

# Welcome to Jianghai



## General Information

- Founded in 1958
- Over **2100** employees
- Over 160 R&D personnel
- **13 sub-companies**
  - 9 Capacitor factories (E-cap, Polymer cap, Film cap, Super cap)
  - 3 Foil factories (Forming and Etched Foil)
  - 1 Cover factory
- **\$460** Million revenue (2018)
- 12 Domestic sales offices
- 7 Global sales offices



- Aluminum Electrolytic



- Screw Terminal
- Snap-in
- Radial
- Polymer (Radial & SMD)

- Power film Capacitor



- DC-Link
- AC , X2
- Snubber
- Module, EV
- Customized

- Super Capacitor

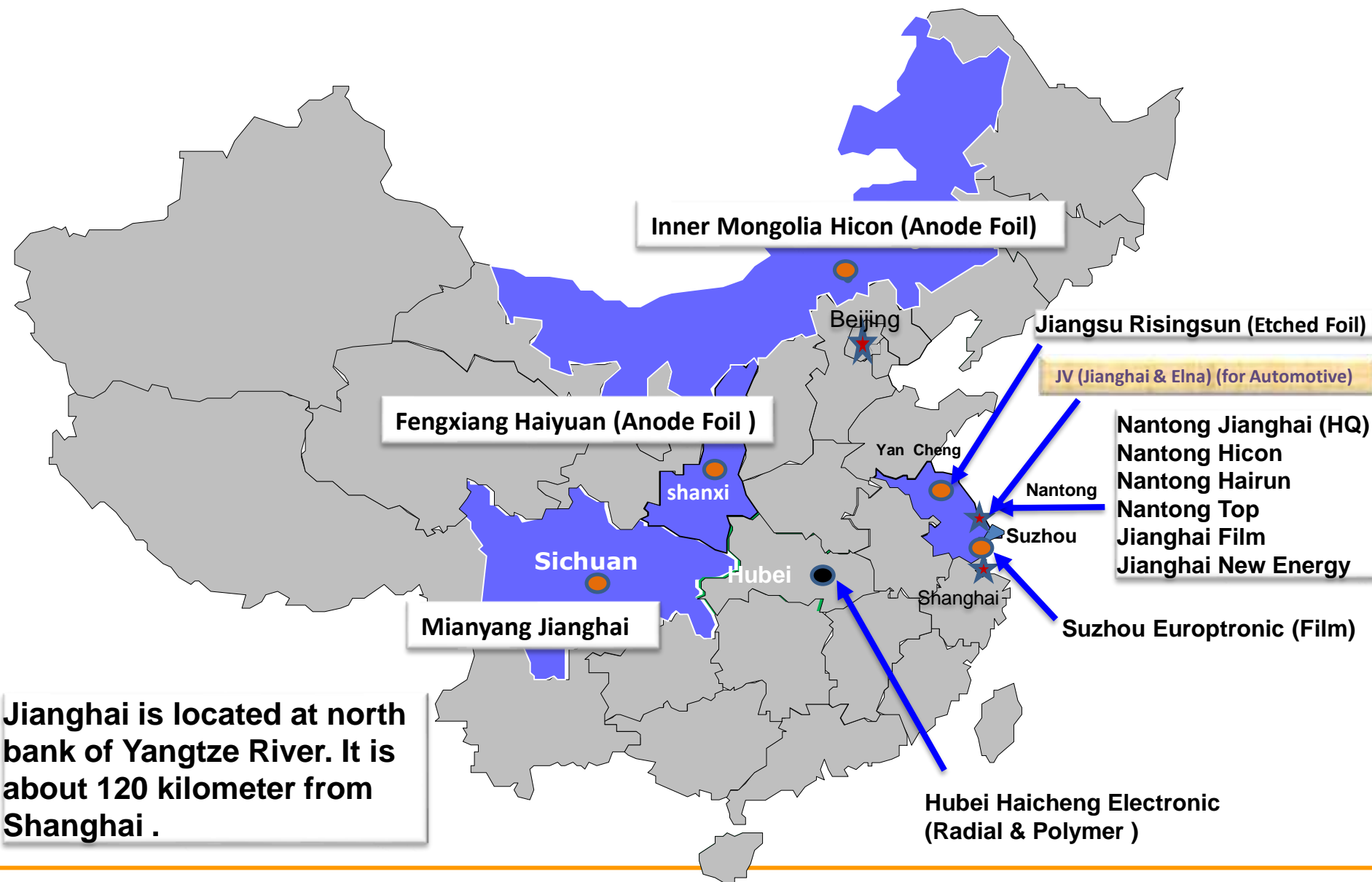


- EDLC (Coin, Radial , Snap-in)
- LIC (Soft package ,Radial )
- Module

- Material & Spare parts

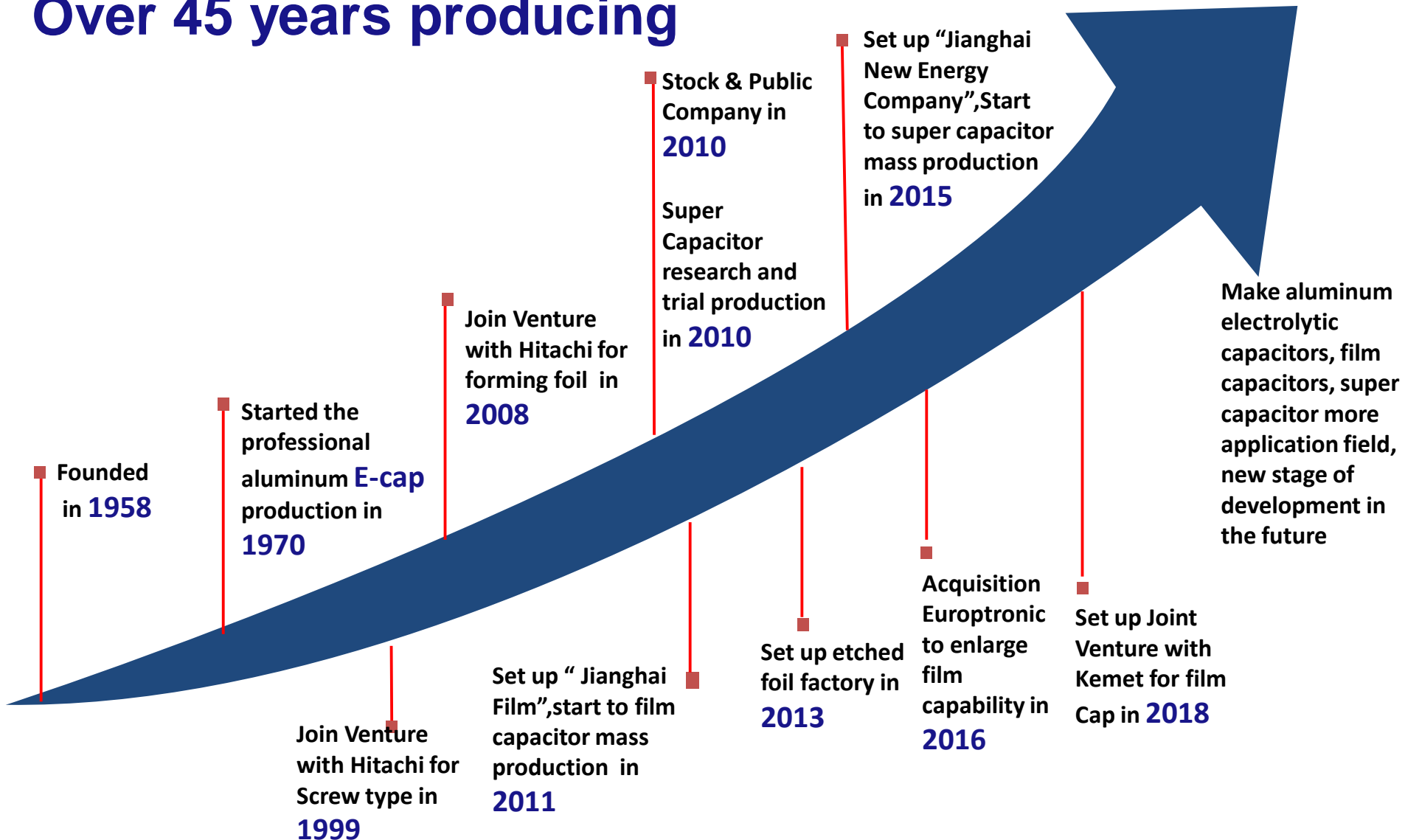


- Etched foil
- Formed foil
- Cover for screw
- Carbon coat foil
- Metalized film
- Lithium Coated copper foils



**Jianghai is located at north bank of Yangtze River. It is about 120 kilometer from Shanghai .**

## Over 45 years producing



## E-cap

- Nantong Jianghai Capacitor Co.,Ltd (All series E-cap)
- Hicon Electronics Co. Ltd (Screw E-cap) **JV with Hitachi**
- Mianyang Jianghai Electronics Co., Ltd (Snap-in E-cap)
- Hairun Electronics Co. Ltd (Polymer E-cap) **JV with ELNA**
- Hubei Haicheng Electronics Co.,Ltd ( MLPC, Polymer, Radial E-cap)

## Film Cap

- Jianghai Film Capacitor Co., Ltd (DC-link , Customized , Metalized film)
- Suzhou Eurotronic Electronics Co.,Ltd (AC, Snubber, Oil filled, Box)
- Haimei Electronics Co.,Ltd(EV modules) **JV with Kemet**

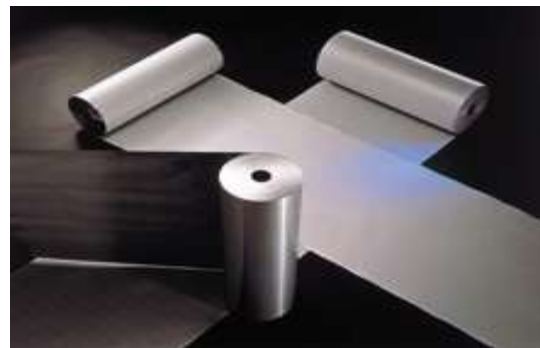
## Super Cap

- Jianghai New Energy Co., Ltd (EDLC, LIC, Carbon coated foil)

- Inner Mongolia Hicon Electronics Co.,Ltd (F)
- Fengxiang Haiyuan Electronics Co.,Ltd (F)
- Jiangsu Risingsun Electronics Co.,Ltd (E)
- Top Electronics Material Co.,Ltd (Cover) **JV with Capchem**



**Forming foil**



**Etched foil**



**Cover for E-cap & film capacitor**

# Update Monthly Capacity & LT

| Product   | Description   | 2018 Capacity | 2019 Capacity  | 2018 L/T | 2019 L/T       |
|-----------|---------------|---------------|----------------|----------|----------------|
| E-cap     | Snap-in       | 15M           | <b>18M</b>     | 10~12WKS | <b>4~6WKS</b>  |
|           | Screw         | 450K          | <b>500K</b>    | 6~8WKS   | <b>4~6WKS</b>  |
|           | Radial        | 350M          | <b>420M</b>    | 8~10WKS  | <b>4~6WKS</b>  |
|           | Polymer       | 20M           | <b>50M</b>     | 6~8WKS   | <b>4~6WKS</b>  |
|           | MLPC          |               | <b>10M</b>     |          | <b>4~6WKS</b>  |
| Film Cap  | DC-LINK+BOX   | 80K+500K      | <b>100K+1M</b> | 6~8WKS   | <b>4~6WKS</b>  |
|           | AC+Safety Cap | 20K+30M       | <b>40K+50M</b> | 10~12WKS | <b>4~6WKS</b>  |
|           | Module        | 30K           | <b>50K</b>     | 6~10WKS  | <b>6~10WKS</b> |
| Super Cap | EDLC          | 0.3MWh        | <b>2.8MWh</b>  | 4~6WKS   | <b>3~5WKS</b>  |
|           | LIC           | 5MWh          | <b>30MWh</b>   | 5~6WKS   | <b>5~6WKS</b>  |
|           | Module        | 2.6MWh        | <b>16.4MWh</b> | 6~10WKS  | <b>6~10WKS</b> |

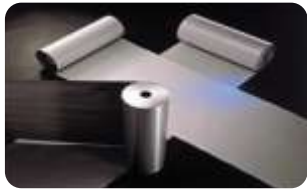




**Automatic Snap-in production lines put into mass production at Q2 2018**



**Automatic film production line for vehicle customization Q2 2018**



**Second production lines in Inner Mongolia put into mass production at Q3 2018**

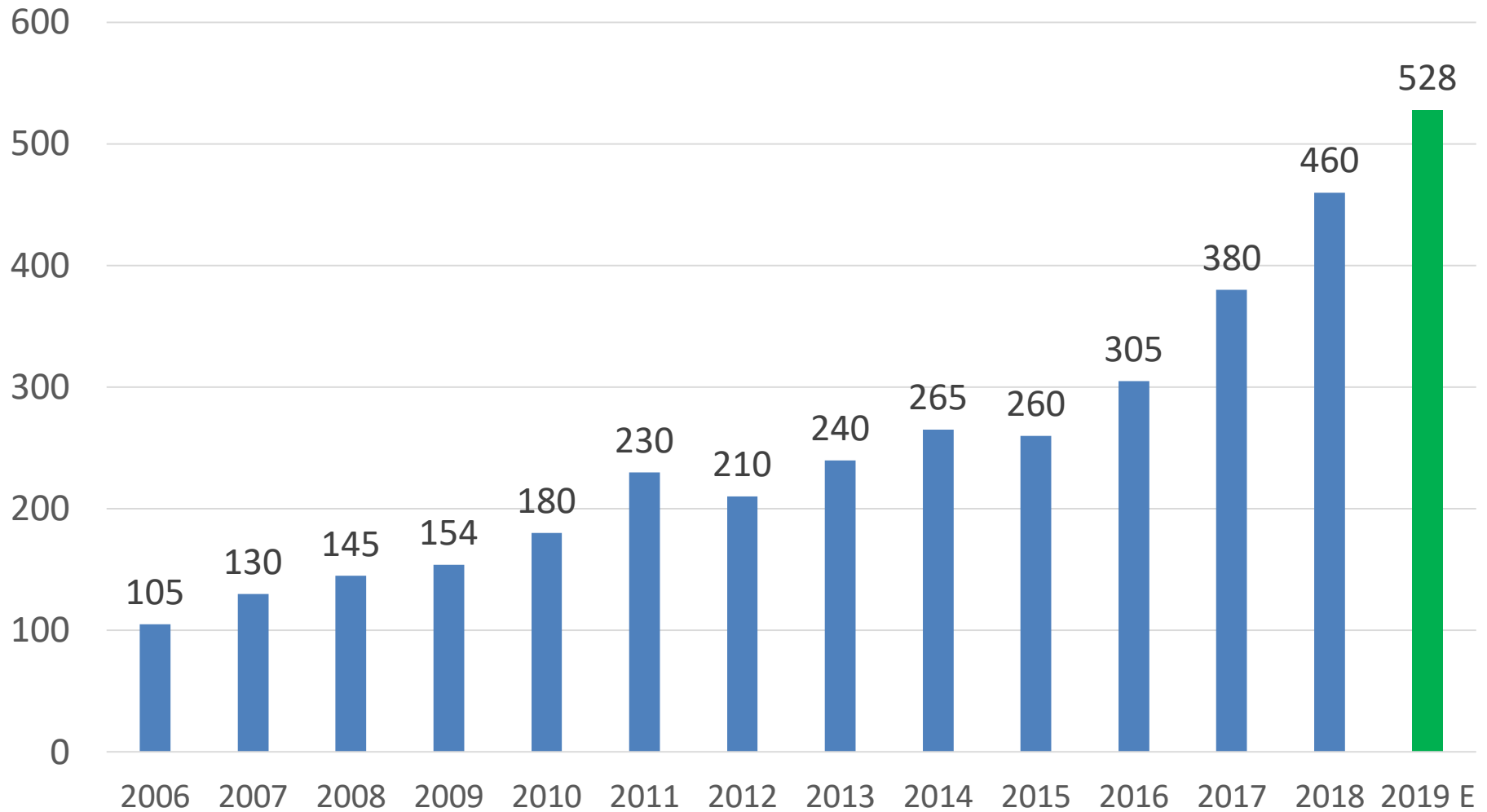


**Super capacitor production lines move to high-tech district at Q1 2019**

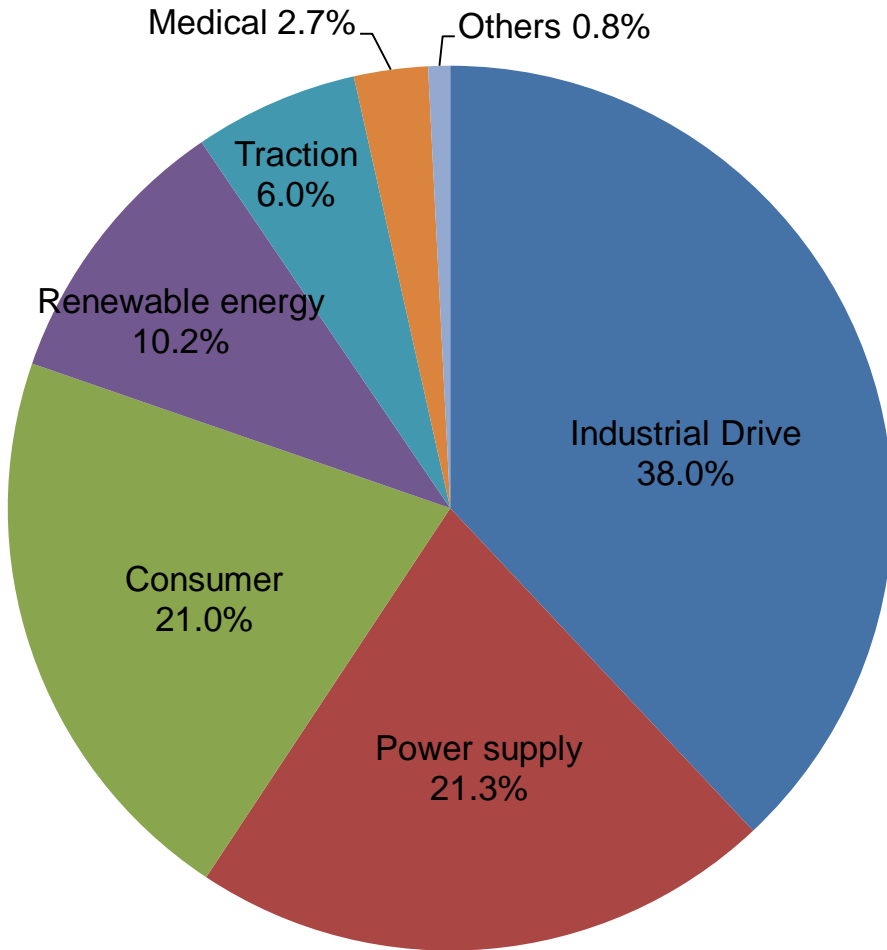


**Haicheng (Hubei) factory put into mass production at Q3 2018 (For polymer SP Cap )**

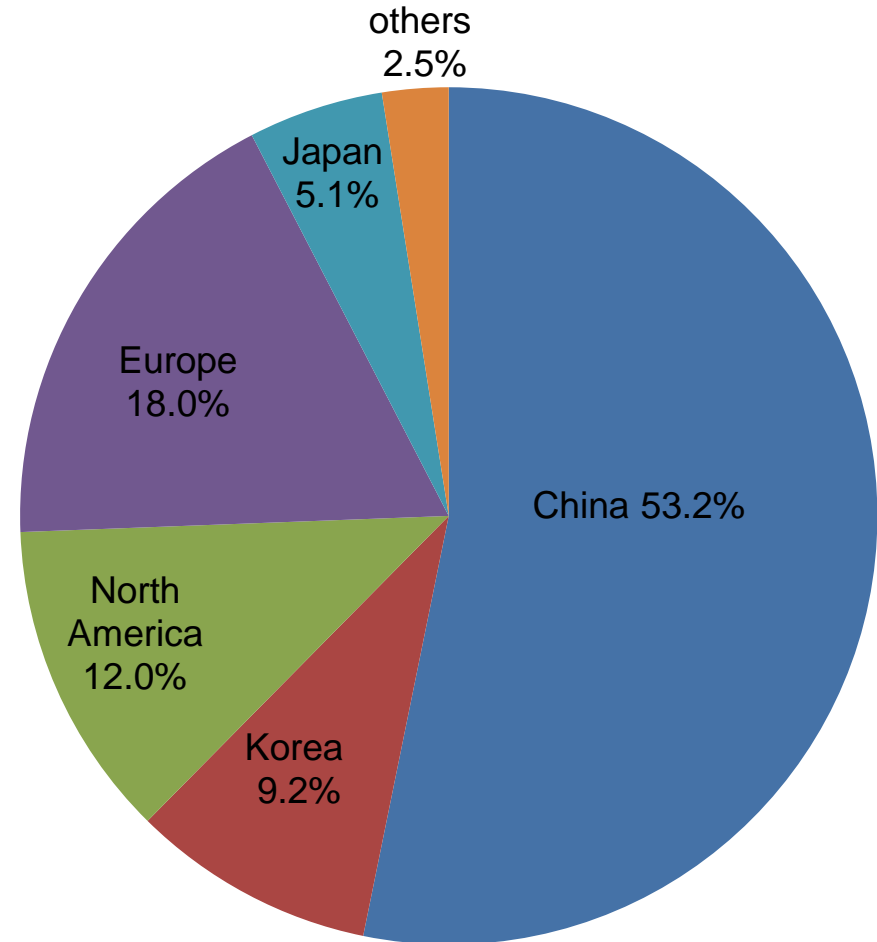
## Sales Revenue (Mil USD)



## Sales Revenues by Application (2018)



## Sales Revenues by Region (2018)







# Consumer Field Customer Reference



**TRANE**



www.c-s-l

- State - level R&D Center (CNAS)
- Cooperate with University and Professional Laboratories
  - Nanjing University ; Central South University (Material Research )
  - Nanjing University of Aeronautics and Astronautics (Application Research)
  - Changchun Institute of Applied Chemistry (Film material Research)
  - UCLA (Super capacitor material Research)
- 6% of sales revenue dedicated to R&D



|                  |   |
|------------------|---|
| <b>Sep.1994</b>  | <b>ISO9002</b>                                |
| <b>Oct.1995</b>  | <b>IECQ</b>                                   |
| <b>Jun.2001</b>  | <b>ISO9001-2000/QS9000</b>                    |
| <b>Sep.2003</b>  | <b>ISO14001</b>                               |
| <b>Jan.2006</b>  | <b>RoHS Compliant</b>                         |
| <b>Jan.2008</b>  | <b>GJB9001A-Military</b>                      |
| <b>Feb,2012</b>  | <b>CNAS</b>                                   |
| <b>Oct,2012</b>  | <b>UL E353835 (UL508C isolation material)</b> |
| <b>Oct,2013</b>  | <b>CE</b>                                     |
| <b>Dec,2013</b>  | <b>UL E355297</b>                             |
|                  | <b>(UL810 construction of E-cap)</b>          |
| <b>July,2014</b> | <b>UL E227010</b>                             |
|                  | <b>(UL810 construction of Film-cap)</b>       |
| <b>May,2017</b>  | <b>ISO-TS16949 (Film-cap)</b>                 |
| <b>July,2017</b> | <b>OHSAS18001</b>                             |
| <b>Q4,2018</b>   | <b>AEC-Q200(partial series)</b>               |



R&D (CNAS)  
China National Accreditation Service



RoHS  
Energy Spectrometer



X-Ray



The Breakdown Voltage  
of Electrolytic  
Paper Pressure Tester



Quantitative detection of  
Chloride ion content  
of ion chromatograph



Detection and liquid electrolyte  
material of trace  
moisture tester





**Reliability Test**



**Temperature Shock Test**



**Damp Heat Test**



**Vibration Test**



**Thermal Test**



**Transient Voltage Test**



ABB



Siemens



Schneider



Inovance



Fuji



Diehl



Eaton



INVT



STEP



Sungrow



Vertiv



Samsung



Jauch

Jianghai Europe

Jianghai (HQ)

Jianghai Korea

Jianghai Japan

Jianghai Australia

Jianghai America

- **Investment**

Strengthen the investment in the R&D of new material ,technologies and products, including invest **US\$20.0Mil for E-cap, US\$7.0Mil for film Cap, US\$30.0Mil for Super Cap & US\$5.0Mil for raw material** in next 3 years for new lines and facilities

- **Extend**

Providing a “One-stop-shopping” offer for E-cap, Film cap and Super Cap

- **Sustainability Improvement**

Expand supply chain to ensure quality and cost; Continuous improve production productivity; Technical roadmap continuous development

- **Service Philosophy**

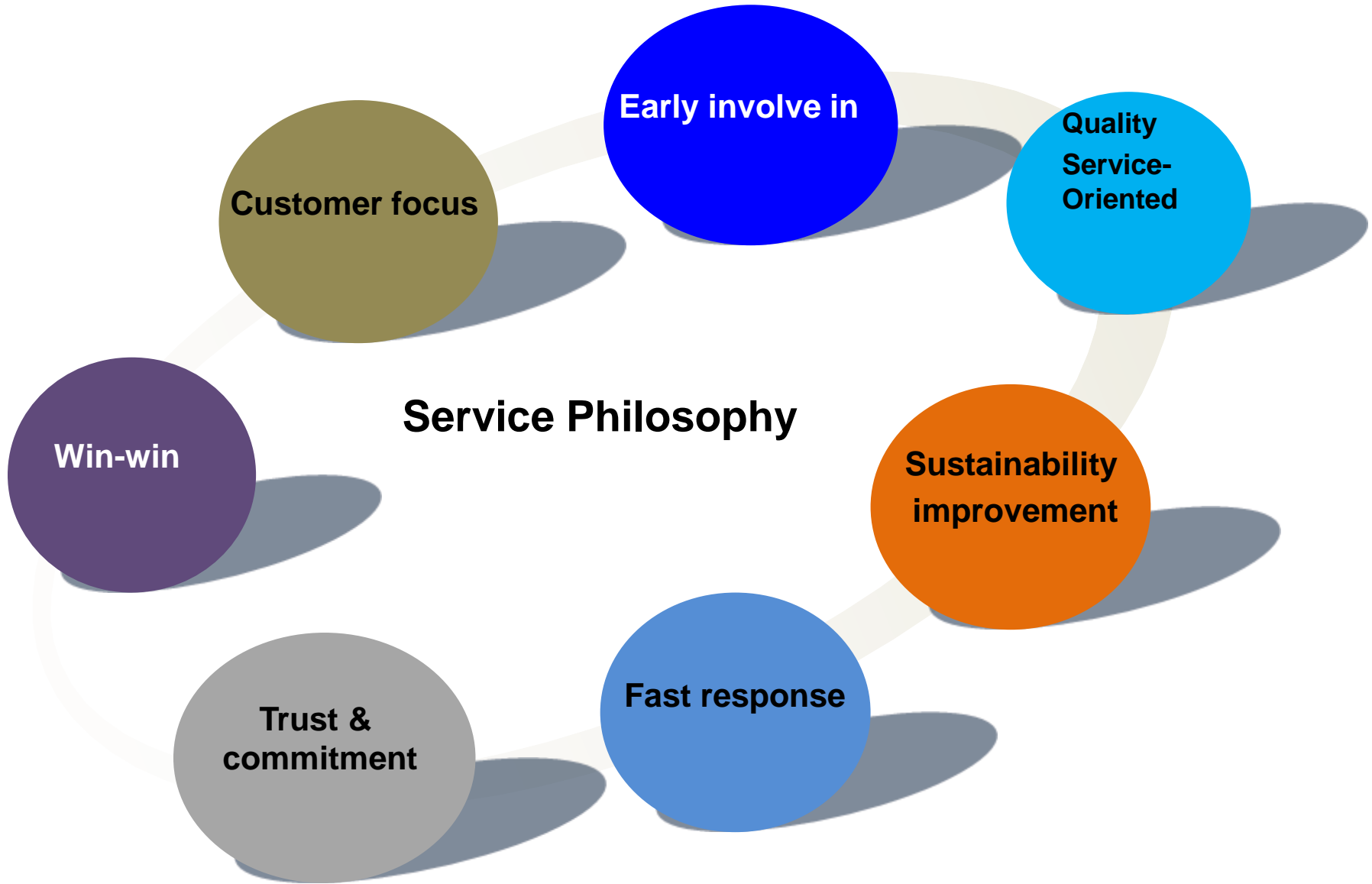
Support customer design-in, Fast response, Quality-oriented, Offer best solution

- **Brand recognition**

Technology leadership, >20% increase of sales revenue

- **Well-known Brand ;**  
Good customer bases and reference
- **Broad capacitor technology portfolio**  
Alu-Electrolyte , film, polymer, EDLC & Li-ion capacitors
- Belongs to the **top 2 producers** of snap-in and screw terminal electrolytic capacitors
- ISO 9001, IATF 16949, ISO 14001, UL810 , OHSAS18001
- **Vertical integration of pre-material** production and development  
Ensure good quality and short lead time at any time
- **Global sales office** --- design-in support , Fast response

## Service Philosophy



# Thank You!

