

# EWA Webinar

## Mitigating the Impact of the US/China Tariffs

Operational, Commercial & Supply Chain Counteractive Measures

December 5, 2018

east  west<sup>®</sup>

a s s o c i a t e s

Commercial, Operational & Risk Management Specialists for China/Asia

- A leading provider of commercial, operational & risk management solutions and detailed implementation to western companies competing in the ever-changing China & Asia markets.
- Founded in 2005 with offices in the USA and in China
- All EWA executives have lived in China & Asia and held senior management positions with P&L responsibilities for western MNCs with operations in China & Asia, including Briggs & Stratton (NYSE: BGG), Bechtel Group and Littelfuse, Inc. (NASDAQ: LFUS)

- Extensive experience in numerous key industries:

Automotive

Metal Fabrication

Chemicals

Semiconductors

Specialty Metals

Energy & Natural Gas

General Manufacturing

Consumer Goods

Packaging

Food & Beverage

Laboratory Equipment

Industrial Textile & Apparel

Durable Goods

Filtration & Separation Equipment

Electronics

Medical Devices

Food Technology

Costings & Building Materials

Corporate Strategy  
Development

M&A Due Diligence

Risk Management

Performance  
Improvement

Senior Management  
Recruitment

Working  
Environment  
Efficiency

Location Services

Supply Chain  
Management

Business  
Assessment

Research Services



## **ALEX BRYANT**

Founder & President

- Director of International Business Development for Barnhardt Manufacturing Company
- Attorney, Ogletree Deakins Nash Smoak & Stewart, P.C.



## **MARK PLUM**

Director

- President of Briggs & Stratton Asia (NYSE: BGG)
- Vice President of Sales & Marketing, American Standard Thailand & American Standard China



## **WARREN WISNEWSKI**

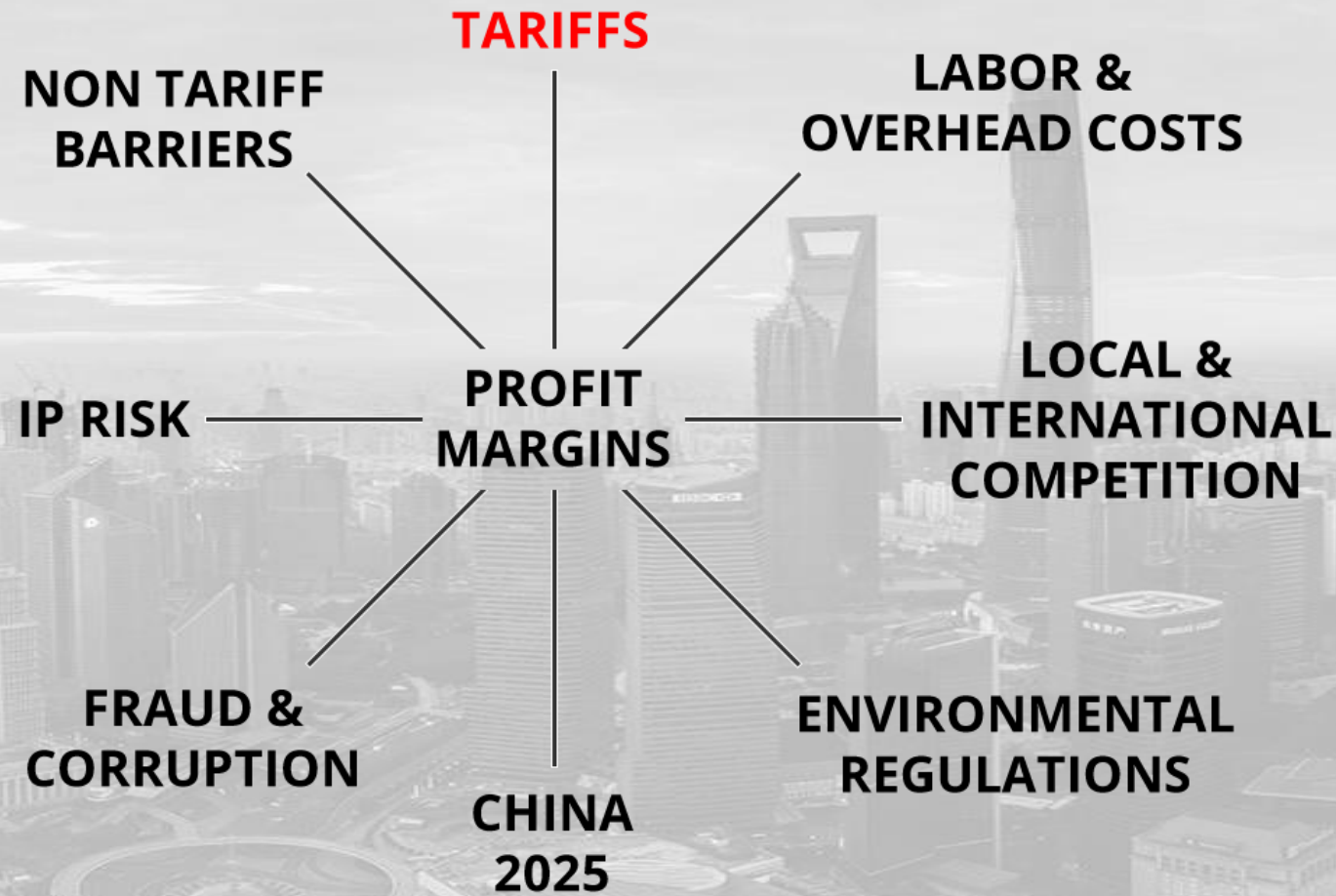
Director

- Vice President and General Manager, Asia Pacific for Eastman Kodak Company (NYSE: KODK)
- Recipient of Shanghai City's Silver and Golden Magnolia Awards

- To provide a comprehensive understanding of the US/China tariffs, our webinar will discuss counteractive strategies for products manufactured, sold and procured between the 2 countries



# One More Challenge for Companies Operating and Investing in China



- Today's webinar is divided into 4 segments:
  - Overview of the impacts of the US/China tariffs upon companies operating & investing in China
  - Presentation of 5 key counteractive strategies, which companies are developing to mitigate the impact of the US/China tariffs
  - Review of the counteractive strategy development process
  - EWA implementation case studies outlining how counteractive strategies are transformed into results



## Key Impacts Of The US/China Tariffs



- Of all of the 2018 supply chain trends, the US/China tariffs will present the greatest risk of disruption (2018 Supply Chain Trends, Cerasis)
- 84% of manufacturers expect the US/China tariffs to have a negative impact upon company profitability, due to increased costs for raw materials & components

# The US/China Tariffs Threaten Corporate Stability & Make Life Tougher To Operate Competitively

competitiveness and increased supply chain disruptions, is the high potential for a loss of customer base (The Financial Times, 2018)



## **5 Key Counteractive Strategies That Companies Are Developing To Mitigate The Impact Of The US/China Tariffs**

- “At the present time we are seeing companies looking to move their production out of China and to manufacture elsewhere in the region. This started before the trade wars surfaced – with companies seeking lower labor costs – but the focus has increased due to the US tariffs”  
(Lisa Robins, Global Head of Transaction Banking at Standard Chartered)
- “Facing the prospect of increased tariffs on Chinese-made goods, has caused companies to accelerate the moving of production to other countries in Asia”  
(John Laurens, Global Head of Transaction Services at DBS)
- 70% of US manufacturers are considering relocating some or all of their China production facilities to another Asia-Pacific market, due to the US/China tariffs  
(AmCham China Survey, 2018)

- 84% of US manufacturers sourcing raw materials & components from China plan to diversify their current supply chains by recruiting new suppliers from other Asia-Pacific markets, as a direct result of the US/China tariffs (EWA Survey, 2018)
- “Over the recent months, we have experienced a heightened interest in the global expansion of supply chains as a result of the ongoing US/China trade war rhetoric” (Lance Younger, Head of Deloitte’s Sourcing and Procurement)
- “More and more companies are opting for increased global supply chain diversity to offset the current geopolitical risks” (Brian Alster, Global Head of Supply and Compliance at Dun & Bradstreet)

- “Due to the geopolitical issues between China and the US, we are seeing increasingly more companies looking to the emerging ASEAN countries as a viable approach to expanding & diversifying their customer base. Companies are taking feedback from the markets to modify existing products or create new products that appeal to these potential customers”  
(Elisabetta Gentile, Senior Economist at the Asian Development Bank)
- “Despite the disruptions of the US/China tariffs, we continue to participate in the traditional dance of the buyer and seller - what has changed is that now more global sellers are looking to dance with Asian buyers outside of China”  
(Reuters, 2018)

- “Despite the current trade war between the US & China, many companies are reluctant to leave China for a number of reasons. But in order to remain competitive, these companies are under extreme pressure to improve production flows and reduce operating costs. We expect this trend to only increase in the near future”  
(Carmen Chan, Senior Analyst at Deutsche Bank Asia)
- 64% of manufacturers have implemented internal cost cutting measures to offset the increased costs of raw materials & components  
(EWA Survey, 2018)

- “As a direct result of the US/China trade war, we have seen a significant rise in the role of technology and an increased usage of robotics among manufacturers looking to streamline production, decrease production costs and move up the value chain”  
(Elisabetta Gentile, Senior Economist at the Asian Development Bank)
- “Today, technology is playing a significantly larger role in helping businesses to expand operations overseas. Data is being used to gain insights on customer acquisition, inventory management and logistics, as well as moving production to another location”  
(Guruprasad Gaonkar, Software as a Service Leader at Oracle Asia-Pacific)

An aerial, grayscale photograph of a city skyline, likely Shanghai, featuring prominent skyscrapers and the Oriental Pearl Tower. The image is semi-transparent, allowing the text to be clearly visible.

# The Counteractive Strategy Development Process



- With so many different counteractive strategic options, determining which strategy is best for a company requires a structured development process that begins with a detailed company-specific assessment / analysis:

Manufacturing Footprint Optimization Analysis  
Supply Chain Optimization Analysis  
Performance Improvement Assessment  
Commercial, Operational & Risk Assessment  
Make vs. Buy Evaluation



Global Plant Relocation & Downsizing  
Global Supply Chain Expansion  
Global Customer Base Expansion  
Corporate Cost Cutting  
Partner Acquisition



## **EWA Implementation Case Studies: Transforming Strategies Into Results**



**EWA Case Study:  
Make vs. Buy Evaluation**

- A global consumer electronics company was developing a totally new product line. Products were:
  - Built around some fundamentally new digital printing technology
    - Deployed in a core “engine” for the finished product
  - In the final development and commercialization stages
- Company operated its own manufacturing operation in the Yangzi River Delta Region (YRD)
  - Plant produced similar, but not identical, technology-based products
  - Operation had an outstanding track record supporting prior new product intros
- Due to the nature of the products, it was determined that:
  - The technology and economics required it to be made somewhere in China
- New company management team held a strong bias toward outsourcing vs. internal manufacturing
  - Independent help was sought for an objective Make vs. Buy analysis

## Step 1: Define specific project objectives and requirements

- Extensive interviews with senior management and project technical team
  - Overall company background and objectives for the project
  - Project economics and product launch plans
  - Technical requirements, anticipated challenges for the core engine
  - Develop a strong working relationship and communications
- Basic technical requirements included:
  - Controlled environment for final assembly, test and burn-in
    - Class 100 clean room
  - Microelectronics assembly and test capability
  - Demonstrated capability for rapid productivity improvement
    - Production yields at time of engagement less than 30%
- Comparison of total life cycle costs, internal vs. external manufacturing

## Step 2: Deploy formal process and develop core elements for analysis

- Detailed, standardized template developed
  - Completed by each potential supplier candidate
    - Internal and external
  - Information required included:
    - Company financial history, evidence of strength/stability
    - Major customers/clients
    - Quality certifications, evidence of currency/compliance
    - Full listing of technical resources on staff by discipline
    - Facility and production equipment details
    - Current capacity utilization, evidence of ability to expand quickly and reliably
- Common set of detailed technical specifications developed
  - Individual components
  - Finished engine assembly and test

## Step 3: ID potential suppliers and obtain analytical data

- Supplier search focused on YRD and Pearl River Delta (PRD) Regions
- Conduct preliminary interviews
  - Quickly develop “short list” of finalists
  - Each finalist required to provide extensive, detailed project proposals with:
    - Projected unit costs,
    - Quality and yield improvement plans
    - Any added “pass thru” costs beyond UMC
    - Productivity commitments
  - Most finalists had full in-house microelectronics capability
- Internal manufacturing option:
  - Utilize nearby sub-contractor for die placement/wire bonding
    - Maintain direct control over final assembly and test
  - Unique info included:
    - Capital costs
    - Additional inventory carrying costs and projected
    - Learning curve costs

## Step 4: Prepare final analysis and recommendation

- Key elements of the analysis included:
  - Initial unit manufacturing cost and projected productivity improvements
  - Upfront costs (learning curve, capital costs)
  - Production scheduling flexibility/ability to quickly adjust supply as needed
  - Projected cash flow requirements
    - Level of inventories to be carried by the company
  - Experience and track record with commercializing similar technology products
  - Demonstrated microelectronics experience and capability
  - Willingness to “pass through” cost benefits of yield and productivity improvements immediately
  - Level of transparency; willingness to work share all operational information with company
- Final recommendation prepared and shared with company senior management



- **Recommendation to company management:**

- Maintain direct manufacturing control over core engine for at least 2-3 years
  - Internal manufacturing costs projected to be 10% less than most qualified external bidder
- Any lack of direct capability for microelectronics mitigated via close proximity to subcontractors
- Yield improvements could be driven more quickly
  - All financial benefits flowing directly to the company
  - Higher degree of focus, priority and control

- **Key takeaway:**

- For make versus buy analyses/decisions, special considerations required for newly developed technologies



## **EWA Case Study: Global Plant Relocation**

- US manufacturer of industrial products for the laundry market with operations in the US, China & Europe
- The Chinese manufacturing facility was located in the Guangdong Province and in operation for 5 years
- Business had been growing 12-15% for the last 3 to 5 years
- The company was operating at maximum production capacity
- Given their growth in China/Asia Pacific, a significant increase in production capacity was mandatory
- The manufacturer required a new facility approximately 10 times larger than their current facility
  - Factory was to be approximately 200,000 square feet
  - Located on a 400,000 to 500,000 square foot site
  - 200 employees (150 production staff & 50 management/engineering)
- Although satisfied with the Guangdong Province, the client accepted the EWA proposal to also investigate the benefits of an expansion into the ASEAN market

## Step 1: Identifying the expansion criteria

- Company analysis
  - 15% of their entire Asian consumption was consumed in China -> ease of exportation
  - Sales projections indicated strong growth -> future production capacity expansion -> labor & material supply
  - Price is a major influencer within the competitive environment -> government incentives & inflation rates
  - Large products with labor intensive production process -> labor costs & transport costs
- Expansion criteria: labor supply/costs, government incentives, inflation rates, availability of raw materials, transport & export logistics

## Step 2: An in-depth comparative analysis of 6 selected countries

- Philippines, Malaysia, Indonesia, Vietnam, Thailand & China
- Weighted areas of focus:
  - Government incentives, labor supply/costs, inflation rates, availability of raw materials, land costs, utility costs, ease of doing business, corruption index, domestic market size, transport & export logistics
- Expansion recommendation: Thailand

## Step 3: On the ground interaction

- Met with two of the largest industrial zone developers, visited 5 potential sites & selected 2 sites for soil testing
- Negotiated conditions for property purchase & property management (waste removal, perimeter security, etc.)
- Negotiated investment incentives with Secretary General of Royal Thailand Board of Investment
- Interviewed, evaluated & qualified:
  - 3 architect and engineering firms
  - 3 general contractors
  - 4 project management firms
  - 3 executive recruiters and manpower staffing firms capable of staffing the 200 person facility
- Met with local legal and accounting firms to identify the necessary criteria for establishing a business entity
- Presented a 360° recommendation to the US Board of Directors which was approved for implementation

## Step 4: Hands-on implementation

- Board of Investment business and tax incentives negotiations finalized in October 2017
- Property was purchased and all pre-construction permits/licenses/registrations were acquired by November 2017
- Plant blueprints, construction budget/timeline & all construction partner contracts were finalized in December 2017
- Mechanical, structural and architectural drawings finalized and approved in April 2018
- Land preparation commenced in May 2018 and facility construction began in July 2018
- Identification, recruitment and hiring of General Manager, Finance Director and HR Director finalized in August 2018
- Identification, recruitment and hiring of Facilities and Operations Managers finalized in October 2018
- Handover of 1<sup>st</sup> half of assembly area to owners in December 2018
- Limited production scheduled for February 2019 & full production to begin in April 2019

## Government Incentives

- 8 year tax holiday from corporate income tax (CIT)
- 50% holiday for an additional 5 years

## Cost Reduction\*

- \$22.0M tax savings over 10 years
- \$4.3M annual labor savings after 5 years
- \$1.8M annual material savings after 5 years
- \$120/unit average freight savings

## Growth Development\*

- 42% increase in sales over 5 years
- 53% increase in revenue over 5 years

\*Company Forecasts



**EWA Case Study:  
Performance Improvement Assessment  
& Corporate Cost Cutting**



- Privately-owned US manufacturing company owned China-based operation
- Employs 750 employees and exports 95% to the US market
- Company's plant layout/workflow was poorly designed and haphazard
- Recently hired new General Manager
  
- EWA was engaged to streamline current operation in order to cut operating costs
- Based on our conversations with company and insights from several plant tours, we knew several existing problems:
  - Management had unsuccessfully implemented earlier performance improvement efforts
  - Current production layout had numerous "choke points"
  - Operations Director said company had some defined operational processes for each production area but did not see employees following them on production floor

## Step 1: Assessment of the Operations

- Analysis:
  - Company's business situation
  - Organizational structure
  - Management style
  - Level of process standardisation
  - Lean management tools & history
  - Operational "culture"
  - Employee handbooks
  - Process flow
  - Organization chart
  - Quality assurance processes & documentation
  - Production records
  - Financial reports

## Step 1: Assessment of the Operations

- Interviews:
  - CFO of US headquarters as Project Sponsor
  - General Manager
  - Department managers (HR director, QA director, manufacturing director, assembly shop manager, production planning manager)
  - Selected staff (e.g. EHS engineer, project manager for new factory building, project assistant). All staff were Chinese and no Westerners

## Step 2: Assessment Findings

- EWA findings were categorized into 4 areas:
  - **Management Practices**
  - **Defined Operational Processes**
  - **Production Layout & Automation**
  - **Pollution Controls & Compliance**

## Step 2: Assessment Findings

- Management Practices

- The company's middle management (directors, managers and deputy managers) appeared to be in disproportionate numbers in relation to the company size and number of production staff
- Company operated in a top down fashion with limited freedom to express or implement process improvements
- Overall morale was a bit low as was work discipline
- Previous improvement efforts had failed because:
  - They had not been pushed / managed sufficiently
  - Daily work and problem-solving had overwhelmed the staff in charge
  - Management had not realized (or not been clearly shown) the benefits of such improvements and had limited stake in the outcome

## Step 2: Assessment Findings

### • Defined Operational Processes

- Many processes were based on the experience of the staff, ad hoc decisions and quite extensive daily trouble shooting rather than on well-defined and documented processes
- Training was done by word of mouth and details were often lost in the translation and were never documented
- Quality Assurance and Supply Chain management did not have the necessary production processes and procedures
- Quality issues were plentiful throughout the process chain and the high level of final product quality came at a high cost of re-work and scrap
- The enterprise was rather people than process oriented, it was struggling to churn out good quality products at “any” cost and it was caught in an activity trap
- Up and downstream processes also very labor intensive and not continuous (e.g. drying oven)
- There was no real automation at the plant, mostly manual production

## Step 2: Assessment Findings

### • Production Layout & Automation

- The regular shop floor walks also showed a high amount of waste: piled up parts and boxes in every corner, opaque production processes, a packed, poorly organized warehouse, machines and staff idling and an overall messy, disorderly impression
- Process technology was outdated (based on very hazardous sulfuric acid core process and an auxiliary process also based on very hazardous chemicals)
- Processing materials were added manually by a rough schedule and weighing only, based on experience, resulting in poor repeatability and low process stability
- The core process was so hazardous to health, that it was extremely difficult to find and retain workers
- There was not an automatic line for anodizing

## Step 2: Assessment Findings

### • Pollution Controls & Compliance

- While some reasonably effective emissions control equipment was in place, it was often turned off to “save money” and may have only been utilized during Government Health & Safety inspections
- Company had failed 2 recent environmental audits by the regulatory authorities – faced a possible 2.4M RMB fine and worst-case scenario was a forced plant closure –
  - Not known by new GM or US executives
- The sulfuric acid-based part of the production process did not have an improved electro-chemical process to ensure better compliance and safety for the employees
- Operations Director was not conducting pollution & safety audits and his annual bonus payment was not tied to the success of passing the governmental safety audits



## Step 3: Performance Improvement Recommendations

- Management Practices
  - Streamline middle management by terminating 3 deputy managers
  - Replace the Operations Director
  - Institute new reporting procedures to enable employees to express concerns directly to the GM and future Operations Director
  - Tie GM and Ops Director's bonus compensation packages to performance improvement & cost cutting goals and avoidance of incurring environmental fines
- Defined Operational Processes
  - Develop clear operational procedures for each division and hold management accountable
  - Open reviews by senior management and employees on implementation of the performance improvement – what is working, what is not working, affect on internal re-work costs and scrap costs
  - Define training schedule and resources for operational employees

## Step 3: Performance Improvement Recommendations

- Production Layout & Automation
  - Re-design production layout, including a highly disorganized warehouse and production staging area
  - Purchase automation lines to eliminate reliance on manual labor, which has resulted in poor repeatability
- Pollution Controls & Compliance
  - Ensure the emissions control equipment is not turned off during production
  - Define procedures governing this equipment and a 'record log' kept on all occasions when the equipment has been turned off
  - Institute mandated Safety & Compliance audits to meet Chinese regulatory standards
  - Invest in an automatic line for the hazardous anodizing process
  - Tie management bonuses to passing internal audits and governmental inspections

## Step 4: "Hands-On" Implementation

- Terminated Operations Director and 3 Deputy Directors
- Identified, qualified and hired new Operations Director
- Restructured compensation packages for GM and Operations Director
  - Tied to cost cutting projections & environmental compliance
- Developed new operational processes to ensure full production consistency and reduce the cost of re-workings
- Redesigned workflow "choke points" (plant layout, warehouse management & production staging)
- Initiated investments of several new automation lines, including the hazardous anodizing process and the acid process
- Conducted "random" environmental audits to ensure full compliance and drive continued attention to compliance among the senior management

- **9.5%** improvement of production efficiency & throughput
- **17%** load reduction of water treatment system
- **15%** cost reduction of paid leave, due to improved plant morale & worker safety
- **13.8%** cost reduction of chemical water treatment
- Avoidance of a potential pollution fine of 2.4M RMB and possible plant shutdown, due to the company successfully passing government environmental inspections



## US/China Tariffs Summary

- The US/China tariffs are creating unprecedented challenges for companies operating & investing in China - challenges that threaten corporate stability.
- There are numerous counteractive strategic options to mitigating the impact of the US/China tariffs - each with its own potential benefits & implementation requirements.
- But just as every company is unique, every company requires a company-specific counteractive approach to mitigating the impact of the US/China tariffs - success is dependent upon the right implementation of the right strategy.
- This is the core foundation of the EWA philosophy to successfully mitigating the impact of the US/China tariffs:

Manufacturing Footprint Optimization Analysis  
Supply Chain Optimization Analysis  
Performance Improvement Assessment  
Commercial, Operational & Risk Assessment  
Make vs. Buy Evaluation

Global Plant Relocation & Downsizing  
Global Supply Chain Expansion  
Global Customer Base Expansion  
Corporate Cost Cutting  
Partner Acquisition

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