OPENING OF THE CHINESE MARKET
AGRICULTURE, FOOD & LIFE

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EVP Agriculture, Food & Life

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A SUCCESS STORY & FERTILE LAND FOR AFL

Main focus on Chinese domestic market

No. 1 position in Agriculture, Food & Life among international (non-Chinese) TIC companies

Second largest affiliate in the AFL network

Diversified service portfolio and fast growing business

Only ISO-17025, GMP, FDA registered & inspected international TIC player for Life Lab CRO in China
A COMPLETE SERVICE PORTFOLIO
FROM SOURCE TO MARKET

AFL
Nutrition & Health

SEED & CROP
Pre-farm gate / on-farm
• Precision Agriculture
• Ag Contract Research
• Market Research

Integrated Value Chain (origination & pre-financing)

TRADE & LOGISTICS
Commodities
• International Trade
• Domestic Trade
• Storage & Primary Processing

Integrated Value Chain (food safety & sustainability)

FOOD
Manufacturing, Retail & Consumption
• Inspection, Testing & Advisory
• Audit, Certification & Training
• Digital Services

LIFE SCIENCES
Laboratories
• Pharma R&D
• Pharma QC
• Medical Devices

Nutraceuticals
Health Food & Supplements

Pharming
Biotech & Genomics

Pre-farm gate / on-farm

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<th>CURRENT MARKET POSITION</th>
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| **International Provider in a Highly Fragmented Market** | CHF 50-100M (mostly governmental institutions)  
Growth: 5-10% | • Farm nutrition management  
• Ag contract research for input registration | Local / International |
| **Market Leader (private 3rd Party)**  
International & Domestic Trade | CHF 100M (20-30% with private TIC sector)  
Growth: 2-5% | • International trade  
• Domestic trade, logistics & primary processing | Local |
| **Leading Service Provider**  
Top 5 private labs | Food testing:  
CHF 2B (govt/private)  
Food certification:  
>CHF100M  
Growth: 8-10% | • Brand protection for food companies  
• Food international trade  
• Local Food Safety / QA | Local |
| **Leading Service Provider**  
Top 3 (third-party GMP TIC players)  
Top 1 (foreign GMP TIC players) | Total CRO for analytical: CHF 1B  
(majority in the hands of govt. labs)  
Growth rate 2015-2020: ~20% | • Analytical services for international and Chinese Life Science companies covering therapeutic drugs & medical devices | Local |

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AFL CHINA NETWORK BUILD-OUT

1400+ employees:
- Office
- Agri-Food Laboratory
- Inspection
- Life Laboratory
US-CHINA TRADE WAR

- Clear impact on soybean import, shift from US to Brazil origin (not detrimental to the TIC industry)

- No other major impact felt so far in the market, however China seems willing to buy more agricultural products in a year if a partial trade deal with the US is signed
OVERVIEW PER SEGMENT

SEED & CROP

TRADE & LOGISTICS

FOOD

LIFE SCIENCES
SEED & CROP
MARKET & REGULATION HIGHLIGHTS

- Pre-farm gate – agricultural input CRO
  - Previously in the hands of public institutes
  - New regulations on Management of Plant Protection Product Registration Testing announced end of 2017. As a result, this activity is now open to third-parties

- On-farm services
  - Emerging market and growing, but currently extremely fragmented and adoption rates of Precision Agriculture techniques are still low
SEED & CROP
SERVICE PORTFOLIO & SCOPE FOR GROWTH

CURRENT SERVICES

- Soil, irrigation water and plant testing as well as fertilizer recommendation services for the Chinese market
- Market Research on domestic market/crop for international companies
- Field agricultural input contract research

SCOPE FOR GROWTH

- Laboratory testing for agricultural input registration (based on ICAMA Good Laboratory Practices)
OVERVIEW PER SEGMENT

SEED & CROP

TRADE & LOGISTICS

FOOD

LIFE SCIENCES
Until recently, commodity imports into China were mandatorily supervised by CIQ (China Inspection & Quarantine)

Domestic trade remains open to international inspection companies

Recent reform of the state organizations will lead to the progressive opening of the market to international inspection companies:

- Merger of Customs and CIQ. The mandate for import/export commodity inspection system starts changing to focus more on their duty to protect state tax and health/quarantine rather than 100% control of quality
- Transition expected over the next couple of years from 100% inspection to random inspection covering 20-30% of imported commodities
CURRENT SERVICES

- Inspection and testing services for international and domestic commodity trade
- Stock verification/monitoring for commodity in storage
- Primary processing monitoring

SCOPE FOR GROWTH

- Additional market share when market further deregulates for commodity imports
- Supply chain monitoring
OVERVIEW PER SEGMENT

- SEED & CROP
- TRADE & LOGISTICS
- FOOD
- LIFE SCIENCES
FOOD
MARKET & REGULATION HIGHLIGHTS

- Rising cases of food safety incidents has led to stricter rules and regulations from government
- Growing consumer awareness and changing preferences towards better quality and safer food
- Focus is changing from responding to contamination to preventing it, gradually moving from market surveillance/post production mandatory sampling/testing to process monitoring
- Government will tend to more easily accept third-party information in the future
COMMERCIAL MARKET

- Full service portfolio for all the main agri-food categories to support food manufacturers and retailers as far as quality, food safety, authenticity and productivity are concerned.
- Active food international trade with multiple players:
  - 15,407 Chinese companies were registered for export in 2018
  - 40,000 Chinese importers

GOVERNMENT RELATED BUSINESS

- Auditing for food safety control to support government efforts to shift focus from product validation to process monitoring
- Support government with supplementary resources and capacity
Food producers in China are increasingly turning to GFSI-recognized certification schemes which confirm that food products meet the highest possible standards for safety and quality.

- Product Compliance Services to facilitate import & export activities or sales via eCommerce
- Health Food
- Next Generation Sequencing and implementation of new testing technologies
- Supply chain transparency & traceability
- Strengthening of regional coverage for testing and further penetration of domestic food manufacturing
OVERVIEW PER SEGMENT

SEED & CROP

TRADE & LOGISTICS

FOOD

LIFE SCIENCES
Huge promise of China’s pharmaceutical industry*:

- In 2016, China became the world’s second-biggest drug market
- In 2018, sales reached $137B, doubling in just 6 years. Only 12% is coming from biotech (vs. 25% global average), China is now accelerating growth in this segment
- 25% of US market size today, projected to be 50% by 2030. Some 400M Chinese now have health-insurance plans
- Growth likely to come from Chinese drug makers. Pharma is part of the “Made in China 2025” strategy for global leadership

* Ref. The Economist – Sept. 2019
Growing alignment of China’s drug regulations with international standards (Pharmacopoeia, ICH guidelines, etc.). Local regulation for biopharma is maturing

In 2015, CFDA announced that all chemical oral generic drugs in the market should undergo consistency study, including dissolution & bio-equivalence study as supplementary documents to support registration. New decree aims to improve quality of generics and to encourage local R&D of new drugs *(No. 44[2015] issued by the State Council)*
CURRENT SERVICES

- CRO Laboratory services, incl. chemical & micro testing and other project based services (method development, method validation, stability studies, E&L, etc.)
- Client base: 40% International / 60% Chinese pharma companies

SCOPE FOR GROWTH

With currently only 3% of total world CRO market size*, China CRO will continue to grow much faster than world average.

- Domestic pharma industry
- Bioanalysis
- Biologics / Biosafety

* Ref. ISR Reports – May 2019
DIGITAL TRANSFORMATION
AFL CHINA

- **SGSonLine:** SGS China portal used as a dynamic window on a select number of services delivered off-line:
  - From Jan to Sept 2019, more than 4700 leads generated from SGSonLine with strong conversion rate
  - Many requests came from first time customers
- Consumer engagement programs B2B2C via QR codes
- SGS DigiComply for regulatory advisory and label review
- Continuous digitalisation of internal processes (e.g. OneVision project for Life labs)