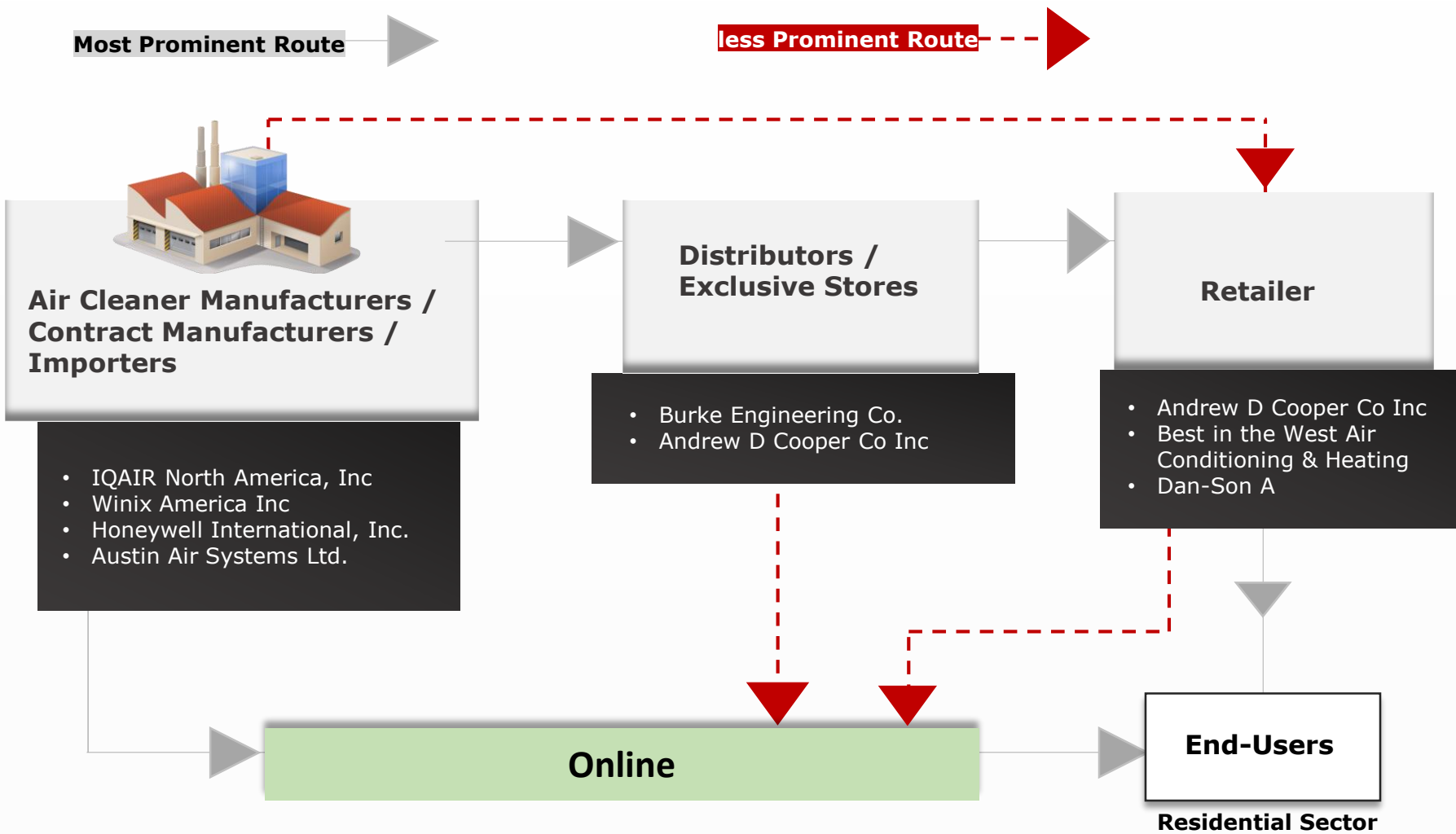
Source: TechSci Research

Supply Chain Analysis



Most Prominent Route →

less Prominent Route - - - →



End users mostly procure air cleaning units through distributors and online sites.

However, installation of units is done by local agencies, which are also engaged in providing maintenance and regular servicing of installed air cleaning units.

Source: TechSci Research

Market Dynamics



Drivers

- **Increasing Airborne Contaminants**
- **Rising Elderly Population**
- **Growing Number of Natural Calamities such as Wild Fire, etc.**

Challenges

- **High Wind Speed in the Coastal Region**
- **Possibility of Economic Recession and Slowdown in US in 2020**

Increasing Airborne Contaminant : Exposure to air pollutants causes various lung diseases, which according to the American Lung Association, claim the lives of 350,000 people in the United States each year. Air pollution also affects the brain and can lead to a drop in cognitive abilities, which can lead to dementia and other health problems. Additionally, high ownership of heavy-duty automobiles leads to emissions such as sulfur dioxide, hydrogen sulfide, nitrogen oxides, benzene and particulate matter. Thus, demand for air purifiers is expected to grow in the California during the forecast period.

Rising Elderly Population : As per California Department of Finance in 2016, the population aged above 65 years in California stood at 5.5 Million (14% of total California Population) which is expected to increase to 13.5 million (26.5% of total California Population) by 2060. As elderly people require clean and contaminants free air in order to live a healthy life, use of air cleaner is inevitable. Air cleaners are used to reduce the air pollutants, contaminates, CO₂ emissions etc., Thus, the demand for the air purifiers is anticipated to increase in California in near future.

Growing Number of Natural Calamities such as Wild Fire, etc. : In 2018, as per California Department of Forestry and Fire Protection around 876 thousand acers was burned due to wildfires in California as compared to 505 thousand acers burned in 2017. In July 2018, Mendocino Complex wildfire in North California is the largest wildfire accident in state history, where 459,123 acers are burned due to wildfire. These incidents degrade the quality of air by increasing the level of fine particle pollution in the air and by emitting harmful gases which in turn hampers the better quality of life. There by growing number of natural calamities such as wild fire, etc., are expected to drive the demand for the air purifiers in the forecast period.

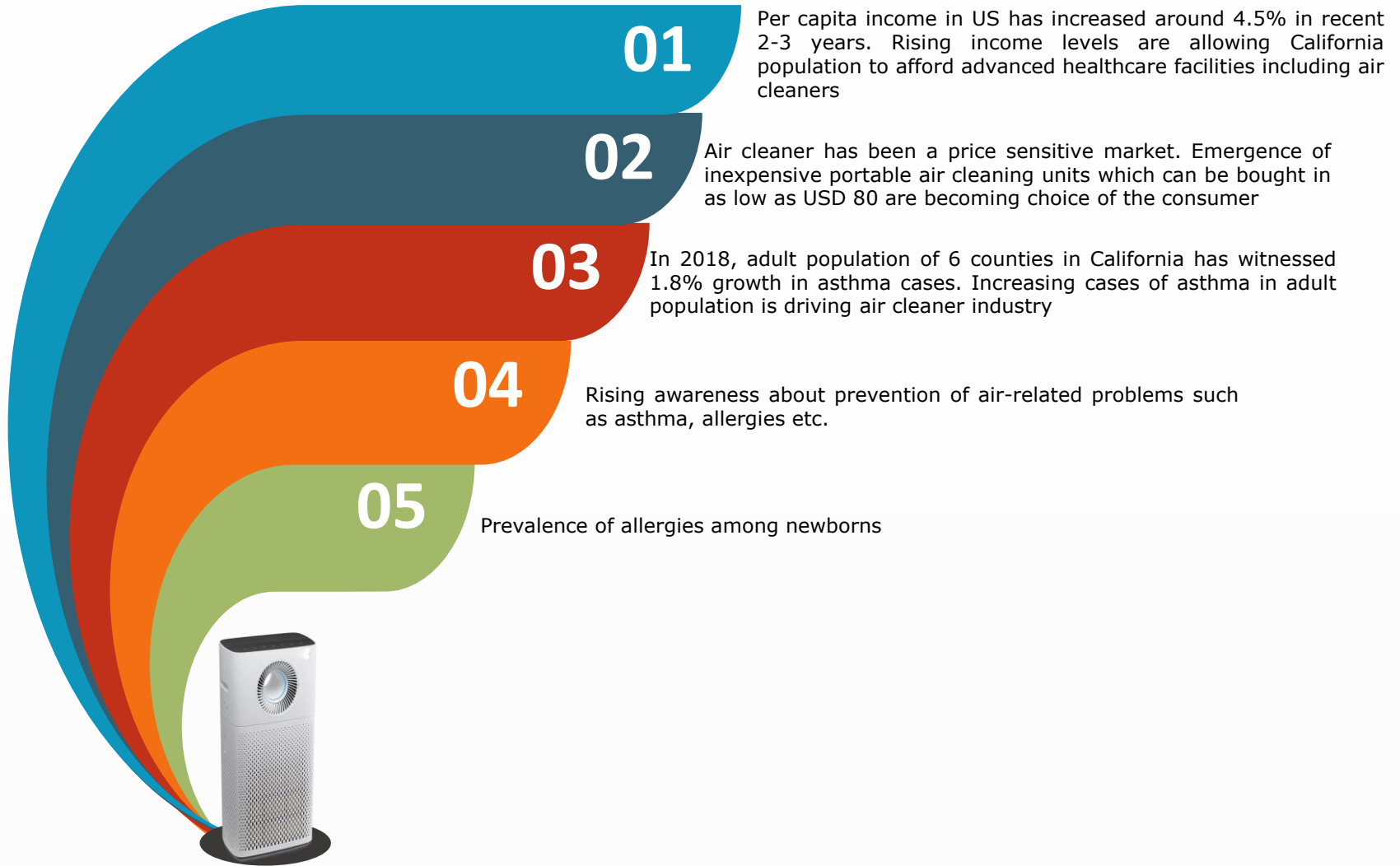
High Wind Speed in the Coastal Region: Coastal region of California such as San Francisco Bay Area experiences high wind speeds. This high speed wind also has high levels of humidity. With high humidity levels of coastal areas, dust concentration can go as high as 25%. This poses a challenge to the air cleaners with their limited capability to handle pollution and dust level.

Possibility of Economic Recession and Slowdown in US in 2020

The possibility of economic slowdown in US can pose a challenge to the sale of air cleaners across the region. Economic slowdown can downsize per capita income which in turn will limit the disposable income and purchasing power of a consumer. Any such event will negatively affect California air cleaner market.

Market Trends & Developments





Competitive Landscape



Company	Portable Air Cleaning Units	Whole House in-duct Air Cleaning Units
Honeywell International, Inc.	Yes	Yes
IQAir North America, Inc.	Yes	Yes
Whirlpool Corporation	Yes	Yes
Austin Air Systems Ltd.	Yes	No
Winix America Inc.	Yes	No

Source: TechSci Research

BASIC DETAILS & BUSINESS OVERVIEW

- **Established:** 1906
- **Headquarters:** New Jersey, US
- Honeywell International Inc. is a global technology conglomerate based in the US. The company has a diverse product portfolio, offering its products through four main business segments: Aerospace, Home & Building Technologies, Performance Materials & Technologies, and Safety & Productivity Solutions.
- The company offers air purifiers through Honeywell Home segment.
- By the end of 2017, the company employed around 131,000 people worldwide, out of which approximately 46,000 are located in the US.
- The company has more than 1,300 sites operating in 70 countries worldwide.

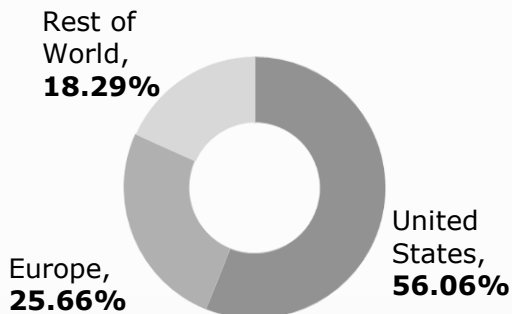
FINANCIALS

Financial Metrics- Consolidated (USD Million)

Particular	2017	2016	2015
Revenue	40,534	39,302	38,581
% Growth	3.14	1.87	--
EBIT	7,151	6,683	6,828
% Margin	17.64	17.01	17.69
Net Income	7,690	7,186	7,256
% Margin	18.97	18.28	18.81

Source: Annual Reports

REVENUE BREAK-UP, BY GEOGRAPHY, 2017



Source: Annual Reports

KEY PRODUCTS

- Air Treatment Products
- Water Treatment Products
- Humidity & Temperature Controller Products
- Air Conditioning Systems
- HVAC Systems
- Power Protection Systems
- Security and Video Intercom Systems
- Switch Sockets and Panels

KEY PERSONNEL

- Darius Adamczyk, President & CEO

KEY CONTACT PERSON

- Carl Minnis - Director, Global Transportation & Logistics
- Tel: +1 800-558-1711

CONTACT DETAILS

Corporate Headquarters

115 Tabor Rd.

Morris Plains, NJ 07950

United States

Phone: 1 (877) 841-2840

Website: www.honeywell.com

Supply Chain :

- The company sells their product through Distributor, Retail Stores and Online in United States
- Kaz is the official distributor of Honeywell in the United States
- The company offers their air purifiers to Residential, Commercial and Automotive Sectors
- The company sells their product in United States through more than 30 retail stores

Key market Focus and Geographical Presence:

- The company has its presence in 70 countries across five regions (North America, Europe, Asia-Pacific, South America and Middle East & Africa) globally
- The company earns more than 55% of its revenue from United States itself

Planned Investments : No Major Planned Investments

Market positioning : The company is the leading player in both Whole House Electronic in-duct Devices as well as Portable Electronic Air Cleaning Units market in California.

Pricing of Targeted Products:

Product Category	Brand Name/Model No.	Price (USD)
Portable Filter Based	HPA020B Tabletop	80
Portable Electronic	16200 HEPAClean Tabletop	250
In Duct Filter Based	Whole-House Media Air Cleaner (F100)	119
In Duct Electronic	Electronic Air Cleaner (F300)	595

BASIC DETAILS & BUSINESS OVERVIEW

- **Established:** 1991
- **Headquarters:** California, US
- IQAir North America, Inc. operates as a subsidiary of 1963-established IQAir AG, a Switzerland-based company involved in the manufacturing of air purification systems.
- Through IQAir North America, Inc., the parent company operates in the United States and South America region.
- The company offers following products:
 - Room Air Purifiers
 - Whole-house Systems
 - Personal Air Purifiers
 - Air Quality Monitors
- The company manufactures air purifiers for residential, institutional and commercial purposes and offers these products through room air purifiers, personal air purifiers and whole-house systems categories along with replacement filters for all.

- Apart from air purifiers, IQAir also offers air quality monitors and other air quality solutions. Major focus areas of the company are medical, education, offices, museums, laboratories and hospitality industry.
- The company's air purifiers are equipped with HyperHEPA Filtration Technology and these filters are installed by Hong Kong Hospital Authority after consistent testing to fight against Severe Acute Respiratory Syndrome (SARS).
- The company holds H12/13 Certification by IAACM (International Association of Air Cleaner Manufacturers).
- As of 2017, the company has about 50 employees at its California office.

KEY PRODUCTS

- Residential Air Purifiers
- Commercial Air Purifiers
- Air Cleaners
- Air Quality Monitors

KEY PERSONNEL

- Frank Hammes, President
- Glory Dolphin-Hammes, CEO

KEY CONTACT PERSON

- Todd Longbrake, Sales Manager
- Tel: +1 877-715-4247

CONTACT DETAILS

14241 Firestone Blvd
La Mirada
California-90638
United States

Phone: +1 877-715-4247

Website: www.iqair.com

Supply Chain :

- The sells its product through Online, Dealers and Retail stores in the country
- The company provides Room Air Purifiers, Personal Air Purifiers, Air Quality Monitor and Whole-House System for Residential sector in United States
- The company offers product support for Air Purifiers in United States through its distributors

Key market Focus and Geographical Presence:

- The company has its presence United States, Canada and Mexico countries in North America region
- United States is the leading revenue generating country for the company

Planned Investments : No Major Planned Investments

Market positioning : As the company offers lower noise and longer life span of air purifiers it is the second largest player in Whole House Electronic in-duct Devices market in California.

Pricing of Targeted Products:

Product Category	Brand Name/Model No.	Price (USD)
Portable Filter Based	-	-
Portable Electronic	HealthPro Plus	899
In Duct Filter Based	Perfect16 Deposit	295
In Duct Electronic	-	-

BASIC DETAILS & BUSINESS OVERVIEW

- **Established:** 1955
- **Headquarters:** Michigan, US
- Whirlpool Corporation is a global manufacturer and marketer of home appliances.
- The company manufactures appliances such as air purifiers, air conditioners, freezers, and washing machines.
- Whirlpool Corporation has 43 manufacturing locations, with 13 being in North America. The company has its operations in 170 countries worldwide.
- The company operates through Whirlpool, KitchenAid, Maytag, Consul, Brastemp, Amana, Bauknecht, Jenn-Air, Indesit and other major brand names in nearly every country across the world.
- Whirlpool Corporation has over 92,000 employees, globally, as of 2017.

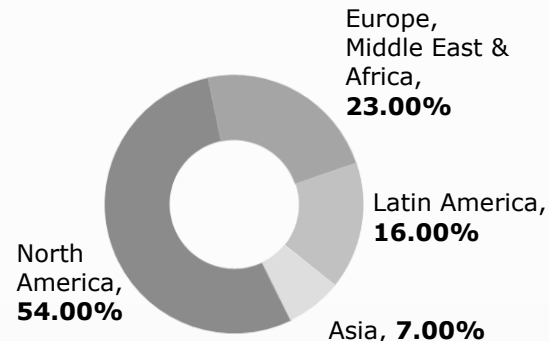
FINANCIALS

Financial Metrics- Consolidated (USD Million)

Particular	2017	2016	2015
Revenue	21,253	20,718	20,891
% Growth	2.58	-0.82	--
EBIT	1,136	1,368	1,242
% Margin	5.35	6.61	5.95
Net Income	350	888	783
% Margin	1.65	4.28	3.75

Source: Annual Reports

REVENUE BREAK-UP, BY GEOGRAPHY, 2017



Source: Annual Reports

KEY PRODUCTS

- Air Purifiers
- Air Conditioners
- Freezers
- Refrigerators
- Water Heaters
- Water Filters
- Washing Machines

KEY PERSONNEL

- Jeff M. Fettig, Director
- Marc R. Bitzer, President and Chief Executive Officer

KEY CONTACT PERSON

- Byron Green - Vice President of Manufacturing, North America
- Tel: +1 269 923 5000

CONTACT DETAILS

2000 N. M-63
Benton Harbor
Michigan, 49022-2692
United States
Phone: 1-269-923-5000
Website: www.whirlpool.com

Supply Chain :

- The company sells its product through Online, Dealers, Distributors and Retail Stores across the world
- The company has 13 manufacturing units in North America
- The company offers its product through more than 20 retail stores in California
- The company provides Air Purifier for both Residential as well as Commercial Sectors

Key market Focus and Geographical Presence:

- The company earns more than 50% of their revenue from North America region
- The company employs around 26,000 employees in North America

Planned Investments : No Major Planned Investments

Market positioning : Whirlpool uses one of the finest quality of HEPA filters for its air purifiers, which helped the company to become one of the leading players in portable air cleaning segment in California

Pricing of Targeted Products:

Product Category	Brand Name/Model No.	Price (USD)
Portable Filter Based	Whispure Tower APT40010R	115.56
Portable Electronic	WPPRO2000B Whispure	369
In Duct Filter Based	-	-
In Duct Electronic	Dehumidifiers WPDV160XS	-

BASIC DETAILS & BUSINESS OVERVIEW

- **Established:** 1990
- **Headquarters:** New York, US
- Austin Air Systems Ltd. is engaged in manufacturing and sale of air purification systems, primarily for hospitals and households in the United States.
- The company has international dealers in Canada, China, Germany, Spain, UK, Singapore and Malaysia.
- Austin Air Systems Ltd. has one of the largest air cleaner manufacturing facility in the world, built at 480,000 sq. ft. of area, and manufactures everything in-house, from filter to metal forming and final product painting.
- The company's air purifiers are available on leading online shopping websites such as Amazon.com, tmall.com, jd.com, suning.com and yhd.com.

- The company offers filtration systems for gas absorption, gases and odor removals, chemical removals and trapping of airborne dust and dander emitted by pets, appliances, instruments, etc.
- Air purifiers manufactured by Austin Air Systems are designated as medical grade air purifiers.
- The company's air purifier models are Energy Star certified. Other certifications issued to the company's products include AHAM Certification for CADR and NSF Certification for Technical Compliance.

KEY PRODUCTS

- Formaldehyde-specific Air Purifiers
- Baby-type Air Purifiers
- Pet-specific Air Purifiers
- Air Purifiers for Asthma Patients
- Air Cleaners
- Replacement Filters
- Medical Grade Air Purifiers

KEY PERSONNEL

- Richard Taylor, Founder & President
- Lauren McMillan, Vice President

KEY CONTACT PERSON

- Michael Domon, Vice President, Sales
- Tel: +1 716-856-3700

CONTACT DETAILS

500 Elk St Buffalo
New York - 14210
United States

Phone: +1 716-856-3700

Website: www.austinair.com

Supply Chain :

- The company sells its air purifiers through Online, Dealers & Retail Stores in the country
- The company has 6 authorized international dealers for sales of its product across the world
- The company sells its product through more than 90 retail stores in California
- The company provides Air Purifier for both Residential as well as Commercial Sectors

Key market Focus and Geographical Presence:

- The company offers their product in more than 100 countries across five regions (North America, Europe, Asia-Pacific, South America and Middle East & Africa) globally

Planned Investments : No Major Planned Investments

Market positioning : The company received the California Environmental Protection Agency’s Air Resources Board certification, which conforms their products are under standard ozone emissions.

Pricing of Targeted Products:

Product Category	Brand Name/Model No.	Price (USD)
Portable Filter Based	-	-
Portable Electronic	Healthmate Jr. HM200	414.99
In Duct Filter Based	-	-
In Duct Electronic	-	-

BASIC DETAILS & BUSINESS OVERVIEW

- **Established:** 2013
- **Headquarters:** Illinois, US
- Winix America Inc. operates as a subsidiary of South Korea-based Winix Inc., which was incorporated in 1973.
- The company mainly offers air purifiers, replacement filters, humidifiers and dehumidifiers in the United States.
- Winix products are Energy Star and ARB certified. Its air purifiers also have AHAM certification for CADR and NSF certification for technical compliance.
- South Korea-based parent company Winix Inc. has been exporting air purifier models such as PlasmaWave 9000 and PlasmaWave 5000 to the United States since 2006.
- As of 2018, the company plans to use its headquarters and distribution center at Vernon Hills as the manufacturing facility.

- The company's air purifiers are based on Plasma Wave technology and three smart sensors: odor sensor for monitoring chemicals and odor, particle sensors for monitoring particles present in the air that can aggravate allergy and light sensors for quiet and energy efficient operation.
- Apart from its captive online portal, Winix products are available at retailers such as Costco, Bed Bath & Beyond, Home Depot and others.
- As of 2018, the company has its presence in Americas, Europe and Asia-Pacific regions.
- As of 2018, the company employs around 100 people across the world.

KEY PRODUCTS

- Air Purifiers
- Replacement Filters
- Humidifiers
- Dehumidifiers

KEY PERSONNEL

- Tony Kircher, President of Winix America & Winix Europe

KEY CONTACT PERSON

- Henrique Boscolo – National Sales Manager
- Tel: +1 847-551-9900

CONTACT DETAILS

220 North Fairway Drive
Vernon Hills
Illinois – 60061
United States

Phone: +1 847-551-9900

Website:

www.winixamerica.com

Supply Chain :

- The company sells its products only through their Online Portal and Retail Store in US
- The company provides Air Purifier for both Residential as well as Commercial Sectors
- The company sells its products through major retail and online stores such as Costco, Amazon, Home Depot, Bed Bath & Beyond, etc., in North America

Key market Focus and Geographical Presence:

- The company has its presence in America, Europe as well as Asia-Pacific regions

Planned Investments : No Major Planned Investments

Market positioning : The company offers its air purifiers with longer warranty periods as well as use of updated technologies such as Wifi connection, which helped them in being one of the major player in the country.

Pricing of Targeted Products:

Product Category	Brand Name/Model No.	Price (USD)
Portable Filter Based	WINIX B151	99.99
Portable Electronic	WINIX T1	1299.99
In Duct Filter Based	-	-
In Duct Electronic	-	-

Strategic Recommendations





- Over the last few years, demand for affordable and compact purifiers across California has increased significantly. In the year 2017, 468.75 thousands of portable air cleaning units have been sold in California which is forecast to grow at a CAGR of 7.41% in next 5 years owing to the increasing demand of low-cost, portable and convenient air cleaning units.
- Rising demand for portable air cleaning units can be mainly attributed to increasing number of small apartments. Moreover, people who work in cubicle settings, tiny offices or travel a lot also demand portable air purifiers.
- Air purification is relatively a new concept for cars, kitchens, table tops and other application areas and companies such as Molukule Inc. are offering portable air cleaners which can be used at all these locations due to their swift movement. Availability of portable air cleaning units in various models and types is expected to emerge as an extra advantage for the market players.
- Air cleaning unit manufacturers across California are recommended to focus on the requirements of different segments such as car, kitchen and table top air purifiers to capitalize on the emerging market opportunities.

Upsurge in Electronic Portable Air Cleaning Units in Coming Years

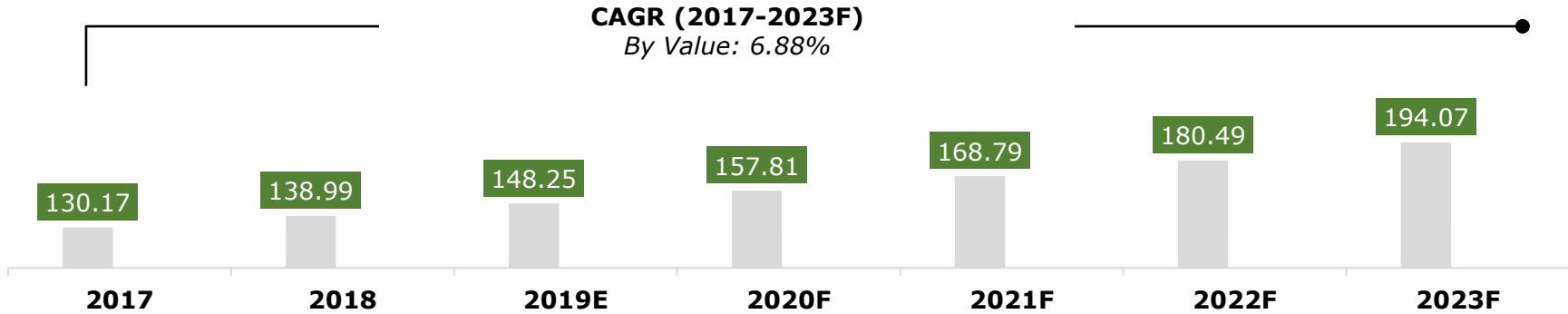


- Demand for electronic portable air cleaning units is expected to surge in the residential sector during the forecast period. One of the major use for electronic portable air cleaning units in California is addressing health issues, due to depleting air quality and growing incidences of allergies and asthma.
- Electronic portable air cleaning units accounted for USD38.53 million of market size in California (29.6% of total home air cleaning units market in California). The surging demand for these products will drive the market with 8.6% of CAGR from 2017 to 2023.
- Increasing pollution levels in major states such as California, Ohio, Kentucky, Texas and Indiana are impacting the health of geriatric population and babies, thereby boosting demand for electronic portable air cleaning units in the country. The demand is expected to increase in the education sector, banking sector, and laboratories, on account of rising awareness about the adverse effects of polluted air.
- Consequently, companies operating in the United States air cleaning units market should emphasize on catering to the residential sector of the country with efficient electronic portable air cleaning units.

Annexure

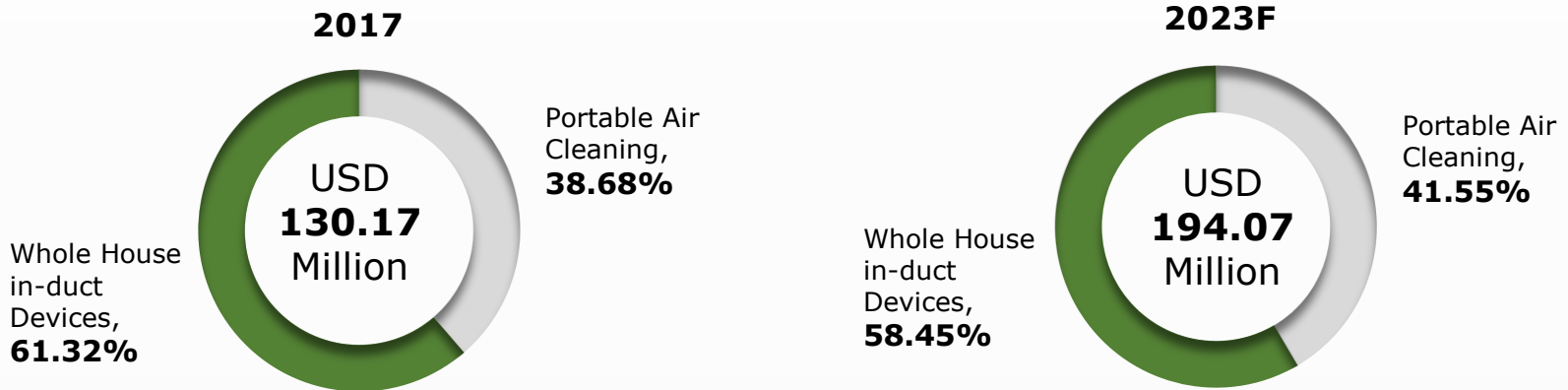


California Air Cleaning Units Market Size, By Value, 2017-2023F (USD Million)



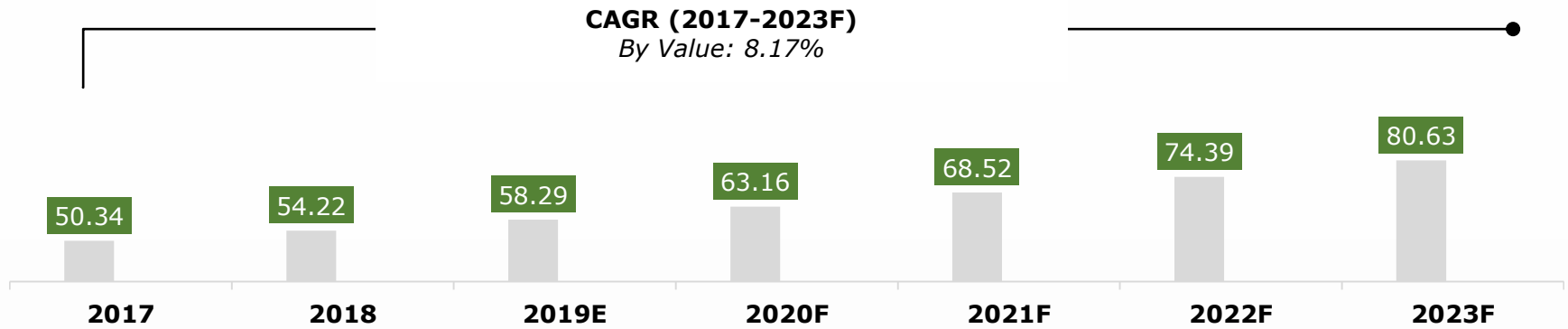
Source: TechSci Research

California Air Cleaning Units Market Share, By Category Type, By Value, 2017 & 2023F



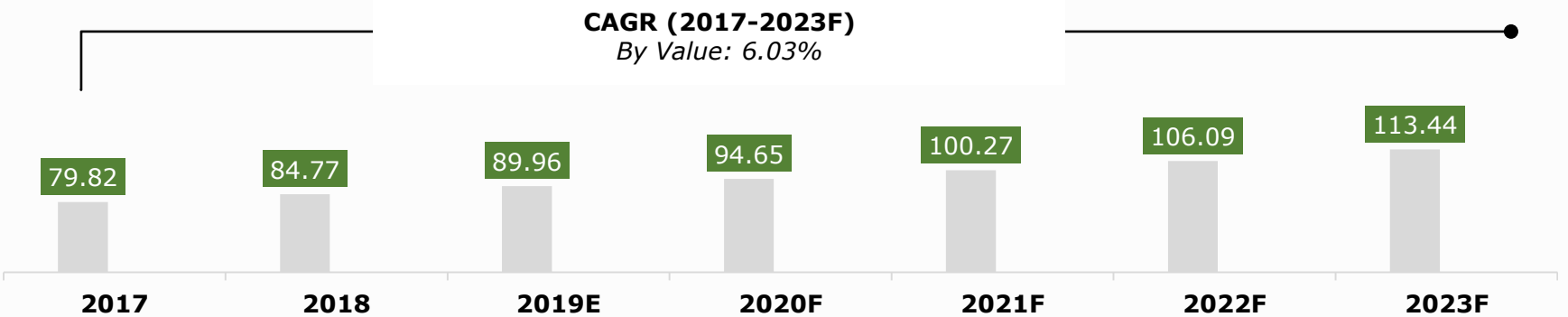
Source: TechSci Research

California Portable Air Cleaning Units Market Size, By Value, 2017-2023F (USD Million)



Source: TechSci Research

California Whole House in-duct Devices Air Cleaning Units Market Size, By Value, 2017-2023F (USD Million)



Source: TechSci Research

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TechSci Research – North America
708 Third Avenue, Manhattan,
New York, United States
Tel: +1- 646- 360- 1656
Email: sales@techsciresearch.com
www.techsciresearch.com

TechSci Research – Europe
54, Oldbrook, Bretton,
Peterborough,
United Kingdom
Email: sales@techsciresearch.com
www.techsciresearch.com

TechSci Research – Asia-Pacific
B – 44, Sector – 57, Noida, National
Capital Region, U.P. - India
Tel: +91-120-4523900
Email: sales@techsciresearch.com
www.techsciresearch.com