SUCCESSFUL STRATEGIES FOR COMPETING IN CHINA

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5th Specialty Elastomers/TPE’s
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Centre for Management Technology
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Robert Eller Associates is a 15 year-old global plastics consulting company helping companies analyze technical, marketing and economic implications for their business to facilitate management in strategic decision making.

- Offices in Akron, Ohio (home office), Paris, Shanghai, New Zealand
- Asia: Active in China, India, Middle East
- 5 Key Focus areas: TPE’s, ETP’s, Automotive, Compounding and Foams
- Multi-client studies:
  - China TPE Market: 2006
  - North America/Europe TPE: 2006
- Single client studies
- Mergers and acquisitions:
  - Complete management service for small acquisitions
  - Due diligence
  - Technical Advisors
What all customers seem to ask first…….

What is your price?

……...but at what quality, what performance and what service level?
STRATEGY DILEMMAS

• Western Companies:
  – How do I protect/grow my share of the companies requiring my high quality and higher prices?
  – How do I get a portion of the domestic Chinese market
    • The toothbrush syndrome……if only I could sell just one toothbrush…….
  – How can I produce products as low cost as domestic producers?

• Chinese Companies
  – How do I take advantage of my low cost position and sell product into the higher quality export market segments?

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
THE TARGET IS CHANGING

• Exports to domestic consumption
  – Current global economic slowdown will slow exports
  – Quality concerns overseas
    • Toys
    • Milk
  – Rising prices due to higher costs reduce export demand as businesses look to move to lower cost manufacturing locations
  – Chinese “buying class” becoming large enough to drive globally competitive manufacturing plants

• Understanding how to compete
  – Understand low product quality/performance/price requirements and how to be competitive

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
GLOBALIZATION: China’s role as low cost producer is changing……

- RMB currency exchange rate
- Labor cost increases 65-80% over last four years
- Property cost escalation
- Inflation > 8% becoming a factor
- Innovation taking off
  - Original Chinese designs
- Higher value, higher technology industries
- R&D investment payoff

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
EMPOWERED MIDDLE CLASS

• The number of urban households with income greater than 40000 RMB/year will triple in the next ten years and by 2025 will represent over 70% of the forecast 400 MM urban households
• This boom is just taking off
• Will become a significant driving element of Chinese economy with export business
• Shanghai/Beijing center of this buying spree, other urban centers are also growing but not as quickly.
• Buying cars, mp3 players, video games, computers, telephones
• Foreign brands popular and extract premiums over domestic products

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
DURABLE GOODS OWNED PER 100 RURAL HOUSEHOLDS IN CHINA

SOURCE: CHINA NATIONAL BUREAU OF STATISTICS
GLOBALIZATION VS. LOCALIZATION

• Globalization
  – Sourcing/manufacturing at the least cost global source

• Localization
  – Sourcing locally with locally produced raw materials

• Export/global market
  – very OEM driven
  – Global uniformity/specification process

• Domestic vs. International Platforms
  – Chery, Nissan, others

• Adapting to the local market needs
  – Cell phones from Nokia, Motorola, Samsung competing with TCL and Bird
  – Colgate Palmolive: acquisition with San Xiao

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
PARALLEL SUPPLY CHAIN

Nationality Based

<table>
<thead>
<tr>
<th>Compounder Nationality</th>
<th>Fabricator/OEM Nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>American</td>
</tr>
<tr>
<td>European</td>
<td>European</td>
</tr>
<tr>
<td>Korean</td>
<td>Korean</td>
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<tr>
<td>Japanese</td>
<td>Japanese</td>
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<tr>
<td>Taiwanese</td>
<td>Taiwanese</td>
</tr>
<tr>
<td>Chinese</td>
<td>Chinese</td>
</tr>
</tbody>
</table>

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
# QUALITY TIERING OF CHINA MARKETS

<table>
<thead>
<tr>
<th>MARKET SEGMENT</th>
<th>PRODUCT/QUALITY DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>Products produced for Global market meeting global quality and performance standards at global pricing</td>
</tr>
<tr>
<td>Glocal*</td>
<td>Products produced for domestic and export markets with near global quality and performance standards with near global pricing</td>
</tr>
<tr>
<td>Local*</td>
<td>- Products produced for the local market meeting local performance, quality and price requirements</td>
</tr>
<tr>
<td>Low End*</td>
<td>Products marketed based solely on price, with low concern for quality, and performance</td>
</tr>
</tbody>
</table>

Source: ROBERT ELLER ASSOCIATES LLC, 2008

Note: * = Will gain share in global recession
### QUALITY/PERFORMANCE TIERING

<table>
<thead>
<tr>
<th>Tier</th>
<th>Quality</th>
<th>Performance</th>
<th>Service</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Glocal</td>
<td>Near Global</td>
<td>Near Global</td>
<td>Moderate</td>
<td>Near Global</td>
</tr>
<tr>
<td>Local</td>
<td>Local standards</td>
<td>Local requirements</td>
<td>Low</td>
<td>Local</td>
</tr>
<tr>
<td>Low End</td>
<td>Low</td>
<td>Low</td>
<td>None</td>
<td>Low</td>
</tr>
</tbody>
</table>

**Source:** ROBERT ELLER ASSOCIATES LLC, 2008
THE EVOLVING LEVEL OF QUALITY: DEVELOPED WORLD VS. UNDEVELOPED WORLD

• Developed World: 80% of the opportunity is global and glocal
• Undeveloped World: 80% of the opportunity is typically local and low end
• Japan (1960’s), Korea (1990’s) are comparable models
  – Asian countries that evolved from low cost global producer to high productivity global competitors
• Quality changes as manufacturing culture matures……quality becomes greater importance
  – Concepts like six sigma and high productivity manufacturing techniques put greater pressure on quality, performance and consistency
  – People increasingly willing to pay for reliability and quality until a global quality level is achieved
• Expect pressure on low end and local products to improve quality/performance

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
# QUALITY TIERING: SOME EXAMPLES

<table>
<thead>
<tr>
<th></th>
<th>GLOBAL</th>
<th>GLOCAL</th>
<th>LOCAL</th>
<th>LOW END</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toothbrushes</strong></td>
<td>Colgate Palmolive</td>
<td>San Xiao</td>
<td>San Xiao</td>
<td>One time use like hotel amenities</td>
</tr>
<tr>
<td>(Colgate Palmolive)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Toothbrushes</strong></td>
<td>GLS</td>
<td>Hotai</td>
<td>TSRC</td>
<td>Not used</td>
</tr>
<tr>
<td>(SEBS Compounds)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Compounding Extruders</strong></td>
<td>ZSK: Designed</td>
<td>STS: Designed</td>
<td>CTE: Designed</td>
<td></td>
</tr>
<tr>
<td>(Coperion)</td>
<td>and made in</td>
<td>and part made</td>
<td>and made in</td>
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<td></td>
<td>Germany.</td>
<td>in Germany,</td>
<td>China.</td>
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<tr>
<td></td>
<td></td>
<td>rest in China.</td>
<td>Cost 0.35-0.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>of a ZSK</td>
<td></td>
</tr>
<tr>
<td><strong>SEBS Resin</strong></td>
<td>Kraton</td>
<td>TSRC</td>
<td>Baling</td>
<td>Wide spec</td>
</tr>
<tr>
<td><strong>TPV</strong></td>
<td>Santoprene</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Robert Eller Associates LLC, 2008*
CHINESE COMPOUNDER ADVANTAGES

– Local raw materials
– Typically lower wage rate than western companies
– 4-10 x lower capital depreciation
– Greater creativity in raw materials/raw material sourcing
– Lower packaging costs: returnable bags, reuse of bags
– Lower shipping costs
– Government funded institutes provide R&D sources for compounders as advanced material or high technology centers

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
# PRODUCT DEVELOPMENT VS. CAPITAL BASE

<table>
<thead>
<tr>
<th></th>
<th>Local Quality Extruders</th>
<th>Glocal Quality Extruders</th>
<th>Global Quality Extruders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Quality Raw Materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glocal Quality Raw Materials</td>
<td></td>
<td></td>
<td>Increasing Costs</td>
</tr>
<tr>
<td>Local Quality Raw Materials</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: ROBERT ELLER ASSOCIATES LLC, 2008*
PRODUCT DEVELOPMENT VS. CAPITAL BASE CAPABILITIES

- Difficulties competing in broad market segments with only top-notch western equipment or using only a single raw material source
- Skills are required for developing formulations with various raw materials
- Understanding the quality/performance requirement for each application is critical for price competitiveness and profitability
- Targeting markets and applications where the quality and performance of your product development skills and capital base will best allow you to compete.
- Understand what quality/performance applications you cannot compete because of lack of product development or capital equipment capabilities

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
APPLICATION DEVELOPMENT VS. CAPITAL BASE ..... an example

<table>
<thead>
<tr>
<th></th>
<th>CTE</th>
<th>STS</th>
<th>ZSK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kraton</td>
<td></td>
<td></td>
<td>Highest Price</td>
</tr>
<tr>
<td>TSRC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sinopec</td>
<td></td>
<td>Lowest Price</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
PRODUCT MARKET ANALYSIS

• Markets will divide into several quality segments at several price points so you can define required quality and pricing with the proper quality product at the right price cost
• Necessary to understand the volume for each segment and the price and a profitable strategic plan can be developed appropriate for your capital and geographic capabilities
• Can the right product be produced at the right price for the application requirements?

Examples:
- Medical markets will normally require global and glocal products and as a result are typically higher priced
- Automotive will require glocal and global products with some after market products using local products
- Soft touch has applications in each one of the segments and specific applications like toothbrushes have all of the tiers
- Footwear market
- Power tools (intermaterial competition between COPE, TPU, o-TPV and SEBS) for various quality levels
- Increased use of SBS to meet local quality standards

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
CONSOLIDATION......NATIONAL STRATEGY

• National strategy
  – Close to the customer
  – Necessary for the domestic business
  – Simplifies logistics
  – Geographic footprint
  – Capital footprint
  – Product Development footprint
• Too many players
• Examples of this strategy:
  – **Kingfa**
    • Guangzhou, Shanghai, Dalian, Mianyang (ChangXin)
  – **Lyondell Basell**
    • new plant in Guangzhou (in addition to Suzhou)
    • purchase of Solvay Engineered Plastics (TPO/TPV)
  – **PolyOne/GLS**
    • acquisition of GLS by PolyOne (Suzhou)
    • Shenzhen and Suzhou (Engineered Materials)
  – **TSRC**
    • Kaoshung (Taiwan), Shanghai and Jinann
  – **Sabic Innovative Plastics**
    • Nansha, Shanghai and Nantong (2010)

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
CHINA HAS LARGE NUMBER OF LOCAL TPE COMPOUNDERS

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
COMPETITIVE GEOGRAPHIC/PRODUCT TIERING POSITIONING

- Capital footprint capabilities
- What is your footprint?
  - vs your competitors?
  - vs the market segment that you participate in
- Overlay with markets that you participate in and are successful
- What opportunities should be targeted due to similar successes
- Analytical understanding of what to target tactically and what it requires to get there

<table>
<thead>
<tr>
<th></th>
<th>Global</th>
<th>Glocal</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
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<td></td>
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<tr>
<td>South</td>
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<td></td>
<td></td>
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<tr>
<td>North</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Low Cost Extruder</th>
<th>Moderate Cost Extruder</th>
<th>High Cost Extruder</th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South</td>
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<td></td>
</tr>
<tr>
<td>North</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
GEOGRAPHICAL DISTRIBUTION

<table>
<thead>
<tr>
<th>SHAPES</th>
<th>COLORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQUARE = MNC</td>
<td>RED = TPV</td>
</tr>
<tr>
<td>CIRCLE = DOMESTIC</td>
<td>ORANGE = TPO</td>
</tr>
<tr>
<td></td>
<td>BLUE = TPU</td>
</tr>
<tr>
<td></td>
<td>GREEN = SBCs</td>
</tr>
<tr>
<td></td>
<td>BLACK = COPE (TPEE)</td>
</tr>
<tr>
<td></td>
<td>GREY = OTHER</td>
</tr>
</tbody>
</table>

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
VULNERABLE BUSINESS

• China is losing its low costs advantage and business that are particularly labor sensitive will shift further inward (westward) or to low cost producers like Vietnam, India

• High technology businesses will replace low labor costs early entries particularly in South China (toys and footwear)
  – Electronics, medical, automotive and advanced materials some of the targeted industries to grow

• Driven by incentives from local governments

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
BRANDING

• Western brands can have high value
  – Acquisition of western brands by Asian companies
• Branding successful in developing quality perception in China
• Increased use of product/price/value tier separation
  – Bayer: Texin, Desmopan, and Utechellan
  – Exxon Mobil: Santoprene, Exxon Mobil TPV, use of masterbatch

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
GLOBAL BUSINESSES: GETTING CLOSER TO THE MARKET

– Electrolux
  Global Plastics purchasing in Shanghai

– IBM
  Corporate Purchasing in Guangzhou

– Bayer
  TPU Global Business relocated to Hong Kong

– Dow
  Footwear Solutions market facing business headquartered in Hong Kong

– Lyondell Basell
  Advanced Polymer Systems relocated global advanced polypropylene resins and compounds business to Hong Kong

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
CORPORATE STRATEGIES IN CHINA

• The global companies: Chasing the “export” truck
  – Sabic Innovative, GLS, RTP, Kraiburg, A Schulman
• Extending penetration with global businesses to “glocal” tier business
  – Dow, Exxon Mobil (Santoprene), PolyOne
• Acquired domestic position to combine with global products
  – Colgate Palmolive (San Xiao), Coperion (Nanjing Keiya), Bayer (Uretech), Coca Cola (Huiyuan Juice)
• Domestic Chinese companies with quality/performance to begin to challenge the imports as fabricators look to localize raw materials:
  – Polymax, Sunstar, Hotai, Sanpo, Dawn
• JV’s large risk
  – Control/Cultural differences major liability
  – NZ Fontera JV with San Lu

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
STRATEGIES FOR SUCCESS

– Understand tiering and target the proper quality/performance best suited to your skills and capabilities for optimum profit
  • Where do you fit
    – Assessment and Analysis
    – Strategy: Where do you want to be?
    – What is your footprint?
    – What should you look at strategically for a next market, next capital expansion?
  • How do you achieve the required changes?
    – Organic
    – Acquisition, jv, technology acquisition??

– Understand the dynamic nature of quality, evolving steadily higher over next few years

– National Strategy:
  • Industry consolidation is reasonable expectation
    – Increase reach of successful compounding operations
    – Increase probability of equipment diversification
    – Increased database for product development formulations
  • Target industries that will not be subject to relocation due to lower labor costs

– Branding
  • Keep the value of a quality brand

– Getting close to the market
  • Speed
  • Relationships

SOURCE: ROBERT ELLER ASSOCIATES LLC, 2008
Thank You!

Robert Eller Associates, Inc.
CONSULTANTS TO THE PLASTICS AND RUBBER INDUSTRIES