CRACKING THE ORGANIZATIONAL CODE FOR GROWTH IN THE CHEMICALS INDUSTRY
SOCIETE DE CHIMIE INDUSTRIELLE

Annual Meeting - December 18th, 2013, The Yale Club, NYC

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Mr. Andrew Hanff, P.Eng., OLIVER WYMAN
About Us

Dr. Joachim Krotz
Partner

• Leads the Oliver Wyman Chemical practice
• Former CFO of the German chemical group SKW Trostberg AG (today part of the BASF Construction Chemicals division)
• Focuses mainly on holistic programs for corporate development (strategy definition and realization), corporate performance (operational excellence) and restructuring

Andrew Hanff, P.Eng.
Associate Partner

• Co-leads the N.A. Organization Transformation practice
• Focuses on strategy definition, organization design, operations improvement and business unit effectiveness
• Multi sector asset-intensive industrial experience (e.g. chemicals, plastics, mining, utilities)
• Leads the “organize for growth” initiative within the banking sector
Oliver Wyman is a global management consulting firm that combines deep industry expertise with horizontal capabilities

- Revenue 2012: US$12 BN
- Staff: 53,000
- Clients in more than 100 countries
- Listed on the New York Stock Exchange

<table>
<thead>
<tr>
<th>Oliver Wyman Group</th>
<th>Marsh Inc. Risk and Insurance</th>
<th>Guy Carpenter Re-Insurance Advisors</th>
<th>Mercer Human Capital</th>
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<tbody>
<tr>
<td><strong>Industry knowledge</strong></td>
<td><strong>Capabilities</strong></td>
<td><strong>Presence</strong></td>
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<td>More than 40 years of experience in consulting with leading companies in following industries</td>
<td>Broad expertise in functional areas</td>
<td>US$ 1.5 BN revenues in 2012 Staff of 3,500 in 50 offices across 25 countries, e.g.</td>
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<td>• Automotive</td>
<td>• Strategy &amp; Growth</td>
<td>• Abu Dhabi</td>
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<td>• Aviation, Aerospace &amp; Defence</td>
<td>• Corporate Finance and Restructuring</td>
<td>• Atlanta</td>
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<td>• Chemicals</td>
<td>• Organization Transformation</td>
<td>• Bangalore</td>
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<td>• Communication, Media &amp; Technology</td>
<td>• Marketing &amp; Sales</td>
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<td>• Energy</td>
<td>• Mergers &amp; Acquisitions, Capital Markets</td>
<td>• Beijing</td>
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<td>• Financial Services</td>
<td>• Efficiency, Restructuring &amp; Lean Management</td>
<td>• Berlin</td>
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<td>• Health &amp; Life Sciences</td>
<td>• Procurement &amp; Supply Chain</td>
<td>• Boston</td>
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<td>• Industrial Products</td>
<td>• Intellectual Property</td>
<td>• Chicago</td>
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<td>• Retail &amp; Consumer Products</td>
<td>• Transfer Pricing</td>
<td>• Columbus</td>
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<td>• Surface Transportation</td>
<td>• Strategic IT &amp; Operations</td>
<td>• Dallas</td>
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<td>• Travel and Leisure</td>
<td>• Risk Management</td>
<td>• Detroit</td>
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Agenda

1. Context of the study and our presentation today
2. Summary of outcomes and supporting elements
3. A few takeaways to think about
4. Finding out more
Context of the study and our presentation today
There are distinct geographic realities within the chemicals space. American firms are the ones to watch in 2014, while Europeans are increasingly lagging behind.

USA
Catching up

- Local auto industry demand positive and a strong factor supporting the industry
- Shale gas boom is also a growth driver, with recoverable US reserves estimated at 20 trillion cubic meters and a cost 3x inferior to world average.
- Strong demand will increase price and margin levels, but market is not without risk, given potential for over-capacity resulting from large investments in basic chemicals during last five years
- Credit quality expected to stay healthy, supported by recovery

Asia
At full volume

- Core of the industry has shifted to Asia
- Almost 50% of global sales
- Average 3% growth predicted
- With the home-field advantage, Asian players positioned to own 2/3 by 2030
- Driven by pulp production, automotive, and construction

Europe
Lagging behind

- High costs and eroding margins
- Insufficient ability to invest in new facilities and production
- Result will be that they lag behind in the long run

Value migration will be an ever-present reality in the industry.
Challenges in the chemical industry
Three main types of organizational challenges have been identified

Firms must be able to satisfy shifting demands…

- Migrating from being a product- to a solution- and service-provider
- Implementing customer-oriented processes
- Tailoring customer-interaction models and channels
- Expanding geographical footprint of clients

They need to acquire new capabilities…

- Designing alternative organizational models to address new growth opportunities
- Developing a growth-nurturing culture
- Achieving the right power and resource distribution between business lines, regions, and the corporate center
- Putting in place the right organizational and management models in emerging countries

…and ensure the delivery of high performance

- Preparing for the future while delivering short-term results
- Risk mitigation
- Shareholder revenue and profit
- Customer satisfaction
- Employee engagement
Individual firm revenue vs. industry average CAGR

Growth averages are very differentiated by industry

There are ‘stars’ in any industry that consistently beat their sector’s average

Source: Bloomberg, Oliver Wyman proprietary analysis
Should growth or efficiency be pursued within the chemicals space?
73% of firms that beat average EBITDA growth over the long-term did so by pursuing a growth vs. efficiency play

Revenue growth (x-axis) vs. EBITDA growth (y-axis)
In CAGR%, corresponding median as white lines dividing the matrix
Market capitalization performance is highly correlated to growth…
… with companies that show highly profitable growth outperforming the market capitalization performance of their competitors.

**Market Capitalization**
CAGR in %, 2009-2011
Root causes of stalling growth
The outline of the external perspective *Stall Points* by Matthew S. Olson of the Corporate Executive Board

Root causes of stalling growth
A partial list of elements

<table>
<thead>
<tr>
<th>External factors outside management’s control (13%)</th>
<th>“Pure” strategic factors (41%)</th>
<th>Hybrid factors (29%)</th>
<th>“Pure” organizational factors (17%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic downturn</td>
<td>Premium position captivity by competitor(s)</td>
<td>Adjacencies failures</td>
<td>Organization design</td>
</tr>
<tr>
<td>National labor inflexibility</td>
<td>Premature core abandonment</td>
<td>Innovation management breakdown</td>
<td>Capabilities and skills gaps</td>
</tr>
<tr>
<td>Regulatory actions</td>
<td>Key customer dependencies</td>
<td>Failed acquisitions and expansions</td>
<td>Flawed decision-making structure</td>
</tr>
<tr>
<td>Geopolitical context</td>
<td>Voluntary growth slow down</td>
<td>Excessive strategic diffusion / conglomerations</td>
<td>Talent bench shortfall</td>
</tr>
</tbody>
</table>

- Root causes are fairly evenly distributed between strategic and hybrid / organizational factors
- Organizational deficiencies have the double effect of also inhibiting the firm’s ability to respond to strategic factors impacting growth or adapt adequately in the face of negative external environments
Some facts regarding the study
Based upon a broad dataset, key organizational findings and insights for promoting sustainable growth were uncovered.

Methodology

• Quantitative aspects
  – Compilation and review of companies’ revenue, EBITDA and market capitalization growth over a 6 year time period
  – Segmentation of firms into the different performance categories

• Qualitative aspects
  – Investigation of companies’ organizational practices at different levels within the corporate structure
  – Comparison of observed practices across the different performance levels
  – Deduction of focus areas and best practices

Participants

• 477 participants from a diverse set of major chemical companies
• 2/3 of respondents at the level of General Manager or above
• Coverage of 20 segments within the chemical industry
• Geographical location from around the globe, with 42% headquartered in Europe
• Average revenues of 7.7 billion USD in 2011

Key areas investigated

• Strategic focus
• Organization & processes
• Culture & talent
• Innovation
• Acquisitions
Summary of outcomes and supporting elements
Strategic focus
The path chosen to achieve growth

Growth paths
In % of total

Main insights

• Higher focus on growth as the objective
• One third of growth originates from adjacent and new businesses
• Partnerships are leveraged twice as much as acquisitions
• 70% consider that significant changes to the strategy will be required in the near future

Source: Oliver Wyman-ICIS joint study, August 2013

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Achieving customer-centricity through an aligned sales & marketing org

The organization to support the transformation towards customer-centricity has to balance five building blocks and five enablers successfully.
Top-down greenfield design – target P&L structure and six building blocks

For each of the six building blocks client’s greenfield will have clear targets closely linked with a target P&L with 13-15% EBITDA (coming from 5%)

### Target P&L structure

- **100%** Turnover
- **48-52%** Material
- **14-18%** Other COGS
- **2-3%** R&D expenses
- **7-9%** Selling expenses
- **4-6%** General & admin expenses

### Building Block along Value Chain

1. **Profitable customer & product portfolio**
   - Focus on **premium chemicals segment**, eliminate low-margin products and customers
   - Serve **selected global automotive OEMs, tier 1&2 suppliers**

2. **Customer-centric GTM approach with supporting sales & marketing**
   - Act as **custom solution provider** or **value chain integrator**
   - Establish **global key accounts** with **regional support**
   - Establish centers of excellence for defined functions

3. **Customer-focused application engineering**
   - Establish **dedicated** network of **resident engineers** supporting OEM along **all steps of product process**
   - Establish **joint-labs** with OEMs and other partners where suitable

4. **Lean, agile and scalable operations footprint**
   - Establish **central management system** as production and outsourcing approach
   - **Disaggregate production steps** to enable hub and spoke approach with **scalable capacities**
   - Manage **distribution to OEMs** as core competence
   - Use group **integrated supply-chain** for sourcing benefits

5. **Focused identification & innovation approach**
   - Establish **end-customer scouting** to provide deep insights
   - Focus on **quality enhancing** and **cost per unit reducing** product and process **innovations**
   - **Collaborate** with dedicated external partners in a **R&D network** with **centers of excellence**

6. **Lean and agile support functions**
   - Only establish **core support functions** with management impact such as **Controlling**
   - Establish **shared/ corporate functions** for accounting, treasury, HR, and IT
Strategic design of the organization
How are foci of the front and back-offices distributed?

Distribution of key activities to back and front office
In %

**Back Office**
- Product services: 45%
- Customer segment: 15%
- Geography: 31%
- Channels: 8%
- Other: 1%

**Front Office**
- Product services: 58%
- Customer segment: 24%
- Geography: 11%
- Channels: 5%
- Other: 2%

**Main insights**
- Sales and marketing tend to be integrated
- Front offices are mainly focused on products and services, as well as customer segmentation
- Geographic delivery is handled to a greater degree in the back-office
- Decentralized purchasing, centralized logistics and distribution
- Accountabilities are well-defined and pushed down throughout the organization

Source: Oliver Wyman- ICIS joint study, August 2013
Greenfield design – target customer interaction model
To ensure efficient client interactions, the GTM approach will focus more on being a customized solution provider or a value chain integrator

<table>
<thead>
<tr>
<th>Trader / transactional supplier</th>
<th>Lean / reliable basics</th>
<th>Standard package provider</th>
<th>Product / process innovator</th>
<th>Customized solutions provider</th>
<th>Value chain integrator</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Cost Development" /></td>
<td><img src="image" alt="Lean Reliability" /></td>
<td><img src="image" alt="Standard Performance Catalog" /></td>
<td><img src="image" alt="Product Process Innovation" /></td>
<td><img src="image" alt="Customized Solutions Provider" /></td>
<td><img src="image" alt="Value Chain Integrator" /></td>
</tr>
</tbody>
</table>

- Numerous anonymous or shallow buyer-supplier relationships
- Spot market behaviour/ index price exists
- Trusted buyer-supplier relationships
- Supply reliability is important buying factor
- Customers need certain breadth of offering but cannot pay for complete customization
- Customers can configure own packages
- Customer interested in superior performance
- High spending in R&D required to fulfil market needs
- Customer willing to partner to develop solution
- Customers ask for customization to fulfil specific needs
- Customer open to shift parts of own value chain
- Substantial transaction cost and risk reduction seen by customer

Each of these require different organizational elements and capabilities to best deliver on the product, service, pricing, channel and branding requirements
Greenfield design – footprint optimization
To meet local needs and leverage maximum scalability, very often a hub and spoke approach is suggested

- One product / product line is produced at one site to fulfill global demand
- Little exchange of goods and information

- Maximizes economies of scale and scope for each production step/process step
- Allows for balancing of capacities

- Suitable for companies with high depth of value add

- Demand from all prime product facilities within region steered to one facility for production and assembly
- Provides for closeness to markets
- Improves scale effects
- Suitable for lower sensitivity to demand fluctuation

- High closeness to markets
- Suitable for market specific production with low value-density or high delivery standards

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Creating a market-oriented organizational design

Market requirements drive the organizational design, with large companies having to develop the capabilities to manage several commercial situations simultaneously.

Global Accounts: centrally managed and dedicated sales staff

Regional Accounts: mix of centrally managed and dedicated sales staff, and locally managed sales force

Local Accounts: managed by local sales organization

Appropriately managing the global / local balance has significant organizational implications
Innovation
A view on the mechanisms used to foster disruptive innovation

Mechanisms to foster disruptive innovation
In % of total respondents

- Open innovation is a relatively common practice across all segments
- There is a low-level of confidence that in-house disruptive innovation can be successful
- Spin-offs are a relatively important component of the innovation portfolio
- 24% of the total innovation portfolio is expected to produce results in the current year

Source: Oliver Wyman-ICIS joint study, August 2013
Acquisitions
What are the main rationale for acquisitions?

<table>
<thead>
<tr>
<th>Acquisition rationales</th>
<th># of selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaching new customer groups</td>
<td>33</td>
</tr>
<tr>
<td>Product diversification</td>
<td>67</td>
</tr>
<tr>
<td>Filling in missing capabilities</td>
<td>45</td>
</tr>
<tr>
<td>Expanding distribution network</td>
<td>44</td>
</tr>
<tr>
<td>Acquiring new intellectual capital</td>
<td>28</td>
</tr>
<tr>
<td>Protecting against competitors</td>
<td>28</td>
</tr>
</tbody>
</table>

Main insights

- Accessing new customer groups, product diversification and building missing capabilities are the prime drivers.
- Integration problems resulting from cultural differences are one of the key root causes for failure.

Source: Oliver Wyman- ICIS joint study, August 2013
Valuations on the rise – average enterprise value (EV/EBITDA) multiple

Transaction multiples are on the rise, with strategic buyers tending to have an advantage over their private equity counterparts as they can achieve more synergies and thus pay a higher price.

**Commodity chemicals**

<table>
<thead>
<tr>
<th>Year</th>
<th>EV/EBITDA Multiple</th>
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<tbody>
<tr>
<td>2004</td>
<td>6.8</td>
</tr>
<tr>
<td>2008</td>
<td>6.6</td>
</tr>
<tr>
<td>2009</td>
<td>6.1</td>
</tr>
<tr>
<td>2010</td>
<td>7.0 - 8.0¹</td>
</tr>
<tr>
<td>2011+</td>
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**Specialties chemicals**

<table>
<thead>
<tr>
<th>Year</th>
<th>EV/EBITDA Multiple</th>
</tr>
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<tbody>
<tr>
<td>2004</td>
<td>9.1</td>
</tr>
<tr>
<td>2008</td>
<td>7.3</td>
</tr>
<tr>
<td>2009</td>
<td>9.5</td>
</tr>
<tr>
<td>2010</td>
<td>10.5 - 12.0¹</td>
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<tr>
<td>2011+</td>
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</table>

**Transaction rationale**

- Synergies/cost savings
- Market leadership
- Enhance entry barriers for smaller, less sophisticated players

**Results**

- Increasing market potential of specialties chemicals attracts global players, as well as financially strong Chinese and Middle East investors

1. The acquisition of SÜDCHEMIE by CLARIANT has a multiple of 10.5 times 2010 EBITDA
Approaches to organization transformation
Occurrence of major transformation journeys

Time since last major transformation
% of the total

- Less than a year ago: 34%
- Between 1 and 3 years: 32%
- Between 3 and 5 years: 13%
- More than 5 years ago: 21%

Key observations

- Two thirds of companies most recently re-organized less than 3 years ago.
- High performers continuously adjust their structure and question their effectiveness more often than low performers.
- High performers reorganize to align on new strategies and increase effectiveness.
- Poor performers seem to have experienced an enduring need for transformation due to merger or divestment consequences.

Source: Oliver Wyman-ICIS joint study, August 2013
3  A few takeaways to think about
Organization transformation
Possible reasons for failure during the transformation journey

**Weakness in setting clear and shared objectives for the transformation**

**Examples**
- Unclear objectives, goals and end state definition
  - Inability to associate the change with clear business and strategic drivers
- Absence of continuing Board or CEO commitment and support
- No robust and compelling case for change demonstrating that the status quo is not an option

**Examples**
- “Copy/Paste” emulation of organizational blueprints from other entities - one size fits all syndrome
- Over emphasis on the structure with inadequate consideration of capabilities or soft aspects
- Inconsistencies between governance and decision making attributes and the organizational architecture
  - Failure to consciously steer the required culture, behaviors and talent development

**Weakness in defining the target organization system**

**Examples**
- Over estimation of the level of senior team alignment
- Unclear accountabilities between business leaders and the transformation project team
  - Insufficient understanding of new operating models by middle management and individual contributors
  - Failure to anticipate and manage responses and behaviors that derail progress

**Weakness in engaging stakeholders and overcoming resistance**

**Examples**
- Design considerations as the end point of the overall exercise
- Under estimation of the resources and effort required to manage the transition
- Lack of change monitoring/early warning mechanisms indicating deviations and risks
- Inadequate follow-through and accountability surrounding execution

**Weakness in planning and managing for excellence in execution**

These interrelated risks must be continuously anticipated and intentionally managed

Source: Oliver Wyman
A few takeaways when planning the journey for your chemicals organization

<table>
<thead>
<tr>
<th>Take away</th>
<th>Features</th>
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</thead>
<tbody>
<tr>
<td><strong>1</strong> Do your homework</td>
<td>• Start with a long term strategy, communicate it to the organization and get understanding and buy-in</td>
</tr>
</tbody>
</table>
| **2** Push down accountabilities | • Don’t create global structures for the sake of it  
• Be close to your customers |
| **3** Adopt customer interaction models adapted to your business | • Adjust to market segments and customer requirements  
• Different interaction models might exist within the same BU |
| **4** Adapt top down and bottom-up processes | • Integrate the management vision into day-to-day operations and take into account local constraints in setting the vision |
| **5** Adjust the footprint to match your business model | • Don’t build a ‘worldwide’ plant if you need to be close to your customers and change formulations on request (in this case the hub and spoke approach might be more successful) |
| **6** Think partnerships | • Often prove more efficient than acquisitions and definitely boosts innovation |
Finding out more
To learn more about the study, specific results and how you can get involved

Press Release - Dedicated article
ICIS Chemical Business
15 – 28 July 2013

Upcoming global report
- Full survey results
- Customized for your company
- Oliver Wyman point of view

A dedicated webpage
http://www.oliverwyman.com/6006

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