

## **EWA Chemical Industry in China Webinar**

**COVID-19 Has Changed The Business Environment - But The Pre-Existing Challenges Remain  
“Combatting Pre-COVID Challenges in a Post-COVID Environment”**

January 26, 2021

**east**  **west**<sup>®</sup>  
a s s o c i a t e s  
DRIVING COMPANY GROWTH IN CHINA, ASIA, MEXICO & CEE

- A leading provider of commercial, operational & risk management solutions and detailed implementation to western companies competing in the ever-changing China, Asia, Mexico & Central Eastern European markets
- Founded in 2005, with executives in China, Asia, Mexico & Central Eastern Europe
- All EWA executives have held senior management positions with P&L responsibilities for western MNCs, including Briggs & Stratton (NYSE: BGG), Bechtel Group, Fluor Corporation and Littelfuse, Inc. (NASDAQ: LFUS)
- Extensive experience in numerous key industries:

Automotive	General Manufacturing	Durable Goods
Metal Fabrication	Consumer Goods	Filtration & Separation
Chemicals	Packaging	Electronics
Semiconductors	Food & Beverage	Medical Devices
Specialty Metals	Laboratory Equipment	Food Technology
Energy & Natural Gas	Industrial Textile & Apparel	Costings & Building Materials

Strategic Business  
Planning

Manufacturing  
Footprint  
Optimization

Supply Chain  
Optimization

Performance  
Improvement

HR & Executive  
Recruiting

Risk Management

M&A Due Diligence

Business  
Assessment

Research Services



**ALEX BRYANT**  
Founder & President



**DAN MCLEOD**  
Director



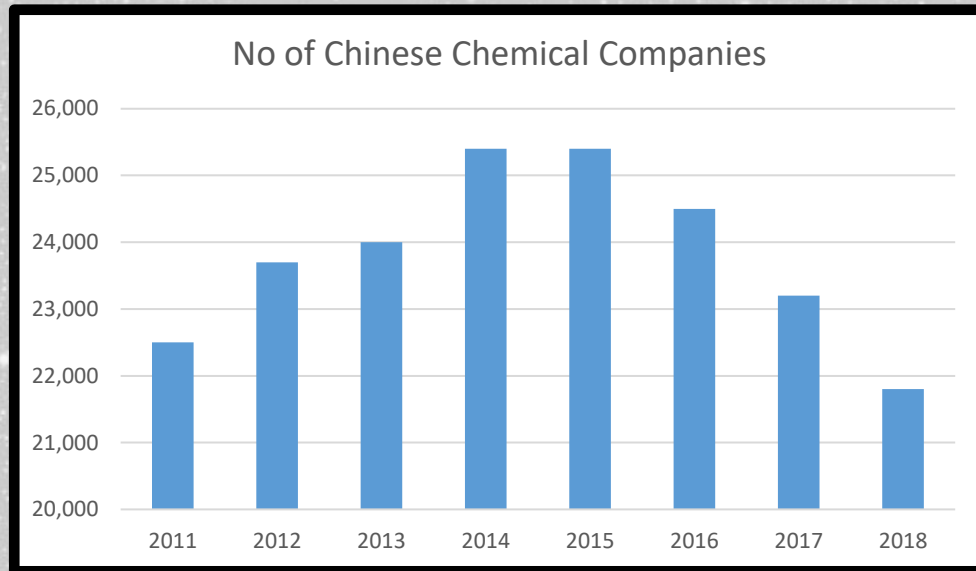
**Jay Hoenig**  
Director

Before COVID-19, western chemical companies in China were fighting a 2-front battle:



# Challenges and Opportunities

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**Slowing economy and regulatory pressures driving consolidation**

**China's chemical-market growth has slowed as the country's GDP growth has decelerated, and the trend is projected to continue.**

**China's chemical-market growth and GDP growth compared, %**



Source: Asian Development Bank; China Petroleum and Chemical Industry Federation; Citigroup; Deutsche Bank; Economist Intelligence Unit; Goldman Sachs; IHS Markit; JPMorgan Chase; Merrill Lynch; UBS; World Bank; McKinsey analysis

## **China's Jiangsu Province cracks down on chemical industry**

New regulations aim to shift to lower-polluting, higher-value manufacturing

*Chemical and Engineering News May 2020*

## **Chemical Multinationals Must Stop Cutting Corners in Sourcing: Report on China Blast**

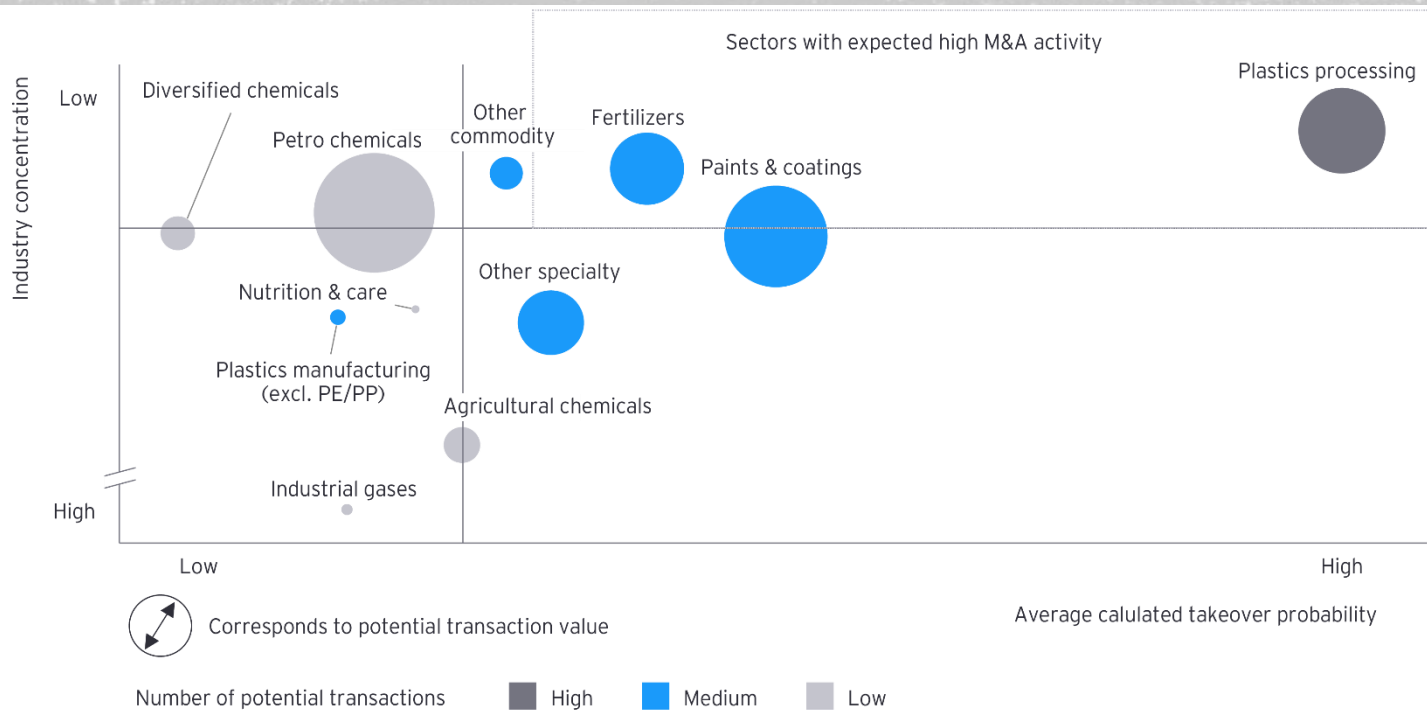
*Reuters 2020*

## **Push Towards Relocation of Chemical Production May Open up Opportunities for Acquisitions**

*CHEManager Dec 2019*

# Rebound in Chemical M&A Activity

*The profound shift in ways of being and industry paths requires chemical companies to rethink their strategies and re-evaluate their current portfolios. Ample availability of capital for large public companies and private equity -- coupled with the need to **establish redundancies in their global supply chain** amid geopolitical uncertainties -- could also drive an increased level of deal activity in 2021. PwC Dec '20*



*“With no clear exit strategy of the pandemic, those who can best manage change will survive, thrive, and drive robust M&A activities in 2021.”*

EY Oct '20

# Challenges Facing International Chemical Companies in China

Before COVID-19, western chemical companies in China were fighting a 2-front battle:



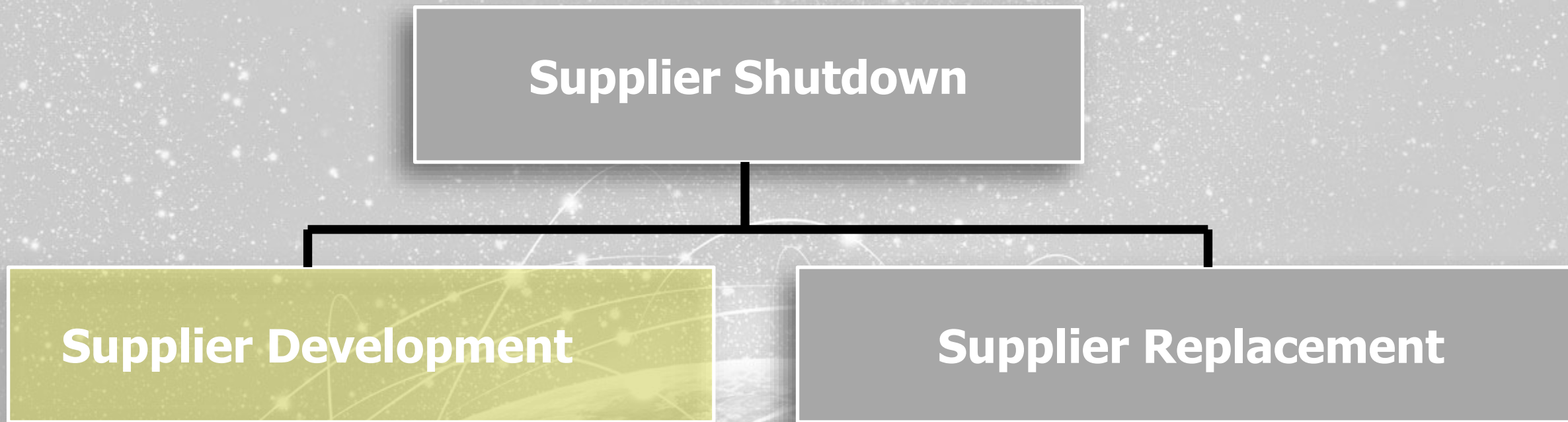


**China's anti-pollution campaigns and drive to consolidate the chemical industry**

**Shutdown of Suppliers**

**Temporary Shutdown of Operations**

**Forced Factory Relocation**



## Supplier On-Site Assessments

- Identify suppliers potentially vulnerable to environmental enforcement
- Assessment focus: previous enforcement actions, conditions of shop floor, inventory management, quality systems, environmental and safety systems, factory location (appropriately sited)
- Includes primary suppliers as well key vendors to the suppliers

## Supplier Covert Investigations

- Investigation focus: company reputation, ownership (look for potential conflicts of interest), environmental/safety enforcement actions

## Development of Under-Performing Existing Suppliers

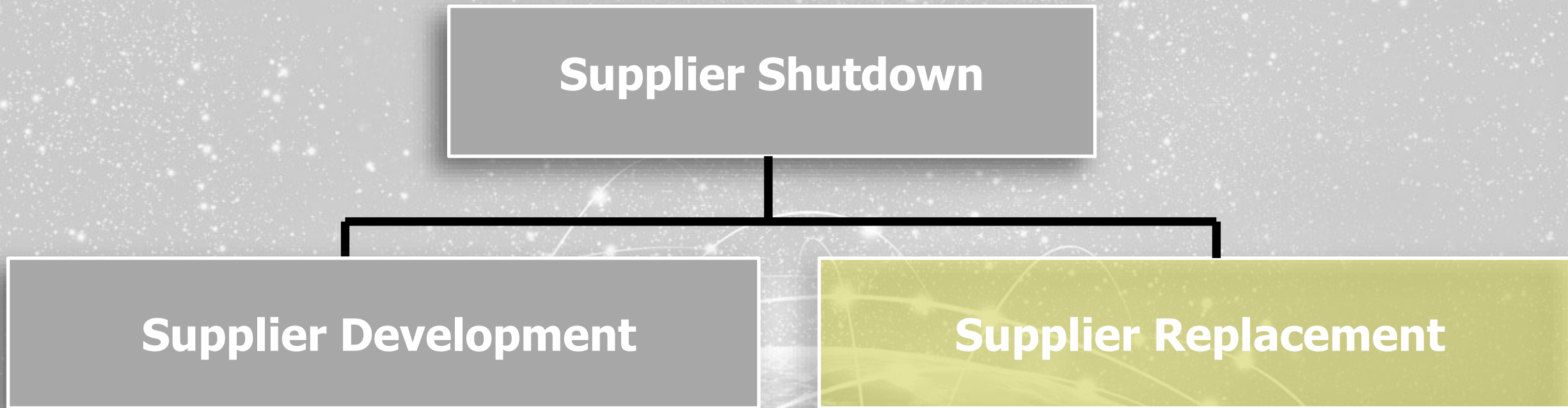
- Focus of underperforming supplier assessment on environmental and safety compliance processes, production planning and delivery performance, product consistency and quality improvement

## Most Often Identified Risks

- Inadequate facility maintenance leading to environmental and safety problems
- Located in a non-licensed zone
- Lack of adequate environmental and safety management systems
- Lack of proper operating standards
- Lack of understanding of regulations

## Most Often Implemented Solutions

- Supplier performance monitoring and score carding
- Performance improvement training at supplier sites
- Establishment of regular supplier audits to ensure accountability
- Arrange/facilitate compliance meetings with local governmental authorities and affected supplier
- New supplier identification and qualification



## Identification & Qualification of New Suppliers

- Identify new suppliers in China which meet technical, cost, reliability, and ethical standards

## Development Programs for New Suppliers

- Development programs for business practices, environmental and safety compliance processes, production planning and delivery performance, product consistency and quality improvement

## Establishment of New Sourcing Office

- Establish new sourcing office to identify and manage new suppliers

## Covert/Overt Investigation of New Suppliers

- Investigation focus: company reputation, ownership (potential conflicts of interest), environmental/safety enforcement actions

Before COVID-19, western chemical companies in China were fighting a 2-front battle:



**China's anti-pollution campaigns and drive to consolidate the chemical industry**

**Shutdown of Suppliers**

**Temporary Shutdown of Operations**

**Forced closure/relocation of Factories**

**Negotiating with local regulators to continue operating in the current facility is possible....*but is increasingly difficult in the current regulatory climate***



## **360° Operation Risk Assessment**

Assessment focus: facility, people, compliance, production, waste, regulatory landscape, impact from proposed regulations, local government relationships

## **Assessment Analysis & Risk Identification**

Assessment analysis, identification of risks. analysis of importance/need to act based upon likelihood of company shutdown and categorized into 3 groups: High, Mid, Low

## **Development of Recommended Corrective Solution**

Final selection of recommended risk correction solution for each risk and development of a detailed outline of costs, requirements, time to implement, etc.

## Most Often Identified Risks

- Inadequate environmental management systems
- Insufficient safety compliance
- Lack of monitoring of key performance indicators
- Lack of collaborative relationship with local government and regulators
- Lack of understanding of emerging regulatory trends

## Most Often Implemented Solutions

- Establish/Enforce environmental compliance system
- Establish/Enforce safety compliance systems
- Organization development - local outreach
- Organization development - monitoring regulatory landscape
- Metrics implementation to measure, monitor, and institutionalize improvement

# Minimizing Impact to Customers from a Temporary Shutdown

**Negotiate Product Swap/Purchase**  
**2-3 Months**

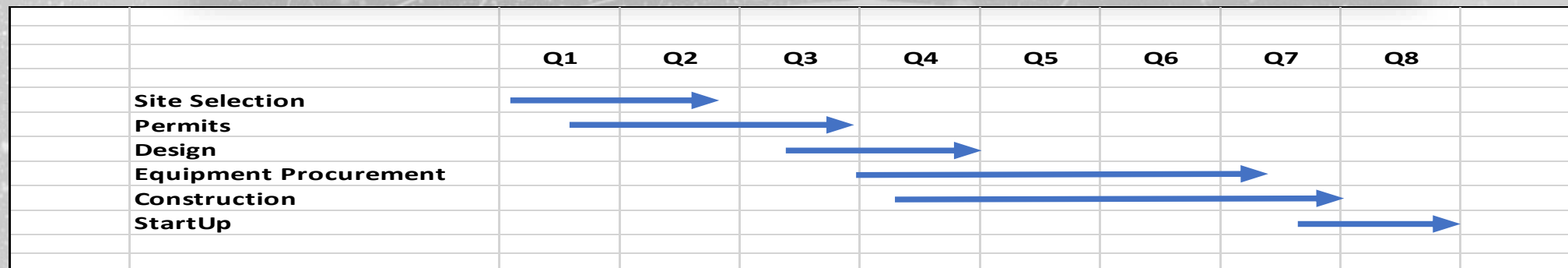
**Identify and Qualify Contract  
Manufacturers**  
**2-4 Months**

***Pre-qualification can substantially shorten your response time***

Recovering from Supplier Shutdown  
**2-4 Months**

Recovery from Operations Shutdown  
**2-4 Months**

Factory Relocation – *2 years for a Greenfield Site*



Before COVID-19, western chemical companies in China were fighting a 2-front battle:



*Improving Profitability and  
Stability*

**Growth Development**

**Cost and Efficiency  
Improvements**

## **Commercial Assessment**

### **Purpose**

Validate effectiveness of current approach and Value Proposition, gain competitive knowledge and locate market gaps that can be filled with existing or new products

### **Outcome**

Development of a roadmap to achieve increase in sales and customer satisfaction by filling newly discovered customer needs in the marketplace and exploiting competitive weaknesses

## **Commercial Assessment**

### **Expansion into New or Adjacent Markets**

- Adapt existing products to new customers

### **Distribution Strategy Optimization**

- Evaluate "go to market" model - direct selling, use of distributors or agents, ecommerce opportunities

### **Acquisition**

- New product offerings & expand client base
- New technology & intellectual property
- Add regional manufacturing coverage
- Extend distribution channels & logistics capabilities



*Improving Profitability and  
Stability*

**Growth Development**

**Cost and Efficiency  
Improvements**

# Maximizing Competitiveness – Cost and Efficiency

## Reducing Costs & Improving Efficiency

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graph TD; A[Reducing Costs & Improving Efficiency] --- B[Operational Assessment]; A --- C[Organizational Assessment]; A --- D[Manufacturing Footprint Assessment]; A --- E[Supply Chain Assessment];
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**Operational  
Assessment**

**Organizational  
Assessment**

**Manufacturing  
Footprint  
Assessment**

**Supply Chain  
Assessment**

# Maximizing Competitiveness: Operational Assessment

## Supplier Performance Improvement

- Working with high value/strategic suppliers on a one-to-one basis to improve their performance

## Optimize Planning Processes

- Align demand forecasting with inventory management and production planning to meet delivery

## Manufacturing Process Optimization

- Identify opportunities for Lean, Six Sigma, and process control improvements to reduce waste, improve quality, improve yields, and reduce costs

## Operability Improvement

- Focus on TPM (Total Productive Maintenance) and Mechanical Integrity to reduce downtime and increase output and agility of the manufacturing process

## Value Stream Mapping

- Applies Lean principles to visualize and streamline workflows

## Organization Redesign

- Align the organization structure with the work processes necessary to execute the company strategy

## Quality Management Systems

- Effective implementation of ISO 9001 or equivalent quality management systems
- Continuous improvement processes

## Back Office Improvements

- Apply Lean and recognized best practices to improve administrative efficiency and cash flow management

# Maximizing Competitiveness: Organizational Assessment

## Organizational Development

- Training, programs, processes to improve the effectiveness of the organization

## Compensation Alignment

- Compensation and incentives may be out of step with the local market, or inconsistent with attracting and retaining employees with the required skills and experience

## Interim Management

- Interim management can provide consistent day-to-day leadership through a turnaround until a key manager can be replaced

## Organization Design

- Align the organization structure with the work processes necessary to execute the company strategy

## Employee Retention Improvement

- Effective retention programs that can include compensation, training, incentives, structured performance evaluation and salary administration, manager coaching

## Talent Management & Executive Coaching

- Includes succession planning, targeted recruitment, employee development and selective coaching

## Plant Rationalization / Consolidation

- Consolidation of facilities or sale of assets to reduce costs, right-size the operation for the current scale of the business, or achieve synergies following M&A

## Plant Expansions

- A stand-alone recommendation to increase capacity to capture economies of scale.
- Additional facility to support geographic growth

## Factory/Closure Relocation

- An assessment may reveal that a factory does not have the ideal proximity to customers and suppliers, or does not fit with the changing urban landscape

## Site Selection

- Identification of a new location that balances labor availability, logistics connectivity, access to customers and suppliers, building cost, and ease of doing business

## Plant Construction

- Design, selection of reliable contractors, oversight of the construction quality, hiring of management staff, and commissioning and startup of the new facility

## Supplier Consolidation

- Reducing the number of suppliers to focus on strategic rather than transactional relationships
- Eliminating agents or distributors in the supply chain for high spend/high value materials

## Supplier Replacement

- Identify and qualify alternative suppliers of critical materials; eliminate sole sourcing arrangements

## Supplier Development

- Working with high value/strategic suppliers on a one-to-one basis to improve their performance

## Make vs. Buy Analysis

- Evaluate bringing outsourced operations back inside or additional candidates for outsourcing
- 

## Logistics Optimization

- Improvement opportunities are often available in transportation planning, carrier management, warehouse operations, use of 3PL services.



## Case Studies

## Background

- A global fine chemical company with sales & manufacturing operations in all major world markets
- Well-established operations in China, with a manufacturing facility located in the Pearl River Delta Region dating from the early 2000s and a network of satellite product distribution warehouses across other regions of China
- **EWA was engaged to provide an overall assessment and development of a country operations strategy including**
  - Potential impact of increased regulatory scrutiny over chemical manufacturing operations, and mitigation strategy
  - Major shifts in location of both customer and supplier bases

## Assessment

- Client's factory was in a general-purpose industrial zone and therefore at risk of shutdown or relocation
- Supplier and Customer base had migrated from South China to East China since operations were established in the 90's....only 25% of business was now located in the south. This resulted in increased freight costs and higher inventories.
- Future growth would be constrained by capacity of existing facility, with little space available to expand
- Concluded that best option to maintain continuity of operations and allow for expansion was a relocation to a chemical zone in East China.



## EWA was engaged to

- Identify an optimized manufacturing and distribution site
- Provide project management support for the new site design

## Site Selection

- Based on customer/distribution and supplier location analysis, EWA focused on potential locations in the Yangzi River Delta Region (YRD).
- Search criteria was focused on:
  - National Level Chemical Industry Parks
  - Availability and cost of land use rights
  - Available investment incentives
  - Reputation of each zone as being supportive and professionally managed
  - Verification of specific properties as being authorized for relevant chemical production (e.g. Class A chemistry)
  - Optimized location for customer and supplier logistics, availability and cost of labor and utilities
  - Search “stretched” to less developed areas (e.g. Anhui) to test for long-term sustainability

## **Results**

- Identified and procured suitable property, in an established chemical zone, in the YRD region
- Negotiated incentive package valued in excess of \$2.2M
- Proximity to customers and suppliers would reduce freight and warehousing costs by \$.5M annually
- Estimated inventory reduction of \$1M
- Projected operating cost savings (utilities, labor, environmental) of \$0.8M annually

## **Background**

- Client was specialty chemicals manufacturer operating a single site in China.
- Despite very high inventory levels, on-time delivery performance was poor and nearly 60% of shipments required expedited freight at increased cost.
- Multiple warehouses were set up across the country, increasing costs and inventories
- EWA was engaged to evaluate logistics and inventory management processes and develop an improvement plan.

## **Assessment**

- Based on current state analysis of the logistics and fulfillment processes in China, EWA developed and presented the following recommendations:
  - Consolidate carriers to improve negotiating leverage and setting of carrier performance management metrics
    - More than 50 carriers were used....none had comprehensive service agreements
  - Transition from manual planning processes
    - Planning processes excessively people-dependent rather than system-dependent
  - Redesign organization to align supply chain functions under a single leader
    - Organization structure siloed without shared kpi's

## Implementation

- Logistics Management
  - An RFQ for outbound logistics services was developed and a primary carrier was chosen to handle 80+% of the outbound loads
  - Contract included kpi's, performance expectations
- Organization Design
  - Organization model developed and key professionals with required skill sets were recruited
- EWA assigned an interim supply chain manager to start the transition
- Planning Processes
  - Forecasting, inventory management, and production planning processes were redesigned
  - KPI's were set and training in new systems conducted

## Results

- Freight & Warehousing cost savings: \$0.3M (annually)
- Expedited Orders Reduced from 57% to 14%
- On Time Deliveries: Improved from 60% to 92%
- Inventory reduction: \$1.9M
- Results achieved in 9 months

## **Background**

- Client was a specialty chemicals company operating multiple sites in China. In addition to domestic production, roughly 25% of China revenue was generated from imported products.
- An imported product line had been growing 20% CAGR, to nearly \$10M annually. Supporting the growth with long lead times was becoming challenging
- Introduction of tariffs was making the product much less profitable
- EWA was engaged to evaluate options for localizing production in China and developing a plan to transition to domestic supply.

## **Assessment**

- EWA conducted a Make-vs-Buy analysis, comparing in-house production at one of multiple sites to out-sourcing the production
- As part of this, EWA estimated capital costs, expense, and timing to start manufacturing in-house.
- It was determined that capital costs for in-house were prohibitive and working through a contract manufacturer would minimize both capital and the time to start producing.

## Implementation

- EWA was engaged to identify and qualify a suitable contract manufacturer that met the client requirements for:
  - Quality/Technical Competence
  - IP Protection
  - Adequate Safety and Environmental processes
  - Proximity to major customers
  - Minimal capital investment
  - Ease of Doing Business/experience with multinational customers
- An EWA Sourcing specialist identified suppliers for the raw materials, focusing on companies with manufacturing or warehousing nearby
- EWA provided a Project Manager to support developing contracts/commercial terms, technology transfer from the client to the contract manufacturer, and start up at the contractor facility

## Results

- Minimized Capital Cost
  - Cost Savings
  - Inventory Reduction
  - Transitioned to domestic supply in 4 months
- Saved \$2.1M  
\$1.3M annually  
\$1.1M

## **Background**

- Client was a publicly-traded leader in the FMCG industry
- An acquisition target included a Chinese subsidiary that was sourcing proprietary ingredients from the US and contracting with 3 local suppliers for processing, packaging, and distribution of a key product. Production required adherence to GMP practices.
- EWA was engaged in two phases:
  1. Supplier due diligence of the agent and suppliers
  2. Post acquisition, implement parent company Standard Operating Procedures, Business Ethics and Code of Conduct, and establish continuous improvement processes through the supply chain

## **Assessment**

- The EWA Assessment highlighted a number of deficiencies:
  - Weak Quality Control and Supply Chain Processes to ensure the ingredients sent to China were actually used in production
  - Weak systems for monitoring and controlling shelf life, rotation and heat history of the ingredients
  - Possibility of questionable relations between the agent and Chinese Customs officials
  - Irregularities in legal compliance by the Chinese suppliers
  - Failure of Quality Control measures in the Chinese suppliers, including non-use of available 'Clean Rooms'

## Implementation

- Counseled Client regarding need for continuous interactions with agent and suppliers.
- Provided ethics and business practice training to key agents and suppliers
- Developed and trained staff in Standard Operating Procedures (SOP's) covering entry and exit of the "clean rooms", handling incoming raw materials, scrap disposal, sterile uniforms, hand washing etc.
- Initiated a Statistical Process Control (SPC) program for suppliers to improve throughput and first-pass quality

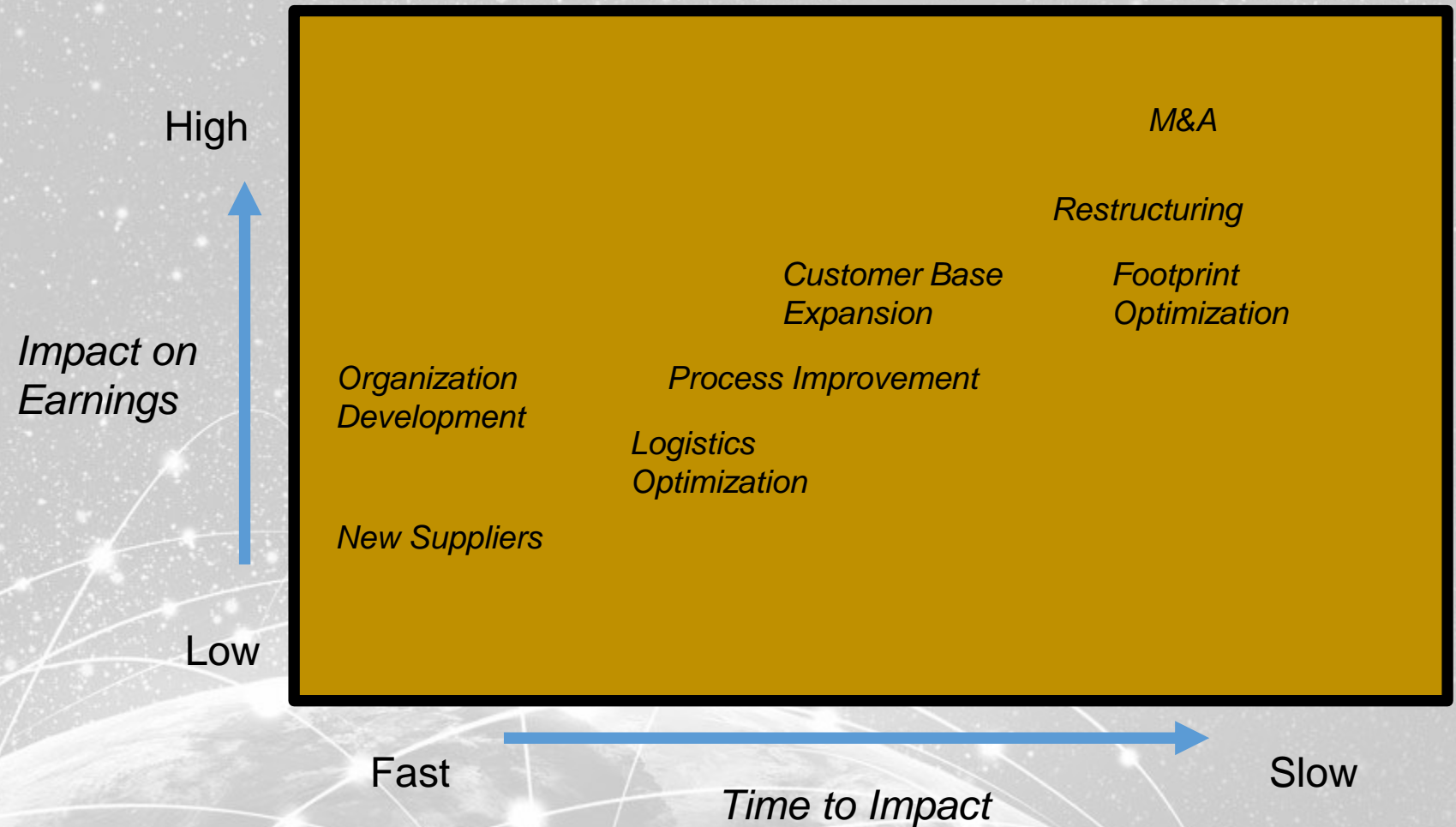
## Results

- After 12 months the focus on developing and implementing continuous improvement resulted in:
  - "Above average" ratings of for all suppliers
  - Suppliers routinely audited their performance on key indicators and reporting them to the agent and parent company as evidence of improvement
  - Measurement and SPC programs increased throughput 30% from the preliminary baseline and reduced instances of contamination by over 50%
  - Overall, first pass quality measures up 43%
  - Reducing waste and spoilage created product cost savings of 15% or \$3.2 million



# Finding the Right Approach

- **Combatting the challenges faced by the Chemical Industry in China often requires a mix of short term improvements and long term, structural changes.**
- **EWA welcomes the opportunity to meet with you to discuss approaches that could apply to your particular situation in China**



# Contact Information

East West Associates Confidential

For further information as to how East West Associates can improve your business, please contact:

**Alex Bryant**

***President***

Charlotte, NC, USA

[abryant@eastwestassoc.com](mailto:abryant@eastwestassoc.com)

Direct +1.704.807.9531

**Daniel J. McLeod**

***Director – Chemical Practice***

Shanghai, PRC and USA

[dmcleod@eastwestassoc.com](mailto:dmcleod@eastwestassoc.com)

USA: +1 207 401 8356C

China: +86 1360 165 0437

***Watch out for information on our next webinar "Driving Growth in Specialty Chemicals in ASEAN" coming in March***



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