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AN INTRODUCTION TO SHENZHEN: CHINA'S TECHNOLOGY MEGA-CITY

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SECTION 01

SHENZHEN: THE FIRST FOUR DECADES

Shenzhen Then and Now

Shenzhen 1979



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Shenzhen 2020



<https://www.chinadiscovery.com/shenzhen-tours/shenzhen-visa-on-arrival.html>

Deng Xiaoping: The Grand Engineer of Reform



"There was an old man/Who drew a circle/by the South China Sea."

- "The Story of Spring," Patriotic Chinese song

Where is Shenzhen?

- **On the Southern tip of Central China**
- **In the south of Guangdong Province**
- **North of Hong Kong**
- **Along the East Bank of the Pearl River**



Shenzhen: Growth and Development

- **1979:** Shenzhen officially became a City; following the administrative boundaries of Bao'an County.
- **1980:** Shenzhen established as China's first Special Economic Zone (SEZ).
 - Separated into two territories, Shenzhen SEZ to the south, Shenzhen Bao-an County to the North.
 - Initially, SEZs were separated from China by secondary military patrolled borders.
- **2010:** Chinese State Council dissolved the "second line"; expanded Shenzhen SEZ to include all districts.
- **2010:** Shenzhen Stock Exchange founded.
- **2019:** The Central Government announced plans for additional reforms and an expanded SEZ.

Shenzhen's Special Economic Zone (2010)

2010: Shenzhen SEZ expanded to include all districts.



Regulations of the Special Economic Zone

- **Created an experimental ground for the practice of market capitalism within a community guided by the ideals of “socialism with Chinese characteristics.”**
- **Preferential policies to attract foreign investment:**
 - Business autonomy
 - Taxation
 - Land use
 - Foreign exchange management
 - Product sales
 - Entry and exit management



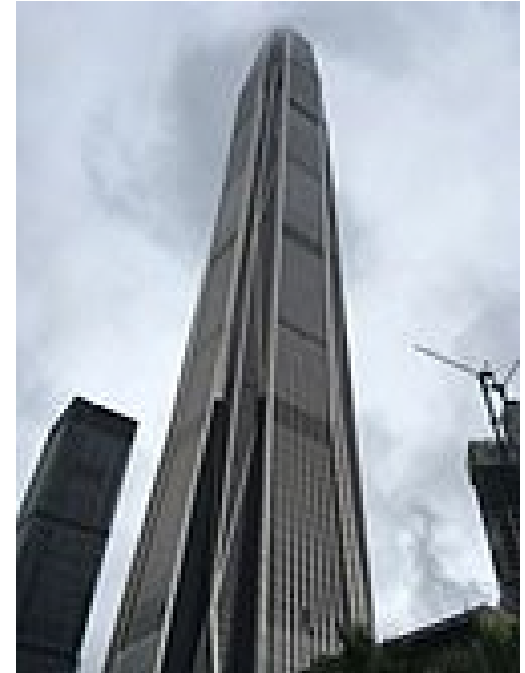
Defining Shenzhen

- ***"China's Instant City"***
- ***"The World's Factory"***
- ***"China's Silicon Valley"***
- ***"The Electronics Capital of the World"***



“The Instant City” - Cityscape

- **“The world leader for completing new skyscrapers” (The Guardian)**
- **Ranked third in the number of buildings above 150 meters**
 - Behind Hong Kong, New York City
 - 223 completed as of July 2019
- **The Ping An Finance Centre**
 - 599 meters, 115 floors



“The Instant City” - Population

- **12,905,000:** Registered population as of 2017
 - With an area of 1,997.47 square kilometers, Shenzhen has a density of 7,317 people in every square kilometer
- **20 million:** Includes short-term residents, unregistered migrants, part-time residents, commuters, visitors, temporary residents
- **108.5 million:** Pearl River Delta Metropolitan region

Young City, Young People

MEDIAN AGE:

28.65

COMPARED WITH:

- **China: 38.4**
- **U.S.: 38.2**



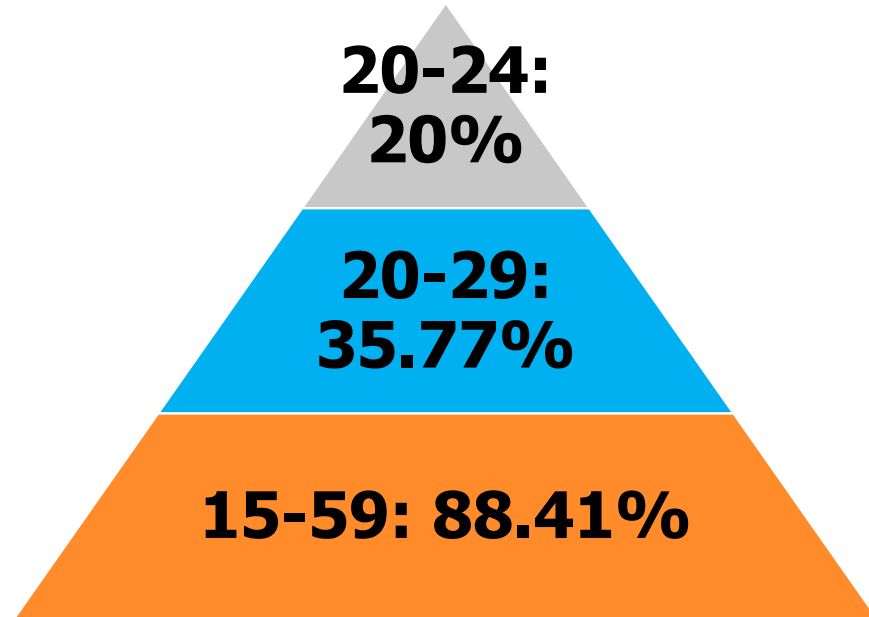
Shenzhen Age Distribution

SHENZHEN PERCENTAGE BY AGE GROUP:

- 0-14: 8.5%
- 15-64: 90.39%
- 65+: 1.11%

COMPARED WITH CHINA GENERALLY:

- 0-14: 38.4%
- 15-64: 71.2%
- 65+: 11.9%



“The Instant City” – Entrepreneurship

- **16.04%** of population reported nascent or new entrepreneurial activities
- **240** commercial entities and **150** enterprises per 1,000 people

Participating Economy ³	Nascent Entrepreneurial Activity - %	New Entrepreneurial Activity - %	Total Early Stage Entrepreneurial Activity - %	Established Business Owners - %	Overall Entrepreneurial Activity - %
	(1)	(2)	(3)	(4)	(5)
Hong Kong	4.99%	4.66%	9.44%	6.12%	15.30%
Shenzhen	6.26%	9.98%	16.04%	7.82%	23.38%
China	4.45%	6.09%	10.29%	7.49%	17.51%
Israel	7.04%	4.45%	11.31%	4.04%	15.04%
South Korea	3.70%	3.04%	6.69%	6.55%	13.04%
Chinese Taipei	3.64%	4.65%	8.24%	7.74%	15.59%
United Kingdom	5.16%	3.73%	8.80%	6.05%	14.57%
United States	8.88%	4.00%	12.63%	9.22%	20.99%
Efficiency-driven economies (mean)	7.95%	6.53%	14.16%	8.61%	22.25%
Innovation-driven economies (mean)	5.59%	3.68%	9.07%	6.68%	15.37%



Source: Global Entrepreneurship Monitor- Hong Kong and Shenzhen Report

“The Instant City” – Dramatic Growth

- Lonely Planet, “Top 10 cities to visit in 2019”
- Shenzhen Symphony Orchestra
- Shenzhen Cultural Center
- Shenzhen Convention and Exhibition Center
- Overseas Chinese Town – cultural theme parks
- 630 libraries and bookstores






“The Instant City” – Education



- Shenzhen University (1983)
- Shenzhen Virtual University Park (1999)
- Southern University of Science and Technology (2011)
- Shenzhen Institute of Technology (2018)

"The Instant City" – Legal System

	Yr. 1979		Yr. 2019
 Permanent population	31,400	X 430	13,438,800
 GDP	28 million USD	X 13,724	374 billion USD
 GDP per capita	87 USD	X 334	29,069 USD

Shenzhen's Economic Miracle

- **China's richest city**
- **The third largest Chinese City, behind only Shanghai and Beijing**
- **Estimated GDP (2019) - \$374 billion**
 - Surpassed Hong Kong in 2018
 - GDP grew 7% in 2019
- **By 2030, estimated to be the city making the 7th biggest contribution to global GDP**
 - Ahead of London and Tokyo
- **The eighth largest stock exchange in the world**



SECTION 2

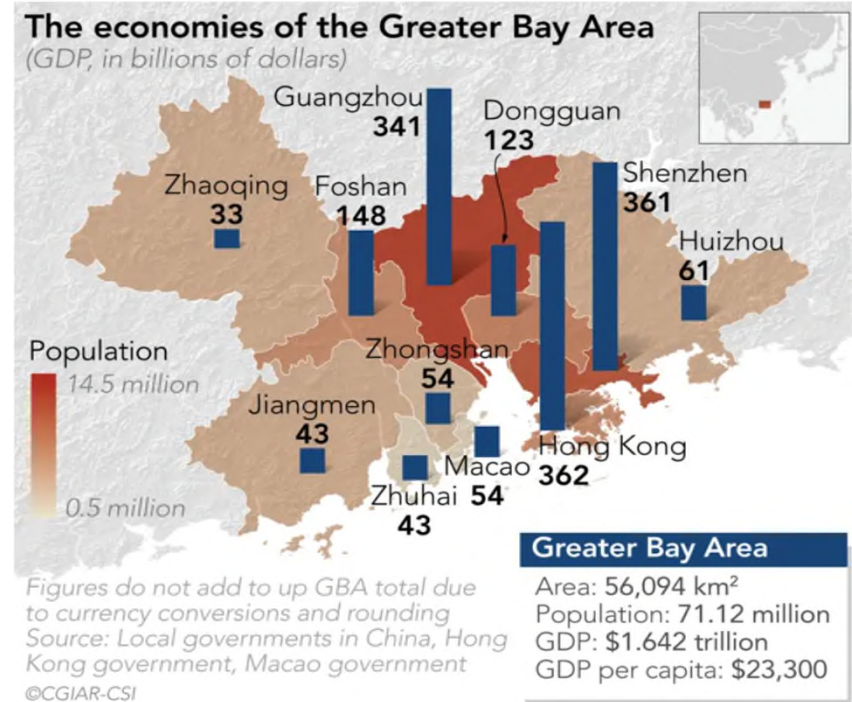
SHENZHEN'S IMPORTANCE TO THE GLOBAL TECHNOLOGY INDUSTRY

SECTION 2.1

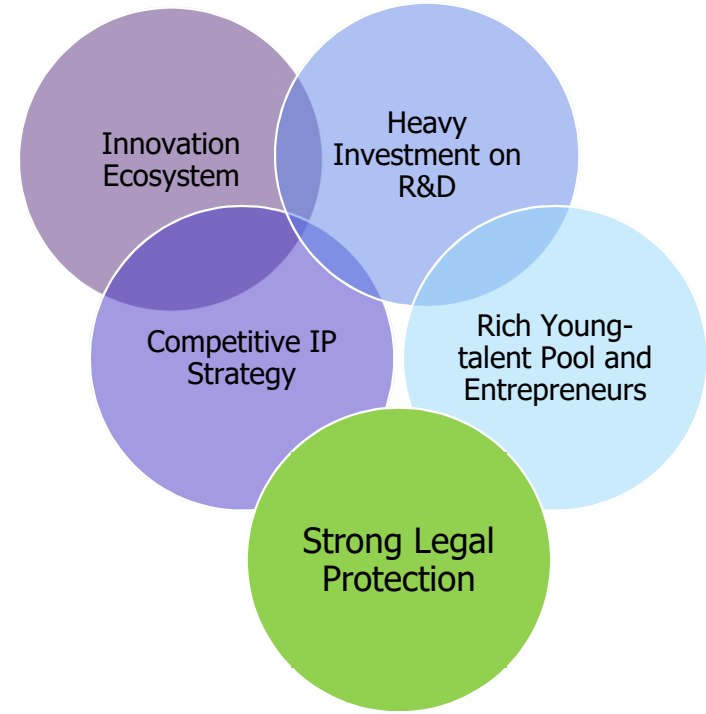
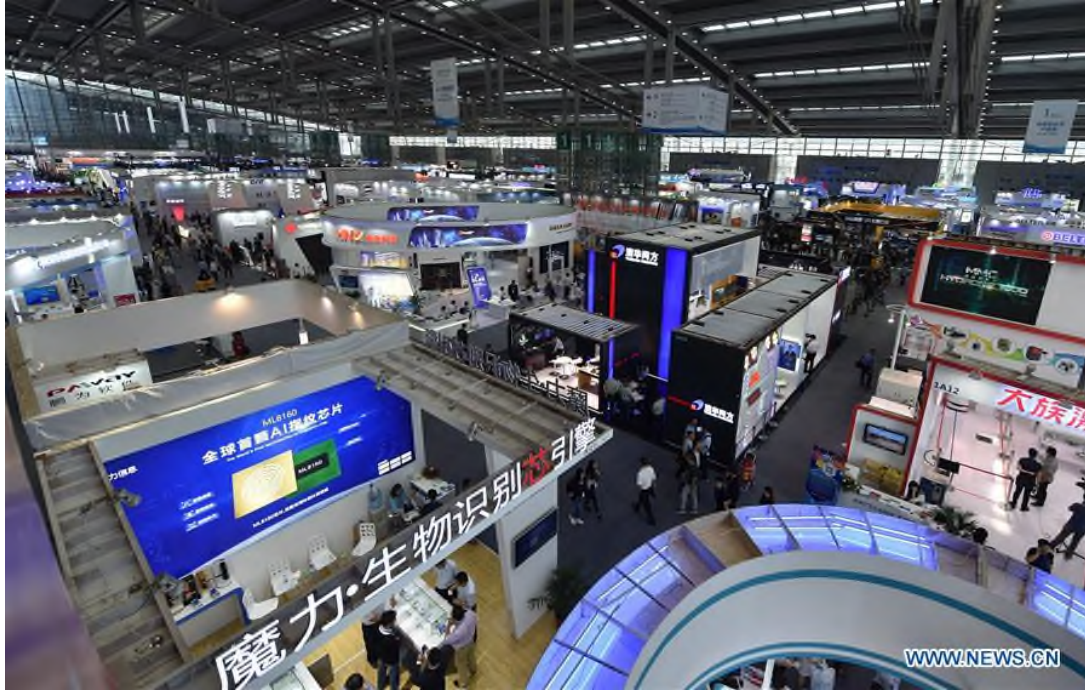
SHENZHEN: ONE OF TOP GLOBAL INNOVATION HUBS

The Greater Bay Area (2017)

- **Population:** 71 million
 - UK – 66 million; Canada – 36 million
- **GDP:** \$1.6 trillion
 - 12% of China GDP; about twice of SF Bay
- **Air freight traffic:** 7.96 million tons
 - > San Francisco + New York + Tokyo
- **Container ports:** 3 of world's top 10
 - Shenzhen, Guangzhou, HK
 - 66 million TEUs, > any other bay areas

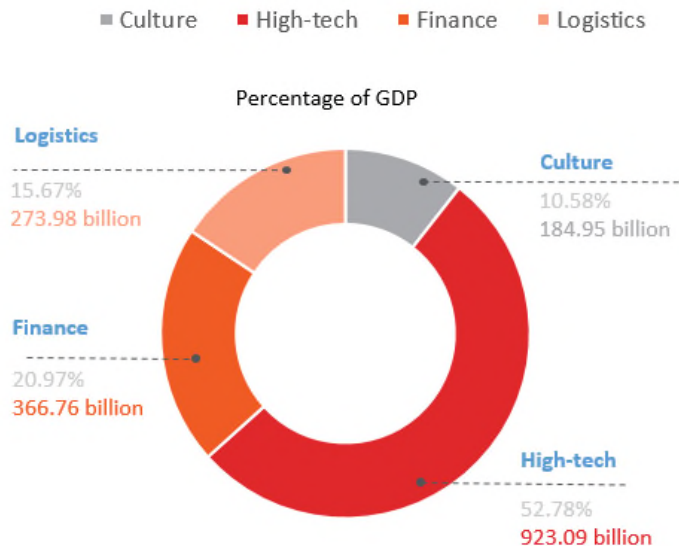


Shenzhen: Top Global Innovation Hub – Why?



Innovation Ecosystem

Key industries in Shenzhen



GDP(RMB)
923.09 billion
366.76 billion
273.98 billion
184.95 billion

Source: www.newsgd.com

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High Tech	
Finance	
Logistics	
Culture related	

Innovation Ecosystem

• Fortune 500 in Shenzhen

98 Int'l Fortune 500 invested in Shenzhen

7 local Fortune 500 Enterprises

28 China Top 500



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• Leaders in Niche Market



World's largest printed circuit board manufacturer



World's largest heparin sodium API supplier



World's second largest provider of professional mobile radio solution



World's top 3 LED display screen manufacturer



Heavy Investment on R&D



Matched only by
South Korea



and **Israel**



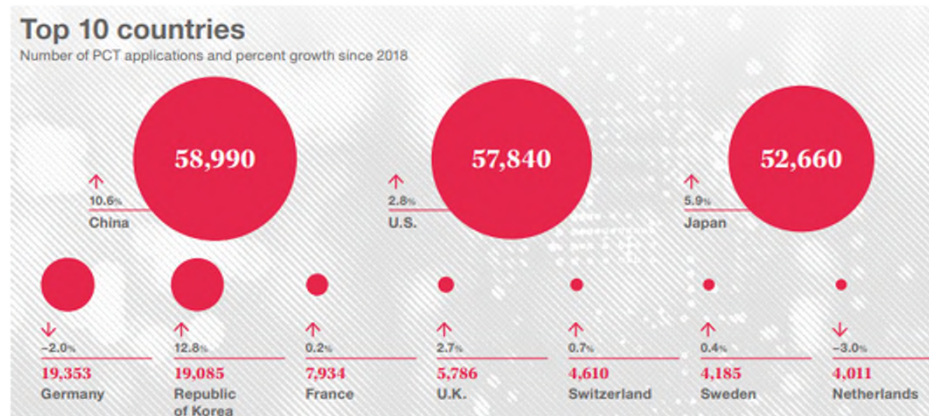
US\$14.9 billion investment

in tech research and development

4% of Shenzhen's GDP

Competitive IP Strategies

- **China takes over world leadership in international patent applications in 2019**



- **Top 10 PCT filers**
 - **4 Chinese companies**
 - **3 Shenzhen-based: Huawei, Oppo, and Ping'an**



Strong Legal Protection to Innovations



Experienced Judges and Law Officers



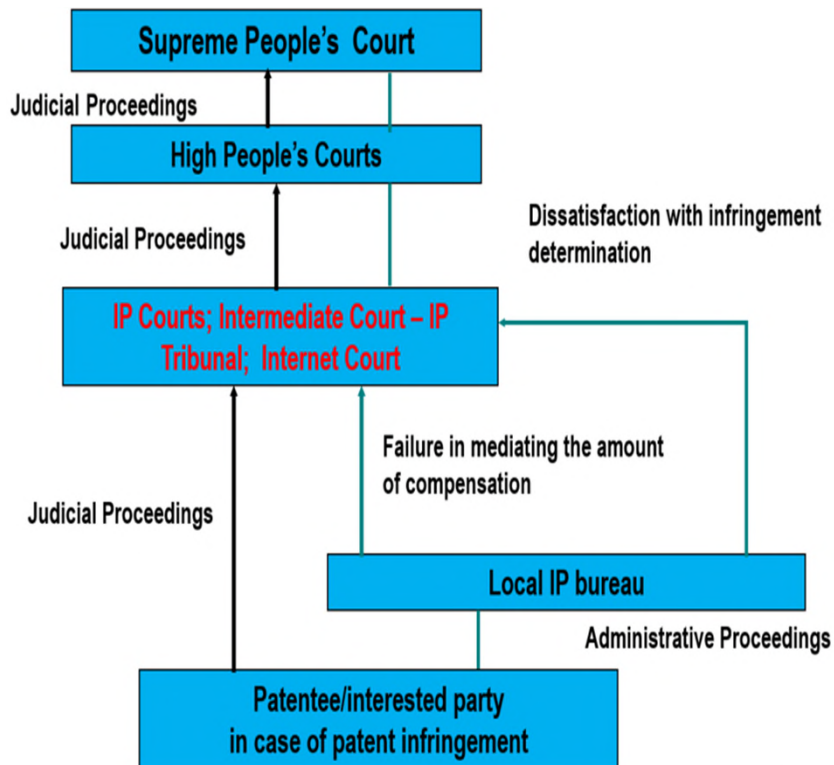
Cases on Cutting Edge Technologies



Enhanced Evidence Preservation and Production

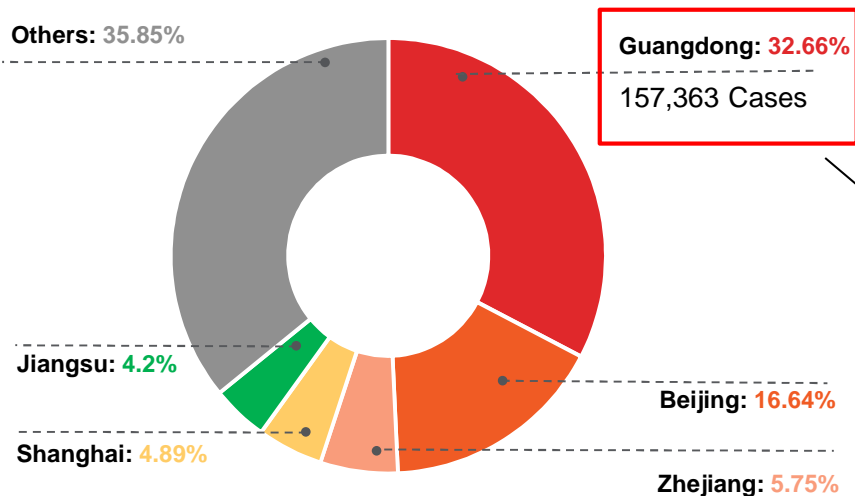


Allowing Mainland China, HK, and Macau Law Firms to Establish Joint Offices



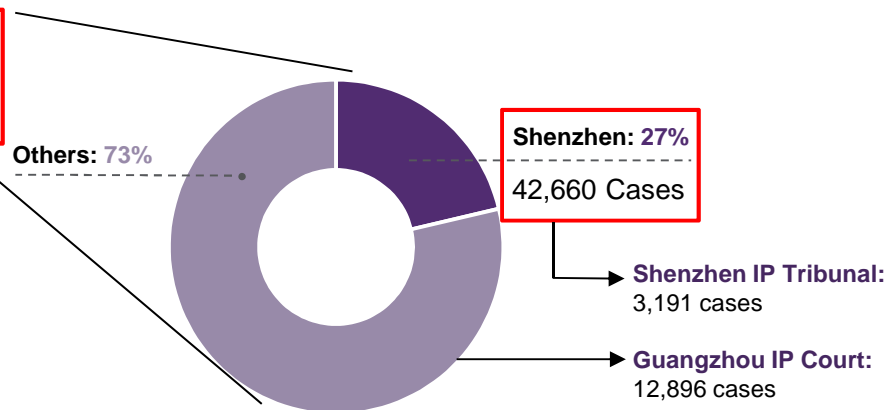
Guangdong- IP litigation Hotspot

Guangdong instituted nearly 1/3 IP cases of China in 2019



Source: Supreme Court of China, 2019 IP Protection White Book

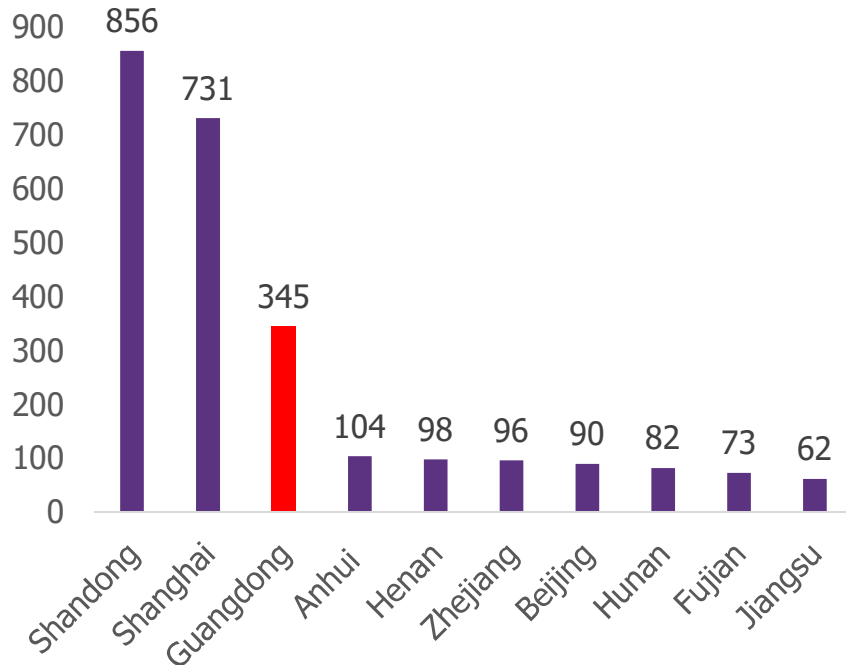
Shenzhen instituted nearly 1/3 IP cases of Guangdong in 2019



Source: Shenzhen Intermediate Court, 2019 IP Protection White Book

Top 3 Forum of Injunction and Preservation Orders

Top 10 Provinces issuing PI and Preservation Orders(2011-2020)



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Source: Iphouse.cn

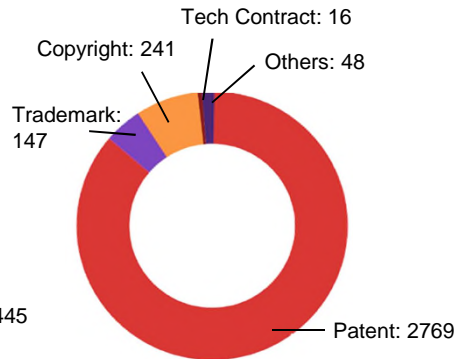
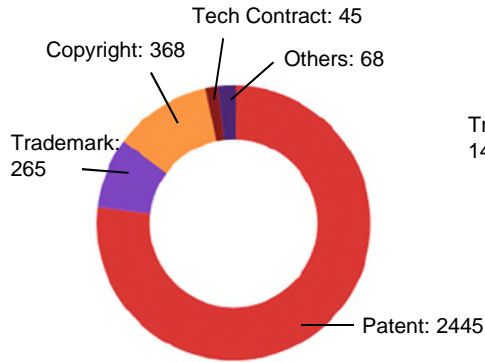
- Guangdong is **top 3 forum** of granting preliminary injunction (PI) and assets/evidence preservation orders
- 254 PI and orders were issued since 2015 in Guangdong, **12.6% of Nationwide**
- Shenzhen constitute **33.6%** of Guangdong, Rank 1st.

High Efficiency Judicial System-Shenzhen IP Tribunal

High Case-conclusion Rate:
more cases closed than newly instituted

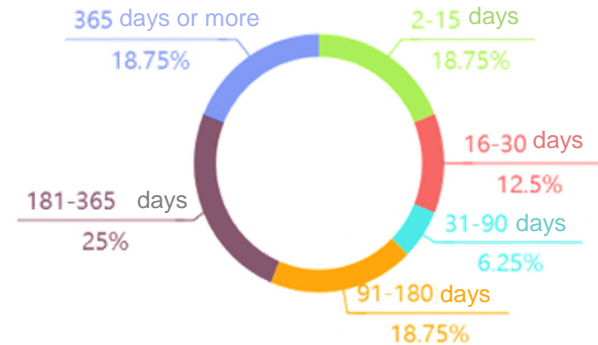
3,191 Instituted in 2019

3,221 Concluded in 2019



Source: Shenzhen Intermediate Court,
2019 IP Protection White Book

**More than 80% cases were concluded
in less than 1 year**



Source: Wolters Kluwer

Increasing High-Amount Damage Awards in Guangdong

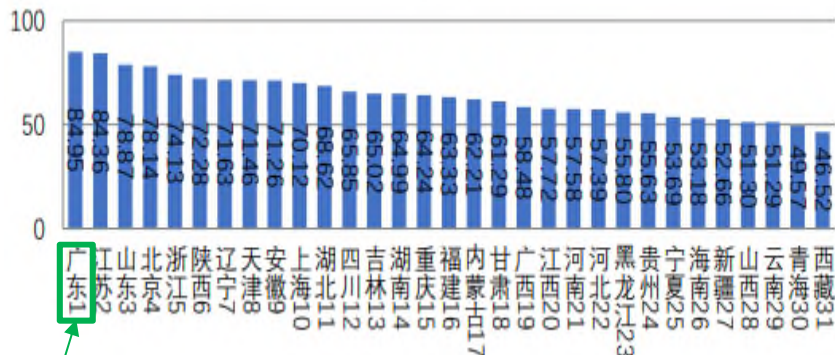
In 2019

- 67K USD: average damage awards in patent case, yearly increase **140.84%**
- **19 cases** with damage awards of more than **10M RMB** (1.42M USD) in Shenzhen and Guangzhou
- **Representative IP Cases Awarding Big Damages**
 - Guangdong High Court: *GREE v. AUX*, **14M USD** awarded in 2 patent cases
 - Guangzhou IP Court: *Guangzhou Redsun v. Guangdong Zhimei*, **7M USD** awarded in a trademark and unfair competition case
 - Shenzhen IP Tribunal: *Tencent v. Yingxiong Entertainment*, **6.3M USD** awarded in a game copyright case



Guangdong: China's Top Province for IP Monetization

2018 China's General IP Monetization Index



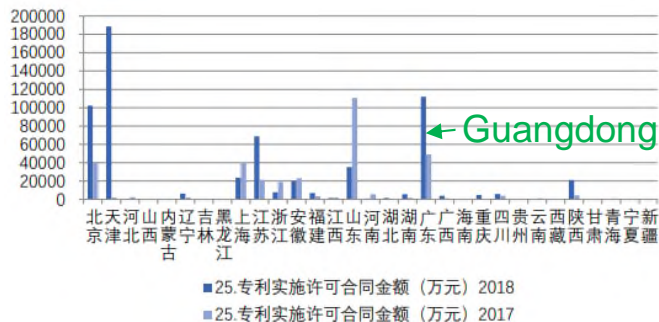
Guangdong

Source: cnipa-ipdrc.org.cn

Int'l Trans of Copyright (US\$)



Patent Licensing (10k Yuan)



The Greater Bay Area – IP Transaction Fair 2019

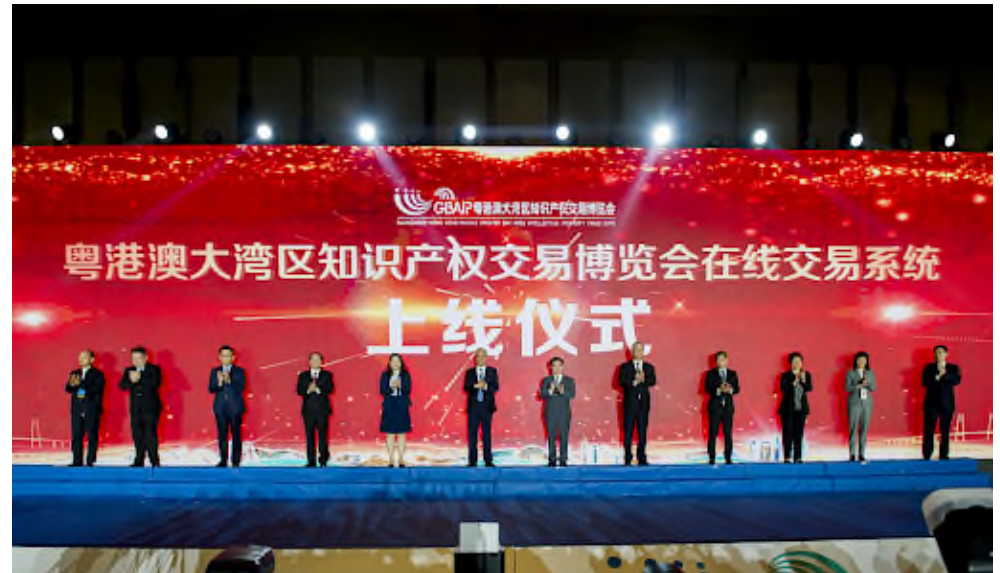


Types of IP Transactions:
patent, trademark,
copyright, geographical
indications, etc.



**IP Transactions on the Fair
in 2019: USD 1.4 billion, up
12.74% than 2018**

- **Patent and trademark, up
42.61%**



Huawei v. Samsung (Shenzhen Intermediate Ct. 2018)

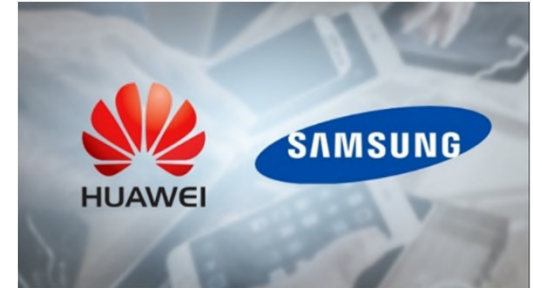
Facts:

Huawei sued Samsung for infringement of two **SEPs** regarding 4G LTE in 2016 after the failure in the cross-licensing negotiations started from 2011. Huawei sought a permanent injunction.

Holding:

- Huawei's patents are SEPs.
- Samsung infringed Huawei's SEPs.
- Samsung maliciously delayed negotiations and was "at fault" during the negotiation. Thus, injunction is granted.

Settlement: Huawei and Samsung reached agreement during the appeal.



Huawei v. Samsung (Shenzhen Intermediate Ct. 2018)

Determining Infringement of SEP

- Is the asserted patent a SEP?
- Does the defendant practice the standard?
 - Samsung smartphone uses 4G network.
 - China's top 3 telecomm service provider adopts the 3GPP standard.



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Determining Permanent Injunction

- Whether plaintiff complies with FRAND during the negotiations?
- Whether defendant complies with FRAND during the negotiations?
- If plaintiff has no faults and the defendant violates FRAND, a permanent injunction shall be granted.



Tencent v. Bytedance (Guangzhou IP Ct. 2019)

Facts:

- Tencent owns copyright over the online game *Honor of Kings* (or *Arena of Valor*) and organized a tournament for the game. Without authorization, Bytedance provided live-streaming of the tournament on its video-sharing platforms.
- Tencent sued Bytedance for **copyright infringement** and **unfair competition**, and claimed USD 7.18 million for damages on Feb. 15, 2019.
- On Mar. 1, Tencent sought preliminary injunction while providing a bond of USD 7.18 million.

Order:

- **Preliminary junction granted.**
 - likelihood of infringement exists
 - likelihood of irreparable harm exists
 - balance of equities tips in Tencent's favor
 - no harm to public interest



Tencent v. Qihoo 360 (Supreme Ct. 2013)

Facts:

Qihoo developed its software *Guard* which scans Tencent's QQ instant messenger, flags the ads and other plugins in QQ as dangerous items, and prompts users to remove those plugins. Tencent sued Qihoo for **unfair competition**. Guangdong High Court entered judgment for Tencent and awarded USD 710k for damages. Qihoo appealed to the Supreme Court, which affirmed.

Holding:

- *Guard* damaged the security and integrity of QQ software.
- Removing QQ's ads would result in Tencent losing transactions and ad income.
- Qihoo defamed Tencent.



Guangzhou Tianci New Materials v. Mr. Hua and Anhui Newman Fine Chemicals (Guangzhou IP Ct. 2017)

Facts:

Anhui Newman was given **criminal sentences** due to misappropriation of Tianci's **trade secret**. Among the criminal investigation, Tianci discovered that it is Mr. Hua and some other Tianci's employees disclosed the trade secret to Newman, thus filed a civil litigation against the employees and Newman.

Holding:

- The defendants jointly and severally liable for infringement of trade secret.
- The court awarded punitive damages at USD 4.3 million, 2.5 times of the profits gained by the defendants.



Tencent v. wdzj.com (Shenzhen Nanshan Dist. Ct. 2020)

Facts:

- Dreamwriter is an automated news writing program (**AI**) based on data and algorithms developed by Tencent in 2015.
- On Aug 20, 2018, Dreamwriter wrote a financial report, which was published on the Tencent Securities website, noted that “the article was automatically written by Tencent Robot Dreamwriter.”
- Wdzj.com copied the article onto its own website.
- Tencent sued for copyright infringement.

Holding:

- **The article generated by AI was original, and a copyrightable work.**
- Tencent is the author since the work was the result of activities carried out on behalf of Tencent.
- Damages: 1,500 RMB

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Chinese court rules AI-generated article is entitled to copyright

Updated 14:55, 13-Jan-2020

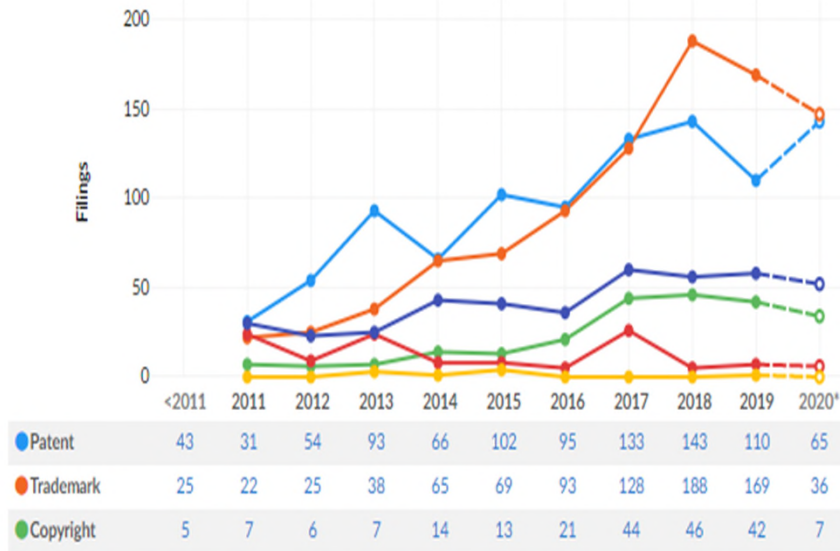
Zhang Guanlan

Share      



Success Resulted in More IP Cases in U.S. Courts

- 2011-2020: about 2,000 U.S. district court IP cases involving Shenzhen companies



Claimant Win	524	30%
Default Judgment	413	23%
Consent Judgment	49	3%
Judgment on the Pleadings	0	0%
Summary Judgment	25	1%
Trial	35	2%
Judgment as a Matter of Law	2	0%
Decision on Bankruptcy Appeal	0	0%
Claim Defendant Win	32	2%
Default Judgment	0	0%
Consent Judgment	2	0%
Judgment on the Pleadings	3	0%
Summary Judgment	16	1%
Trial	8	0%
Judgment as a Matter of Law	3	0%

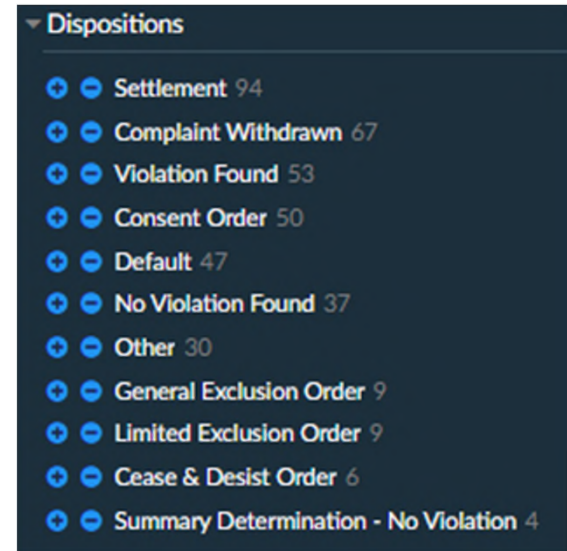


Likely Settlement	723	41%
Plaintiff Voluntary Dismissal	221	13%
Stipulated Dismissal	502	28%
Procedural Resolution	174	10%
Contested Dismissal	22	1%
Dismissal	32	2%
Consolidation	29	2%
Severance	2	0%
Interdistrict Transfer	48	3%
Intradistrict Transfer	5	0%
Stay	24	1%
Multidistrict Litigation	12	1%
No Case Resolution	311	18%

Success Resulted in More IP Cases in U.S. Courts

- 2011-2020: about 240 ITC-337 investigations involving Shenzhen companies

Investigation	Investigation Number	Judge	Notice	Termination
Spa Pumps, Jet Pump Housing, Motors, Components Thereof, and Products Containing Same	337-TA-1198	McNamara	2020-05-11	—
Portable Gaming Console Systems with Attachable Handheld Controllers and Components Thereof II	337-TA-1197	Shaw	2020-05-04	—
Electronic Candle Products and Components Thereof	337-TA-1195	Lord	2020-04-06	—
High-Density Fiber Optic Equipment and Components Thereof	337-TA-1194	Shaw	2020-03-24	—
Audio Players and Controllers, Components Thereof, and Products Containing the Same	337-TA-1191	Bullock	2020-02-11	—
Wearable Monitoring Devices, Systems, and Components Thereof	337-TA-1190	Lord	2020-01-15	—
Balanced Armature Devices, Products Containing Same, and Components Thereof	337-TA-1186	Lord	2019-11-29	—
Smart HVAC Systems, and Components Thereof	337-TA-1185	Shaw	2019-11-27	—
Wireless Communication Devices and Related Components Thereof	337-TA-1180	McNamara	2019-10-17	—
Certain Foldable Reusable Drinking Straws and Components Thereof	337-TA-1183	Elliot	2019-10-10	—
Pouch-Type Battery Cells, Battery Modules, and Battery Packs, Components Thereof, and Products Containing the Same	337-TA-1179	Bullock Cheney	2019-10-09	—
Collapsible and Portable Furniture	337-TA-1178	Shaw	2019-10-04	—
Semiconductor Devices, Products Containing the Same, and Components Thereof (I)	337-TA-1176	Bullock	2019-10-01	—
Lithium-Ion Battery Cells, Battery Modules, Battery Packs, Components Thereof, and Products Containing the Same	337-TA-1181	Lord	2019-09-27	—
Toner Cartridges, Components Thereof, and Systems Containing Same	337-TA-1174	Cheney	2019-09-23	—
Rotating 3-D LIDAR Devices and Products Containing the Same (Including Autonomous Vehicles, Unmanned Aerial Vehicles, Industrial Machines, and Robotics), and Components Thereof	337-TA-1173	McNamara	2019-09-17	—
Filament Light-Emitting Diodes and Products Containing Same	337-TA-1172	Shaw	2019-08-02	—
Fish-Handling Pliers and Packaging Thereof	337-TA-1169	Shaw	2019-07-29	—
Mobile Devices with Multifunction Emulators	337-TA-1170	Elliot	2019-07-19	—
Reload Cartridges for Laparoscopic Surgical Staplers	337-TA-1167	Bullock	2019-07-05	—
Foodservice Equipment and Components Thereof	337-TA-1166	Lord	2019-07-03	—
Barcode Scanners, Scan Engines, Products Containing the Same, and Components Thereof	337-TA-1165	McNamara	2019-07-02	2020-03-12
Light-Emitting Diode Products, Systems, and Components Thereof (I)	337-TA-1163	Cheney	2019-06-25	2019-10-29
Certain Light-Emitting Diode Products, Systems, and Components Thereof (II)	337-TA-1164	Shaw	2019-06-25	2020-03-20



Enforcing IP Rights in U.S. Courts

- Increasing Shenzhen companies enforce their IP rights in US courts

Huawei Technologies, Co, Ltd et al v. Samsung Electronics Co, Ltd. et al	3:16-cv-02787	Patent	N.D.Cal.	2016-05-24	2020-02-26	2019-03-25
Huawei Technologies Co. Ltd v. T-Mobile US, Inc. et al	2:16-cv-00052	Patent	E.D.Tex.	2016-01-15	2017-12-22	2017-12-22
Huawei Technologies Co. Ltd v. T-Mobile US, Inc. et al	2:16-cv-00055	Patent	E.D.Tex.	2016-01-15	2018-02-21	2017-12-22
SZ DJI Technology Co., Ltd. et al v. Autel Robotics USA LLC et al	1:16-cv-00706	Patent	D.Del.	2016-08-11	2020-05-08	—
SZ DJI Technology Co., Ltd. et al v. Yuneec International Co. Ltd. et al	5:16-cv-00595	Patent	C.D.Cal.	2016-04-01	2017-01-30	2017-01-30
Energy Power (Shenzhen) Co. Ltd et al V. Xiaolong Wang et al	1:13-cv-11348	Contracts Trade Secret	D.Mass.	2013-06-05	2018-01-30	2017-01-12
Shenzhen Kinwong Electronic Co, Ltd et al v. Kukreja et al	0:18-cv-61550	Trademark	S.D.Fla.	2018-07-09	2020-04-30	—
Shenzhen Smoore Technology Ltd. v. Anuonuo International Trade Company, et al.	1:19-cv-09896	Trademark	S.D.N.Y.	2019-10-25	2020-04-24	—
Shenzhen Jinghe Technology Co., Ltd. v. Does 1-166	1:18-cv-05031	Trademark	N.D.Ill.	2018-07-24	2019-03-11	2018-10-18
Shenzhen Liown Electronics Co., Ltd. v. Luminara Worldwide, LLC et al	0:14-cv-03112	Patent Contracts	D.Minn.	2014-08-06	2017-01-12	2015-03-31
Hong Kong uCloudlink Network Technology Limited et al v. SIMO Holdings Inc. et al	3:18-cv-05031	Patent	N.D.Cal.	2018-08-16	2020-03-30	—
Shenzhen Topgreen Technology Co., Ltd. v. XVAPE LLC et al	1:18-cv-01243	Trademark	D.Colo.	2018-05-22	2019-06-03	2019-06-03

Improved IP Protection and Risk Management

- Build effective IP portfolio facilitating international competition
- Responding to infringement notice & licensing request
- IP due diligence; monitor IP litigation
- Opinion of counsel
- Design around
- Licensing & cross-licensing
- Challenge validity of threatening patents at the USPTO
- Allocate IP risks through contracts
- Actively responding to IP litigation
- Effective settlement and negotiation
- Manage risks of trade secret misappropriation

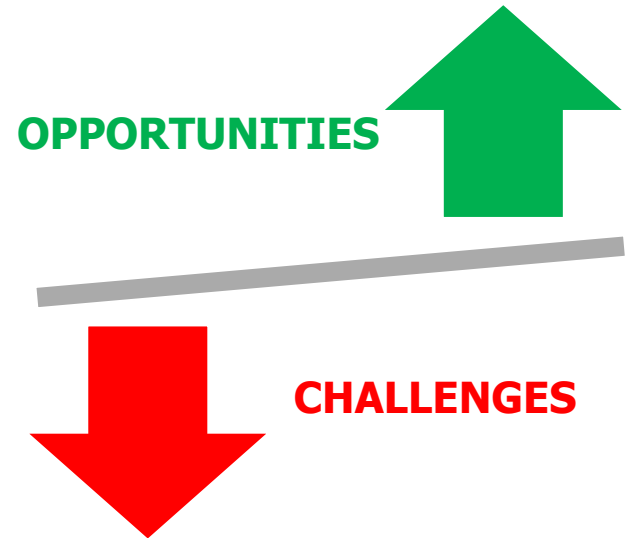


SECTION 2.2

COVID-19 INSIGHTS: CHALLENGES & OPPORTUNITIES

COVID-19 to Shenzhen: Challenges vs Opportunities

- Mainly local companies, not many foreign companies
- Complete industry chain
- High-tech hub: Low percentage of labor-intensive and low-tech assembling industries
- COVID-19 inspires new tech development

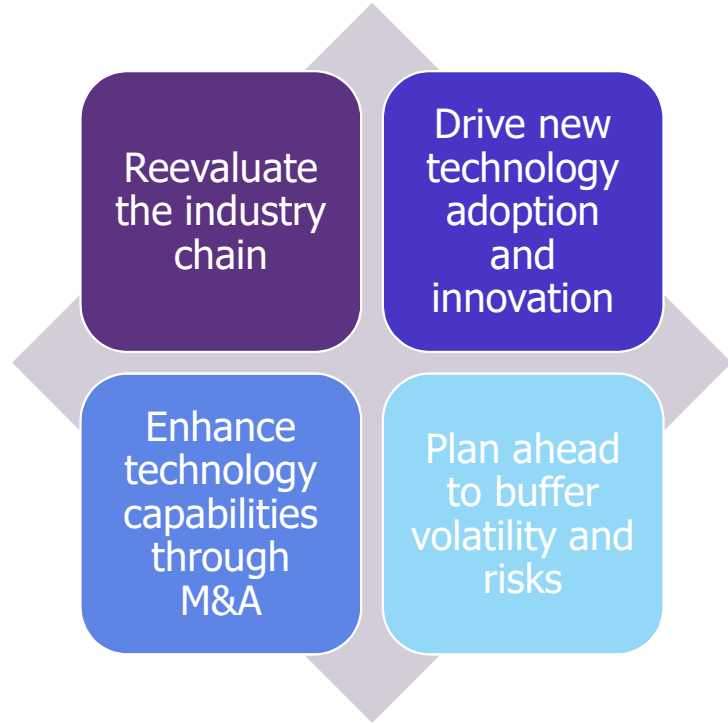


COVID-19: Opportunities

- Health IT
 - Telemedicine
 - Artificial intelligence (“AI”)
 - Drones
 - Robots
 - Big data
- Online entertainment
- E-commerce & Live-streaming commerce
- Online education
- Remote-work technologies
- E-government



Where Do We Go From Here?



SECTION 03

**SHENZHEN'S IMPORTANCE
TO THE GLOBAL LIFE
SCIENCES INDUSTRY**

Overview

- Shenzhen's Life Science Industry and its Significance
- Opportunities in Shenzhen
- COVID-19 and Life Science Industry

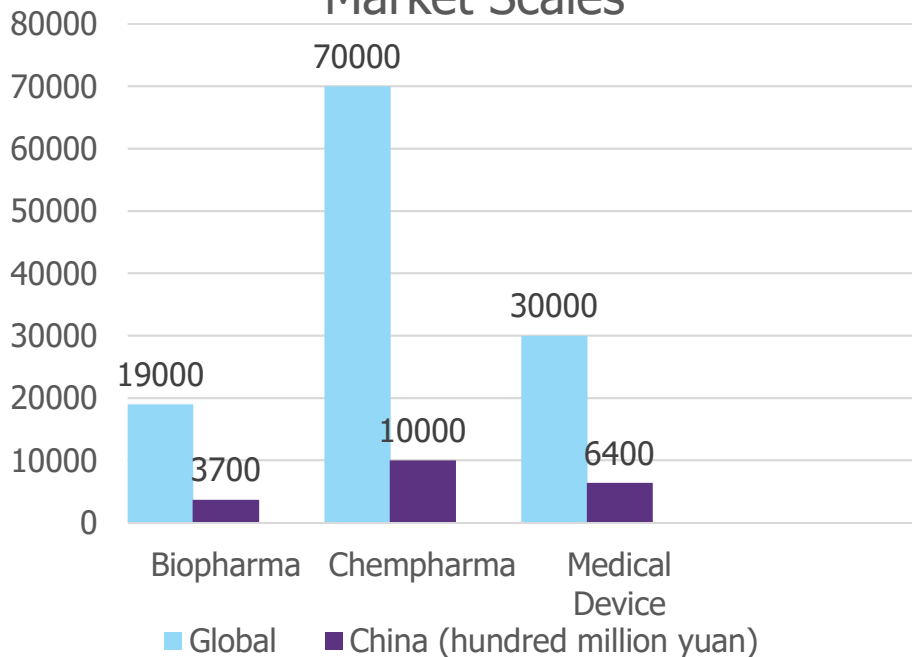


SECTION 3.1

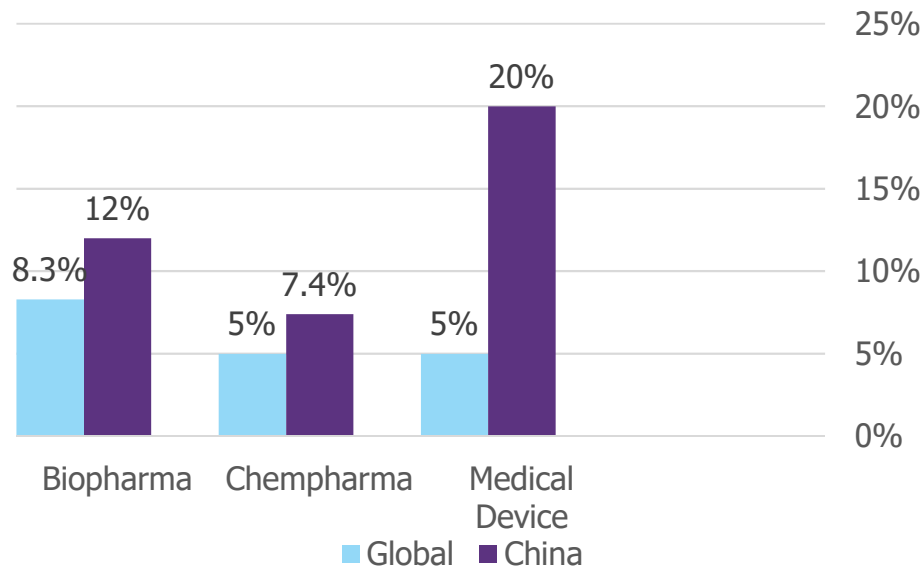
SHENZHEN'S LIFE SCIENCE INDUSTRY AND ITS SIGNIFICANCE

China & Global Life Science Market Scales

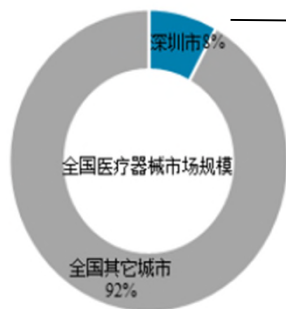
China & Global Life Science Market Scales



China & Global Life Science Compound Annual Growth Rate



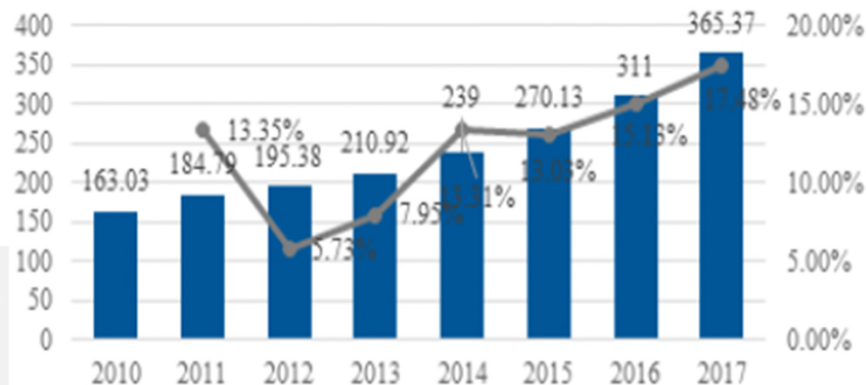
Key Competence - Medical Device



Shenzhen:

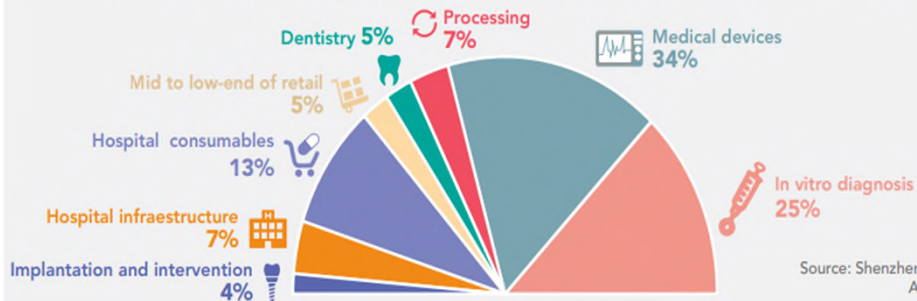
- 700+ medical device companies
- 8% of the national medical device market

2010-2017 Shenzhen Medical Device Industry Production Value and Growth Rate



Annual Production value (hundred million yuan)

PRODUCT FIELD DISTRIBUTION OF SHENZHEN'S TOP 50 MEDICAL DEVICE INDUSTRY MANUFACTURING ENTERPRISES IN 2016



Source: Shenzhen Medtech Association

Key Competence – DNA Testing



- World's leading life science and genomics organization
- Cooperation with thousands of organizations across multi-disciplinary research



- SARS-CoV-2 NP Ab ELISA kit
- Comprehensive health data platform
- Artificial intelligence and biotech



- First national integrated genebank
- Public, non-profit, open, enabling and leading platform



- Clinical high-throughput gene sequencer--HYK-PSTAR-IIA gene sequencing system



- Cancer immunotherapy
- Assistive cancer diagnosis gene detection

Key Competence – Pharmaceutical

- Pharmaceutical Manufacture

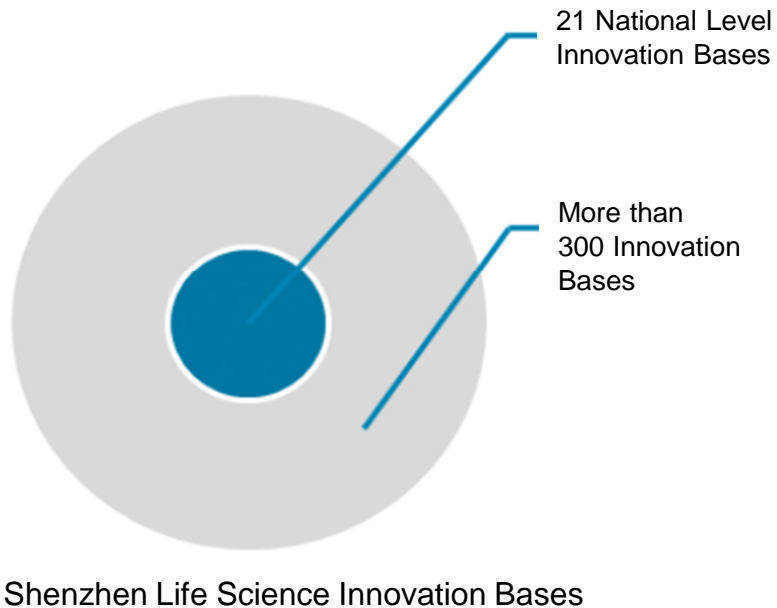
- ❖ 55 manufacturers

- ❖ Total Profits: 5.78 billion yuan (816 million USD) in 2018

Figure 14 | Share of value-added among top industrial sectors in GBA cities

	Shenzhen	Dongguan	Huizhou	Zhuhai	Zhongshan	Jiangmen	Foshan	Guangzhou	Zhaoqing
Computer, communication and electronic equipment	✓	✓	✓	✓	✓	✓	✓	✓	✓
Electrical and mechanical equipment	✓	✓	✓	✓	✓	✓	✓	✓	
Heat and power generation	✓	✓	✓	✓				✓	✓
Chemicals			✓	✓		✓		✓	✓
Textile and garment		✓			✓	✓	✓		
Metal products					✓	✓	✓		✓
Rubber and plastic products		✓	✓		✓				
Petroleum processing, coking and nuclear processing			✓	✓				✓	
Non-metal mineral products							✓		✓
Non-ferrous metal smelting							✓		✓
Pharmaceutical Manufacture	✓			✓					

Home to Life Science Innovation

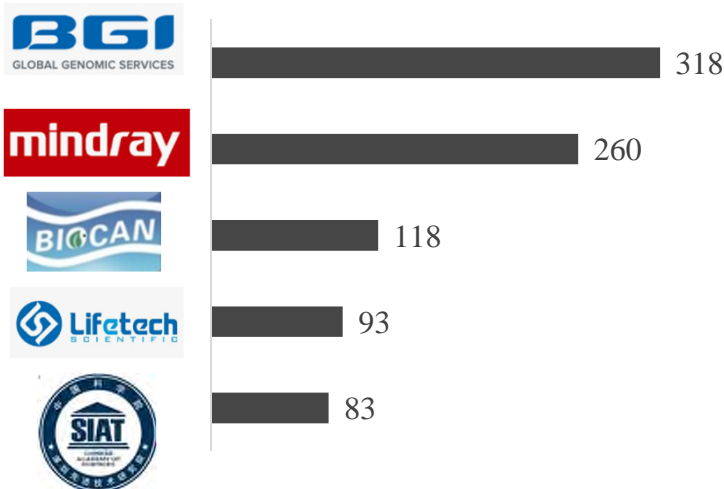


Key Industrial Parks



PCT Applications in Life Science Industry

Top 5 Shenzhen Applicants



PCT Applications of Life Science Industry



SECTION 3.2

OPPORTUNITIES IN SHENZHEN

Internationalization and Diversify Industry



- 5+ Exhibit Areas
- 10+ Trendy Topics
- 20+ Forums
- 200+ Companies
- 15,000+ Square Meters
- 20,000+ Participants

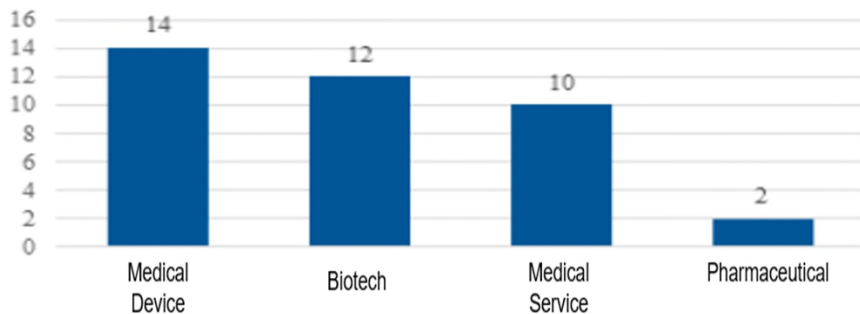


- Trend of Innovative Drugs
- Big Data of Healthcare and Medical Treatment
- Nano Tech in Medical Science
- Personalized and Precision Medicine



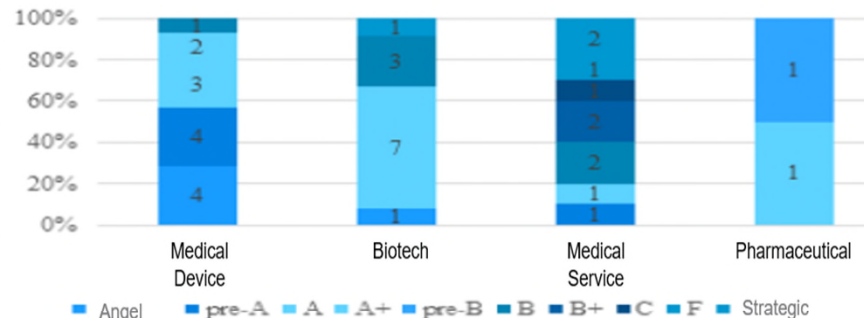
Investment Hotspots

2018 Shenzhen Life Science Industry PE / VC Distribution



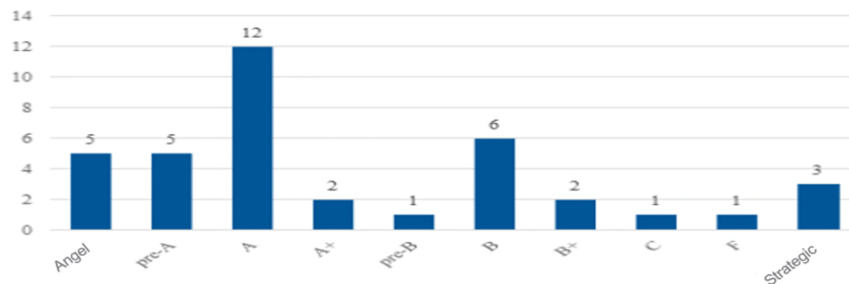
Source: wind

2018 Shenzhen Life Science Industry PE / VC Distribution Statistics Analysis

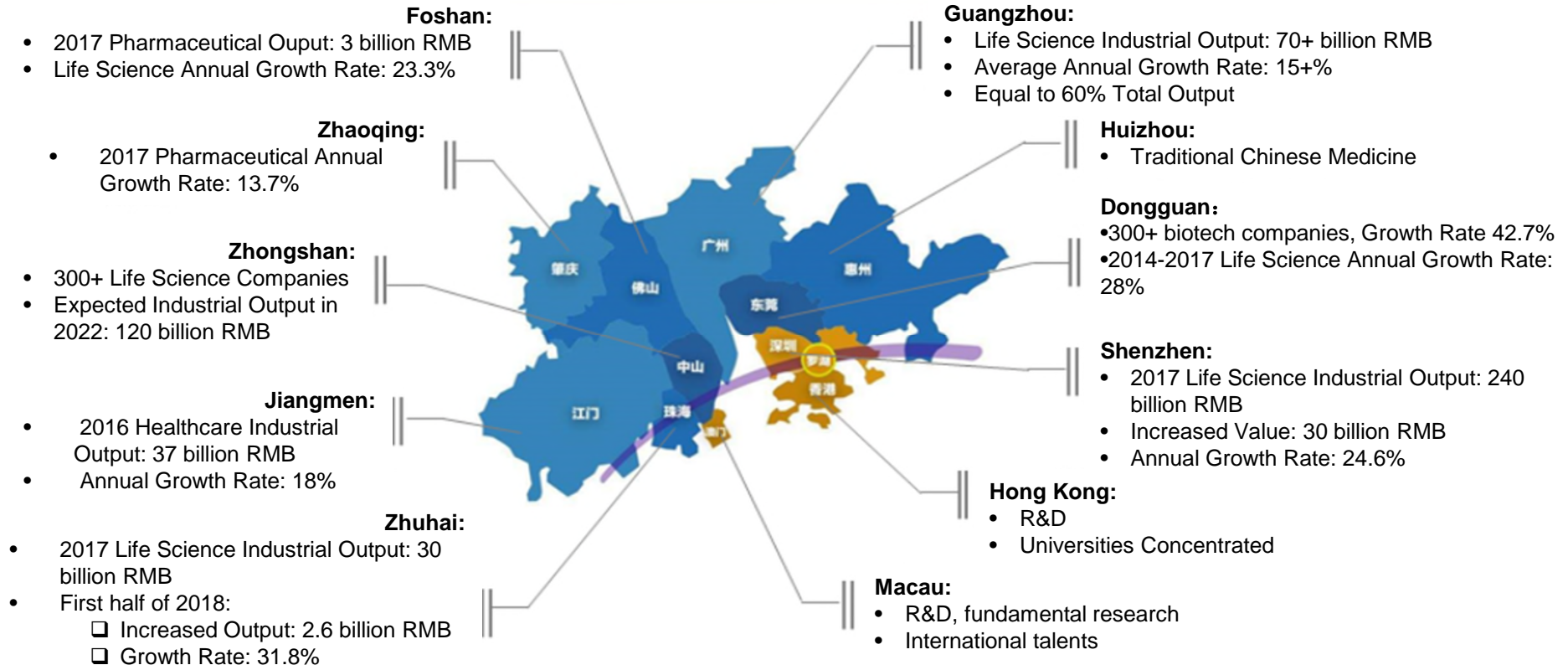


Source : wind

2018 Shenzhen Life Science Industry PE / VC Investment Statistic (Number of Investment Events)



Strong Regional Life Science Collaboration



SECTION 3.3

COVID-19 AND LIFE SCIENCE INDUSTRY

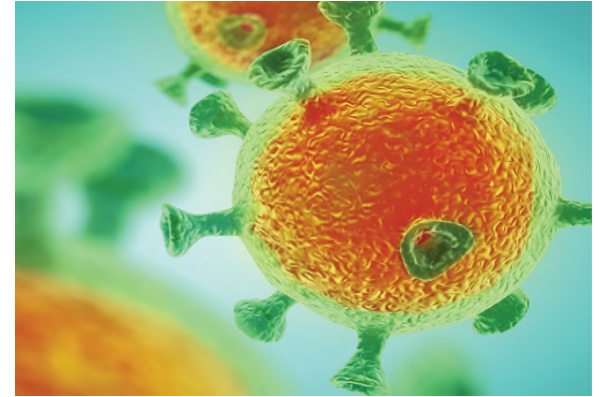
COVID-19 and Life Science Industry

- **Impact on Global Life Science Environment**

- Supply chain blockages
- Drug and labor shortages
- Materials and finished goods shortages
- Clinical trial halts
- Surging demands for COVID-19 related medical products

- **Turn Crises into Opportunities in China**

- Produced 90% of APIs used in generic drugs
- Increased exportation of medical protection products
- Accelerated researches on related diagnosis kits and vaccines
- Concentrated geographic centers for research and manufacture



COVID-19 and Life Science Industry

- **Forward-looking from “where we are here”**

- Use of AI based diagnostics and tools
- Adoption of healthcare big data for disease management
- Accelerated digital transformation of healthcare delivery models
- Comprehensive ecosystem from early diagnostics to follow-up treatment
- Supply chain integration and optimization



Biography



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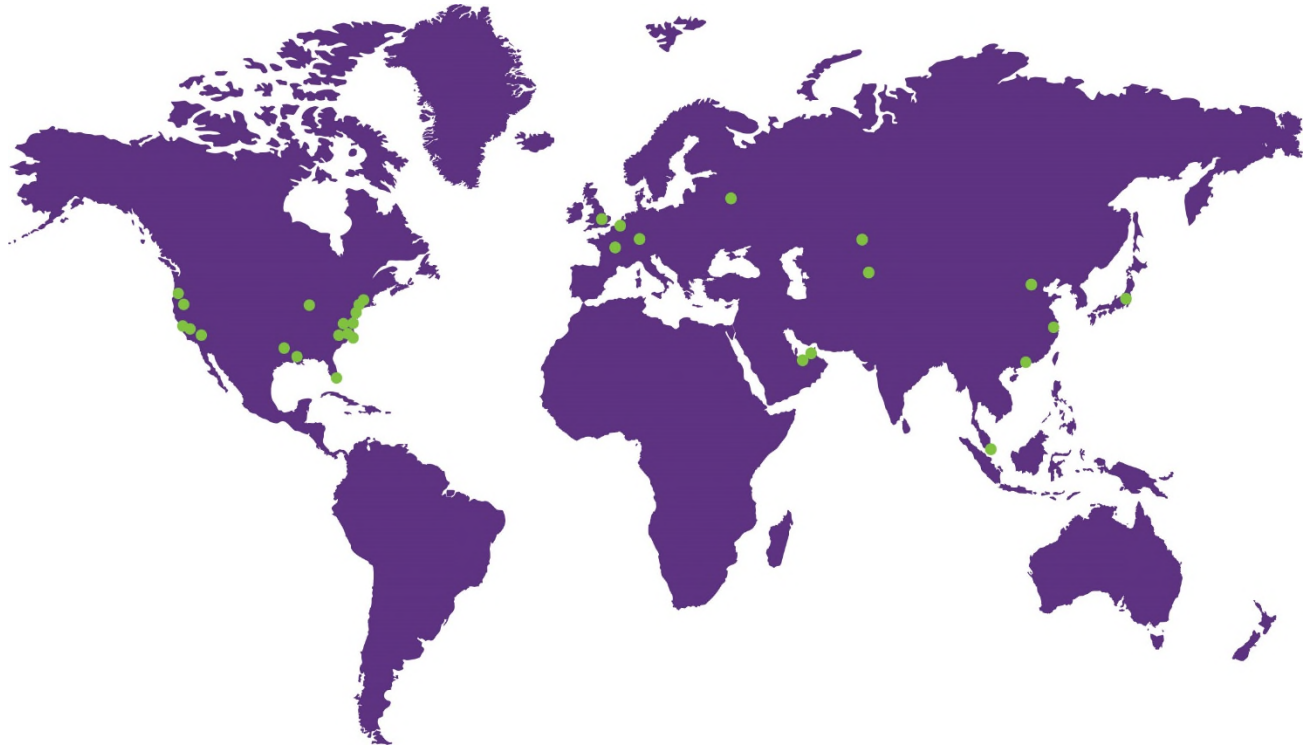
<https://www.linkedin.com/in/yalei-sun-54aa2213/>

Our Global Reach

Africa
Asia Pacific
Europe
Latin America
Middle East
North America

Our Locations

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Almaty
Beijing*
Boston
Brussels
Century City
Chicago
Dallas
Dubai
Frankfurt
Hartford
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Houston
London
Los Angeles
Miami
Moscow
New York
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