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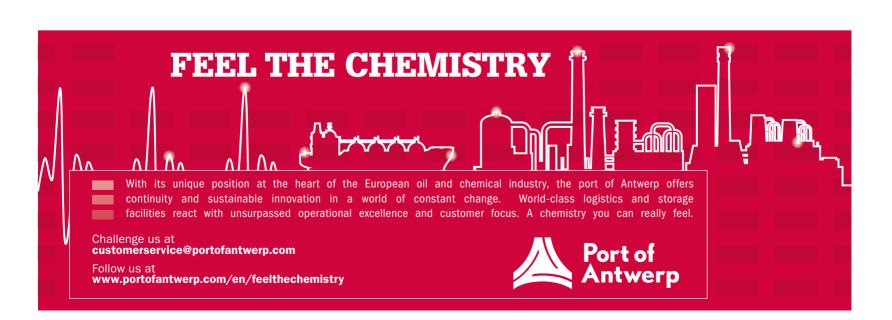
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U-Turn in the Supply Chain

Customers Set the Pace for Fundamental Changes in the Business Sector

Industry 4.0, Big Data, SMAC (social, mobile, analytics and cloud technologies) — these buzzwords all point to one thing: the digitalization trend. This development means fundamental changes for companies in virtually all industries, since digitalization is disruptive in nature. It will gradually turn the processes of entire business sectors upside down.

These buzzwords stand not only for new technologies, but also for new contents, new mindsets and new opportunities — as well as the need to adapt quickly. Previous developments in IT only affected certain divisions of companies, or at most entire companies. Digitalization, on the other hand, concerns entire value chains.

After all, it is in the course of linking all participants in a value-added process to one another so that major flows of information (including those between machines or logistics facilities) largely take place automatically, initiating the relevant flows of goods. A refrigerator that automatically reorders its contents from a delivery service is just one simple example of this.

One advantage of such automated procedures is that they speed up processes enormously. For instance,

if the data on the customer's requirements is generated automatically and forwarded to the supplier in real time, it drastically reduces the ordering time. However, this development will only become effective once the suppliers have a technical infrastructure that expedites order handling in a similar manner.

New Business Models with Digitalization

The comprehensive networking affects the internal processes of the companies involved as well as the organization of their external relations. These include customer-supplier relations as well as relationships with external cooperation partners who work alongside the actual value chain (ecosystem). Ultimately, digitalization

will lead to entirely new business models — many companies will be reinventing themselves and will have to find new roles in their value chain. The challenges this poses are tied in closely with the opportunities it offers.

And this holds just as true for companies in the chemical industry. They will not be able to elude the trend toward increased flexibility, shorter reaction times and expanded services. The idea that customers and their needs will become the crux of corporate activity might take some time getting used to for many in the industry.

After all, this objective means turning the usual train of thought all the way around. It used to be customary for customers to base their choices on the offered products and on the product-fixated organizational structure of their chemical suppliers. While searching for a solution, customers would then contact the department of the chemical company they considered responsible for the matter, where they were generally well-served, from consultation to collective product development.

If multiple product areas came into question, customers would receive more information from the



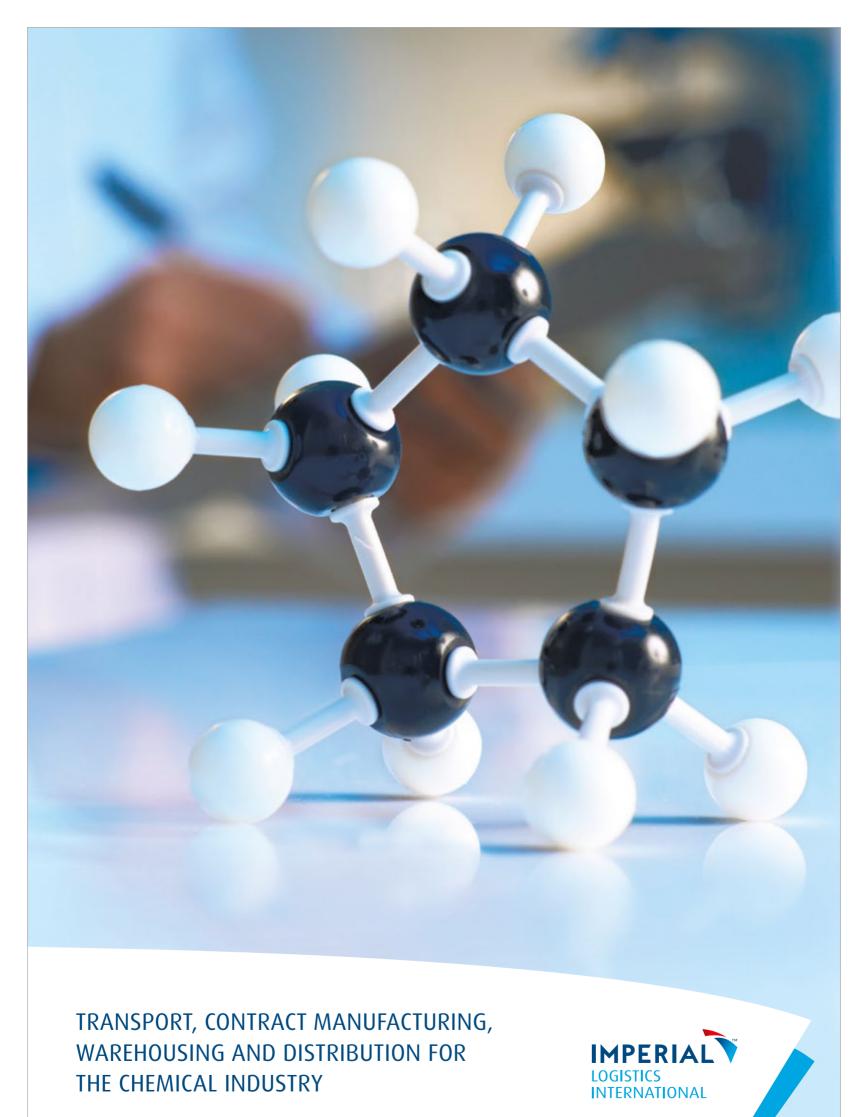
Dr. Frank Jenner, Ernst & Young

contact points in charge, which they would consult on their own. The strict departmental thinking has softened up a bit in the chemical industry since then. After all, its clientele is already increasingly demanding complete and comprehensive solutions — and receiving them.

Focus on Specific Customer Requirements

But digitalization makes it possible to take another big step, a U-turn in manufacturer-customer relations. The future process will no longer be from in-house production to the customer, but the other way around: from customers and their specific individual requirements to the chemicals supplier — which is actually normal in the business-to-customer field. This





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means that today's business models will transform away from the familiar product-centric approaches toward complete customer-centricities. This is where distinct, customer-specific system solutions take the place of individual products.

And this transformation entails major restructuring in the companies. After all, they will have to radically readjust their usual value chains. The keyword here is integration in two directions. Horizontal integration should tie in the customers, suppliers and internal company divisions within the supply chain more closely with one another than before.

Vertical integration, on the other hand, has the one goal of making the boundaries between the supplier's product segments more porous. The other goal is to link the functional divisions, from sales planning to detailed production planning and the process control system, to one another in order to be able to react to customer requirements more flexibly and comprehensively.

Since the division of labor between supplier and customer must also be reshaped in the course of this restructuring, new opportunities may also appear. One such example would be if it becomes possible to tie product delivery (which is already com-



bined in versatile ways) in with additional value-added services.

"Customers 3.0"

Digitalization makes it possible to put the customer in the focus of all business activities. But the drive to do so comes from customers themselves. Their market is pushing them to individualize their products more and launch new products more and more quickly. This increasingly forces them to focus their management attention entirely on their actual businesses. They're no longer interested in their suppliers' organization in product segments; instead, what they want is a single contact point to address questions and problems.

Industry teams that transcend functions and divisions are a good way to meet this requirement. Their members present all responsibilities

"Development will only become effective once the suppliers have a technical infrastructure."

that are important to the customer, from product development to process and application expertise and all the way to business administration. They

provide customer-specific system solutions, products and services in direct contact with the customer.

The chemicals company needs interdivisional planning in order to make sure the technical background works. This is to ensure that the components from multiple divisions are integrated into a complete solution in a timely fashion and bundled together into the package ordered. Such components may include chemical products as well as services such as collective product or application development. External partners of the ecosystem can also be included in such processes.

But customer focus also means getting to know "customers 3.0" better. Digitalization can help with this, too. The use of Big Data and analytical approaches allows suppliers of the future to get an idea of customers' future requirements and adjust to them based on market developments and the individual behavior of their clientele. The oft-cited algorithms make this possible as well.

Dr. Frank Jenner, managing partner, Global Chemical Industry leader. Ernst & Young GmbH, Mannheim, Germany

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Chemtrade Completes Canexus Buy

Chemtrade Logistics has completed its acquisition of chlor-alkali and sodium chlorate producer Canexus for 900 million Canadian dollars. The deal was originally agreed last December.

The acquisition has added sodium chlorate, caustic soda, chlorine and hydrochloric acid to Chemtrade's portfolio. "The Canexus businesses are an excellent strategic fit with Chemtrade's existing operations, adding significant size, scale and diversity to our product and service platform," said CEO Mark Davis. "We are now one of the largest sodium chlorate suppliers in North America and have diversified our product portfolio with the addition of chlor-alkali products. In addition, our geographic reach and diversity is enhanced with operations in Brazil," he noted. (eb, rk)

IMCD Buys Turkey's Feza Kimya

IMCD has acquired Turkey's Feza Kimya, boosting the Dutch specialty chemical distributor's existing operations in the country. Financial details were not disclosed.

Feza Kimya is one of Turkey's leading players in the technical sales, marketing and distribution of specialty chemicals, selling into the coatings, plastics, rubber, lubricants and detergents markets. Based in Istan-

bul, the company has 23 employees and posted revenues of €8 million in

Gokhan Oran, managing director of IMCD Turkey, said Feza Kimya is an excellent fit and will allow IMCD to establish a market-leading organization for the Turkish coatings industry as well as providing a platform to build a local application laboratory dedicated to coatings. (eb, rk)

Maroon Group Buys Lincoln Fine Ingredients

Maroon Group has acquired Lincoln Fine Ingredients, a specialty chemicals distributor based in Lincoln, Rhode Island, USA, serving the personal care, cosmetic, food & beverage, pharmaceutical and household/industrial markets. Financial details of the transaction were not disclosed.

Mark Reichard, president and CEO of Maroon, said the deal represents the group's first foray into the personal care segment. Lincoln Fine Ingredients' management team will remain and continue to manage the business.

"We're gaining some real momentum having completed six acquisitions in less than three years, including companies operating in the CASE [coatings, adhesives, sealants and elastomers], plastics, specialty intermediates and CARE segments,' said Reichard. (eb, rk)

Nexeo Solutions to Acquire Mexico's Ultra Chem

Nexeo Solutions has agreed to acguire Mexican specialty chemicals distributor Ultra Chem for an undisclosed sum. Based in Mexico City, Ultra Chem represents major global producers both in Mexico and Latin America.

"Acquiring Ultra Chem is aligned with our strategic objectives and accomplishes two goals. It expands our overall specialty mix and extends our

chemical reach into Mexico," said David Bradley, president and CEO of Nexeo Solutions. "Ultra Chem is a strong cultural fit with complementary end markets and current margins that are immediately accretive."

The transaction, which is subject to the usual closing conditions and regulatory approvals, is expected to close during the second quarter of 2017. (eb, rk)

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It All Starts with Chemistry

The Chemical Industry is in Front of Every Supply Chain



Reviewing the list of the world's top chemical companies will confirm "the chemical industry touches all other industries." You will see the inventors of Aspirin, Teflon, Saran Wrap and Styrofoam products on this list. These companies deliver products that ultimately make up the wall next to you, your table, your car, your clothes, your smartphone, your medicine, the packaging of your food, as well as many of the food items themselves — you name it.

Many Dow Jones industrial average companies were around when Teddy Roosevelt was US president and Victoria was queen of the British Empire. In fact, the average DJIA company is 111 years old. The chemical industry is well-represented here, along with companies that basically helped invent the modern industrial age — and pioneered most of the modern production and supply-chain philosophies.

The required long-term capital investments, ramp-up times and utilization levels have driven these com-

panies to very high internal efficiency and deep expertise in automation and orchestration, with investments spanning well over 50 years. For their own production value chains, they are masters of efficiency and reliability. However, specifically on the systems side, the traditional IT approaches (monolithic, behind-thefirewall enterprise software modified by yearlong waterfall projects with armies of consultants) are struggling to keep up with the new global, multicompany, fast-paced reality of the market. According to an Accenture

survey, 57% of chemical companies believe that optimizing their supply chains is one of the biggest areas of opportunity — so developing digital supply-chain capabilities will be crucial

The End of the Vertically Integrated Company

Together with the commodities sector (mining, resources), the chemical industry can be perceived as one of the

"Industry 4.0 enables chemical companies to create a smart supply-chain network."

last industries with a complete endto-end value chain within the enterprise. Chemical companies buy the raw materials (or dig for them), re-



David Strauss, E2open

fine and modify them through many steps, put the results in a bottle, bag, drum, truck or bulk vessel, and ship them to the customer. The fundamental infrastructure required to execute these transformations has been built over a century, in a fully integrated fashion, on gigantic factory sites and across entire continents. An example is the European ethylene pipeline network.

As a result of consolidation, outsourcing, globalization and transformation, all stakeholders in today's chemical supply chain need to be interconnected, collaborate and have access to accurate, real-time information outside of just their own enterprises. And with shorter product life cycles and ever more demanding customers who are constantly looking for an even more scratch-resistant glass, even more complex medicine and even more sustainable cars, the need for visibility and agile supply chains is even more obvious.

Industry 4.0 brings together a host of technologies, including the Internet of Things, advanced analytics and robotics that enable chemical companies to create a smart supply-chain network and factories. It also explores new ways for information to create value: "We are doing a joint Industry 4.0 pilot," to "Tomorrow I will be able to scan a diseased plant and receive the corresponding cure the next day."

However, your customers (and sales team) expect you to plug this evolving network rapidly and seamlessly into your own production data networks. On-site enterprise resource planning (ERP) systems and legacy portals are not made to model a supply chain outside your own four walls—they are too slow to keep up with the pace of new and constantly updated information and are too expensive.

Relying on outdated approaches results in mostly single-tier visibility and provides incomplete collaboration support as well as limited support for traceability, planning, optimization and automation.

The growing consensus among experts is to leverage the power of cloud-based offerings and business networks to ensure you can exchange data, rapidly roll out new connections and business applications, and protect your internal ERP architecture road map from the noise and disruption of the outside world.

Five Things to Keep in Mind in Today's Digital World

In this changing chemical landscape, what can be done? Here are five tips that are important to remember as digitalization sweeps through the chemical industry:

□ Think in terms of information first, then technology. What is out there? Can you receive it regularly? Who else could benefit from it? How does it relate to others? The world is run on emails and Excel sheets — go find them, and identify the processes, connections and dependencies they represent. Then, look to integrate or migrate those to more robust, automated solutions.

- ☐ Your IT budget will never catch up with your M&A team. Forget about "one SAP." Focus on "one company."
- □ Leverage cloud-based offerings to support the many different customer processes and maturity variations. Trying to manage these using an ERP system is an unwinnable race, and it will just make your own architecture more complex and brittle.
- □ Whatever technology is there to stay, there will be more of it. Embrace the inevitable transformations. At worst it will make them less painful; at best you will gain control of your destiny.
- ☐ The quantity of data will increase, but human ability to process information will stay roughly the same. Find ways to turn raw data into actionable information through automation and machine-learning algorithms.

Companies that are slow to explore the opportunities of digitalization, specifically in supply chain, may find it hard to compete in an increasingly cost-competitive market.

David Strauss, director, Customer Solutions, E2open, Austin, Texas, USA

www.e2open.com

Marubeni Buys into Feed Additives Supplier Orffa

Japanese conglomerate Marubeni Corp has reached an agreement to take a 60% stake in Dutch feed additive distributor Orffa International Holding. Financial terms of the transaction were not disclosed.

Orffa sells a large number of feed additives, including Japanese products, to 60 countries worldwide. Its biggest market is Europe, which has a highly developed animal husbandry industry that prioritizes environmental protection and safety — a focus that Marubeni expects will become a global standard in the future.

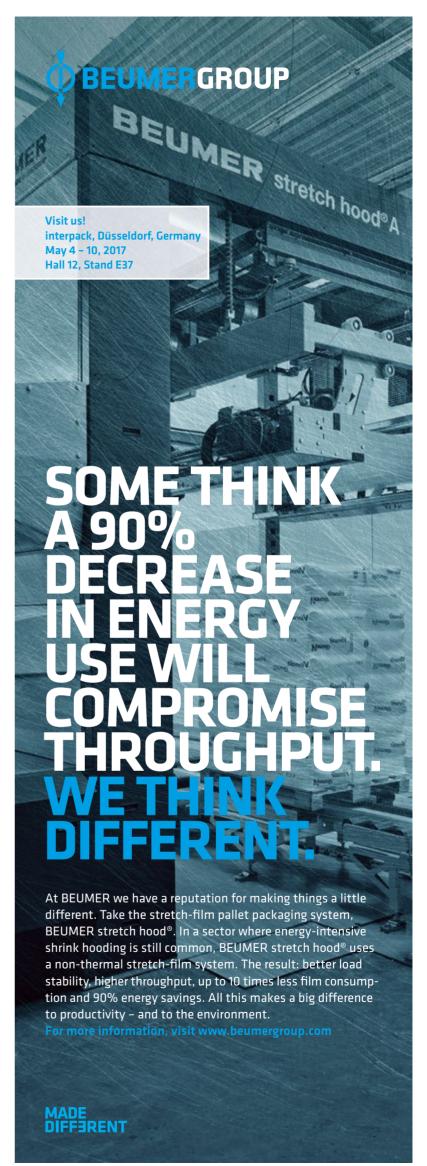
The Tokyo-headquartered group said it will support the global expansion of Orffa's business model, particularly in the Asian market, by using Marubeni's network of agriculture, animal husbandry and fisheries fields. (eb, rk)

Overlack Group Acquires Ceepal

The Overlack Group, a chemical distributor for commodities and specialties, acquired Belgian chemical distributor Ceepal. Headquartered in Germany, Overlack has more than 40 operations in 16 countries across Europe and reported annual sales of €645 million in 2016.

Belgium is a very important location in Europe and Ceepal with its po-

sition in Overpelt gives Overlack the opportunity to strengthen its presence in Europe. "We already have a very close network of clients and suppliers in the region due to our locations in Mönchengladbach, Düren and Eindhoven, but we see a lot more potential for our activities in this region," said Gunther van Baelen, managing director Benelux. (rk)





It Takes Two to Tango

Things to Keep in Mind as M&A Activity in Chemical Distribution Continues at High Rate

In the drive to reach growth objectives, or to maintain and enhance "critical mass", mergers & acquisitions (M&A) has been a theme for the chemical distribution industry for years. The industry leaders (by size and geographic reach) were all built through a series of such transactions. As the practice is further trickling down to the smaller and mid-sized company layer of the sector, and more distributors espouse external growth options, it is worthwhile to spend some time on a reflection of recent events in this context.

Building a Broader Geographic Base

In 2016 most of the M&A transactions in the chemical distribution space, which were announced or completed, again were placed in Europe or North America. On the buy side, it was the group of larger companies (with an annual turnover above €250 million), that was most active. Some companies have almost become "serial acquirers" doing a number of different transactions within a short time-period. Overall, the number of recorded transactions in 2016 is slightly below the peak, which we recorded for 2014.

A number of the transactions were in business activities "outside" the core industry of chemical distribution. For Brenntag this trend towards diversification meant that acquisitions were completed in the lubricants distribution industry around the globe. Deals were concluded in Singapore and the US. More recently, Brenntag has also invested in two service companies, one that provides pipeline testing and maintenance service and one that provides packaging services for small containers with chemical products. The other global diversified distributor, Univar made further investments in the area of environmental and/or maintenance services, particularly in the US.

When is the Next IPO Going to Come?

Last year, the long-time private equity sponsors of IMCD, funds advised by Bain Capital, have sold off a final tranche of 4.20 million shares to institutional investors at a price of €31.25 per share in a private place-

ment (March 2016), completing the exit from IMCD. After that last transaction, IMCD is now 100% owned by institutional and private investors.

Also in March 2016, the market experienced a sort of indirect IPO, when WL Ross Holdings Corp. announced that it was going to acquire chemicals and plastics distributor Nexeo from private equity firm TPG. Nexeo has since become a unit of WL Ross Holdings Corp. The group subsequently changed its name to Nexeo Solutions and is now being traded on Nasdaq.

The chemical distribution industry today has several listed companies, e.g. Brenntag (GE), DKSH (CH), Hawkins (US), IMCD (NL), Megachem (SG), Nexeo (US), and Univar (US). Many stakeholders and industry watchers are now waiting for the initial public offering (IPO) of Azelis. That company had made a big jump across the Atlantic with the establishment of



Günther Eberhard, DistriConsult



Jürgen Mohrhauer, DistriConsult

Azelis Americas, resulting from merging business activities in Canada and the U.S. into the acquired business of Koda Distribution Group. The group has recently only made some smaller add-on acquisitions, on both sides of the Atlantic, expanding geographic coverage or giving it a more balanced access to certain industry sectors. The big move is still ahead.

Suppliers Go for "One Size Fits All" Network Design

When suppliers of specialty chemicals are looking for distributors, their crucial selection criteria include market reach and capillarity, a complementary product portfolio (which is





often application specific), logistics capabilities, technical competence, project management skills, reporting systems and transparency, just to name a few. Increasingly the market reach, which a distributor is expected to have, is not limited to a country or group of neighboring countries. Instead, suppliers try to find and select distributors that can handle a whole continent such as Europe or a major economic area, such as ASEAN in Asia Pacific or Mercosur in Latin America.

The approach towards distribution channels, even by mid-size producers/principals, is increasingly moving away from the assembly of a whole portfolio of "local champions", towards partnering with a limited number of larger distribution groups. It is in a way a "one size fits all" approach to setting up channel network. Principals are trying to reduce the complexity of their indirect sales channel, without losing too much flexibility and at the same time maintaining relevance in the market. This is not always easy, as the attractive companies in the distribution space tend to have long-time relationships with large multinational producers. This puts smaller distributors under a certain growth pressure.

Size matters quite a lot, in the sense that attaining "critical mass" is needed. However, there are some limits to how far the consolidation can go. Potential conflicts between suppliers in a distributor enlarged by the combination of two businesses will have to be resolved or at least "tolerated". The former forces the losing principal to go elsewhere and often triggers (temporary) disruption that nobody likes, the latter is difficult to manage and very rarely practiced. When neither is possible, the potential for combining companies may be limited. The deal may not be imple-

At any rate, a lot of upfront work needs to be done to make M&A transactions work as conceived and plan-

Sell Side Considerations

When planning the sale of a distribution company, preparation may need to start a few years ahead of the actual "hot" process and a related transaction date. Based on our experience (and that of other advisors involved in this type of activity), we would suggest a few points worth considering upfront and well in advance:

- □ Take out real estate, as buyers often only have an interest in the "business", without too much "ballast"
- ☐ Divest/phase out non-core activities as focus will help
- □ Allow for time to distribute excess cash and prepare the sale
- ☐ Be informed and get real about valuations, not everybody feels the same emotional attachment to a company
- □ Take expert advice

Good advance preparation facilitates the transaction. It enhances and secures the value that can be realized.

Caveat Emptor

Many companies, in their recurring strategy development processes, do regularly talk about M&A being a pathway to growth. In our view potential buyers can increase their success rate with a few basic preparatory steps:



Azelis is a leading global provider of high-quality ingredients, with over 3000 customer concept formulations and an extensive network of laboratories and research centers. Our global focus is built upon a regional approach to creating formulations that meet specific local demands.

With an unrivalled product range from first class manufacturers we can deliver an outstanding value added service from market dedicated teams. Our technical expertise & application labs worldwide combined with a cutting edge supply chain solutions are setup to meet your tailored needs. Our local offices are located across EMEA. Asia Pacific and Americas.

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- ☐ Scan the market and be ready to move fast, when an opportunity arises and is presented to you
- ☐ Make your interest to be a potential buyer of businesses known
- □ Take expert advice
- □ Don't get carried away during the process in a bout of "deal fever" and try to avoid "bidding against yourself"

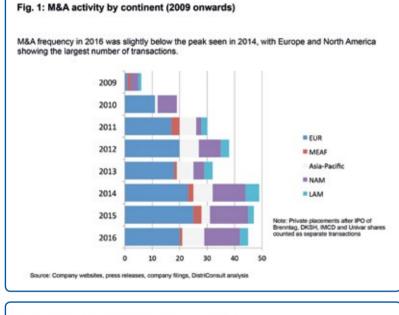
While M&A may be a key part of your strategy, accept that finding and buying a company is by definition somewhat opportunistic, as they say ... "it takes two to tango".

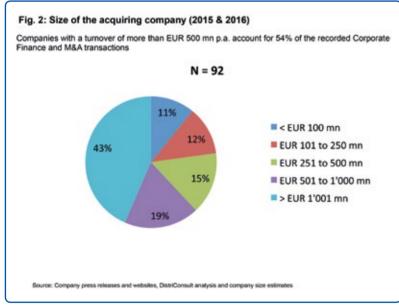


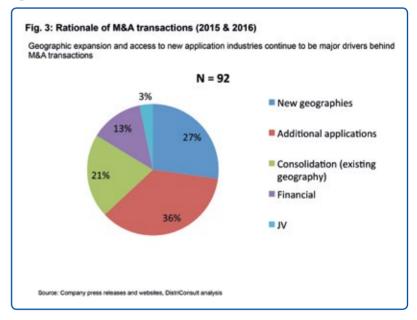
Once an M&A transaction is signed and closed, often the real work is about to start. Post-merger integration, or "PMI" as it's called in corporate finance circles, is the project phase that is often not given enough upfront consideration, and later on an appropriate level of top management attention. Even when product ranges are complementary and the price paid has been right, a lot of other things can still go wrong in a merger of two entities. Company cultures may be too far apart, people simply cannot get along with each other. Sometimes suppliers of the acquired company may exercise the right to terminate a distribution contract based on a "change of owner-ship" clause, they had put into many years ago, when it was negotiated and signed. Customers may feel that they have been neglected in the months leading up to the deal — and so on. The list of reasons for underperformance and shattered expectations can be long and diverse. A lot of value can be lost in the aftermath. It pays off to think about life "after the deal" in an early stage of the acquisition process. Happy hunting!

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Assessa Extends Distribution Relationship with Azelis

For its range of bioactive ingredients Assessa has expanded the distribution agreement with Azelis from Mar. 17 to include Australia and New Zealand.

Azelis has already been serving Lonza in France and Italy for more than ten years and in Turkey since 2015. The new mandate expands the existing relationship started in the UK and recently extended to include the Polish, Italian, French and Benelux markets.

Camiel Huisman, regional managing director Australia and New Zealand, comments: "The addition of the Assessa product range enhances our current portfolio and fills a niche area of strong interest to our clients. Azelis Australia and New Zealand can now offer a full range of high-performance bioactive ingredients, derived from sustainable botanical sources, and provide the technical formulation support targeted to our markets specific needs." (rk)

Songwon Enters Partnership with Biesterfeld Turkey

Songwon has named Biesterfeld Turkey as exclusive distributor for its range of stabilizers for PVC and other polymers. According to Songwon, the plastics industry in Turkey has shown great potential for growth in the past several years. After Germany, it is now ranked as the second-largest plastics processing country in Europe. Biesterfeld Turkey serves more than 2.000 customers in industries such as automotive, appliance, packaging and coatings. Songwon sees the agreement as

an important step to strengthening both its presence and relationships with customers in Turkey. "We're committed to continually enhancing our product availability and level of service for our customers. Partnering with Biesterfeld Turkey further strengthens our distribution network and is a significant step towards our aim of delivering solutions that exceed the expectations of our Turkish customers," says Paolo Arnaboldi, sales director Europe & India at Songwon. (rk)

Kuehne + Nagel Buys Two Pharma Logistics Firms

Kuehne + Nagel announced the acquisition of two specialised Pharma Logistics companies to further expand its capabilities.

In Turkey Kuehne + Nagel has entered into an agreement to acquire Zet Farma, the national market leader in pharma logistics. With 400 employees, the company, founded in 1992, manages 56,000 m² at four pharma grade warehouses in the metropolitan area of Istanbul. This transaction marks Kuehne + Nagel's entry in the fast growing Turkish pharma logistics market.

In Italy, Rome and Milano are key production areas for the high-end pharmaceutical industry. Here, Kuehne + Nagel expands its service scope by the acquisition of Ferlito Pharma Logistics. The company is a major player in pharma logistics, offering GxP compliant warehousing and forwarding services including local distribution.

Gianfranco Sgro, member of the management board of Kuehne + Nagel International, responsible for contract logistics: "The pharma logistics market is expected to significantly grow due to global demographic changes and increased consumer spending. It is one of the markets Kuehne + Nagel differentiates itself by operational excellence, global footprint and dedicated logistics infrastructure."

According to Kuehne + Nagel the two acquisitions underline both the company's global strategy to continuously grow in future proof industries and its focus on specialised, niche acquisitions.

The transaction in Turkey is subject to the approval by the relevant Turkish regulatory authorities and both transactions are subject to customary closing conditions. All parties agreed to not disclose the purchase price. (rk)

Port of Antwerp and Andernach Improve Link by Rail

The rail operator H&S Container Line is introducing an additional round trip between Andernach in Germany and the two container terminals in the Deurganck dock in the port of Antwerp.

H&S already operates on this route, but is raising the frequency to twice per week with financial support from Antwerp Port Authority. The support offered to H&S Container Line is the result of a Call for Proposals (CfP) launched in October last year by the Port Authority to attract projects for improving the rail connectivity between Antwerp on the one hand and the Rhine-Ruhr and Rhine-Main regions on the other.

The Rhine-Ruhr and Rhine-Main regions are among the most heavily industrialized in Germany, and thus also the largest generators of cargo. Antwerp is the nearest port to both of them, and so it is the natural gateway to their hinterland. In 2015 a total of

64 million t of freight was carried between Antwerp and Germany. Although the majority of the freight from the Rhine region found its way to Antwerp by water, a great deal of it still goes by road.

The Port Authority therefore issued a CfP to encourage intermodal operators to introduce a new rail shuttle or to upgrade an existing rail service. The projects selected by the Port Authority could count on limited financial support during a certain period of time. "A significant proportion of the cargo between Antwerp and the German hinterland will also have to be carried by rail in the future. As a port authority we want to support all projects that contribute to this essential modal shift," explained a spokesperson

To raise the frequency to two round trips per week H&S submitted a project with a request for financial support that met the conditions. (rk)





Going Digital

Chemical Distribution 4.0: a Big Step for a Sector Which Is both Mature and Conservative

In this digital era, in which suppliers, distributors, business partners and customers are each time more interconnected and linked to other networks around the world, the digitalization of the chemical supply chain remains both a challenge and a possibility for the chemical distribution industry.

Rising costs, increased global competition and lack of capacity to attack Millennial talent, mean that Chemical Distribution companies need urgently to look at new ways for profitable growth.

The digitalization of the Chemical Distribution Industry is a big step for a sector which is both mature and conservative, but which looks forward to developing business models that will enable closer interaction with business partners, and hence is increasingly looking to digital technologies as a way to better access custo-

A New Industrial Revolution

We can indeed talk about the beginning of a new industrial revolution which has the power to transform the sector, and enable the creation of new business models, which will lead to the creation of new products and services.

The chemical distribution market is ready for this digital age, and chemical distribution companies are working hard to live up to the challenge. With an extremely mobile work force and hence with a strong reliance on technology, such as smartphones and online tools, there is a great desire to enable convenient services to a portfolio of customers who are changing their purchasing habits. Sellers now have less time to influence their purchase, with customers increasing the time they spend obtaining solutions for themselves, including information on the product and up-to-date-quotes online, and spending less time on the face-to-face negotiation and the actual purchase.

Some customers still do require on-site support, but digitalization offers a model to reach the market with a lower cost, and provides the opportunity to rethink the relationship with



Dr. Neville Prior, European Association of Chemical Distributors (FECC)

Faced with the new challenges of the market, chemical distribution companies are not only investing heavily in the development of digital tools, but also remain attentive to the legislative developments in the European policy context.

The European Commission considers digital technologies essential to increase European productivity, and estimates that the Digital Single Market could contribute €415 billion per





year to Europe's economy, creating opportunities for new start-ups and allow existing companies to grow and profit within a market of over 500 million people.

European Digital Single Market Strategy

The European Digital Single Market Strategy adopted in May 2015 is built on three pillars:

- □ Better access for consumers and businesses to digital goods and services across Europe. The Commission proposes rules to make cross-border e-commerce easier, enabling consumers to benefit from a wider range of rights and offers, and businesses to sell more easily to other EU countries. Rules to end unjustified geo-blocking and a reduction of the administrative burden businesses face from different VAT regimes are also under discussion.
- □ Creating the right conditions and a level playing field for digital networks and innovative services to flourish. The Commission is analyzing the role of online platforms (search engines, social media, app stores, etc.) in the market, including pricing policies, and aims to reinforce trust and security in digital services, notably concerning the handling of personal data. Building on the new General Data Protection Regulation 2016/679 of 27 April, 2016, the Commission will review the e-Privacy Directive 2002/58/EC. Cybersecurity in the area of technologies and solutions for online network security is being reinforced by the Directive (EU) 2016/1148.
- ☐ Maximizing the growth tential of the digital economy. The Commission will launch a European Cloud initiative covering certification of cloud services, and define priorities for standards and interoperability in areas critical to the Digital Single Market, such as e-health, transport planning or energy (smart metering).

A new e-government action plan will also connect business registers across Europe, and ensure businesses only have to communicate their data once to public administrations.

In their analysis of the evolution of the Digital Single Market Strategy two years on (November 2016), the European Commission estimates that 90% of all jobs will soon require digital skills. However, only 59% of Europeans can access 4G networks, and

52% of the cross-border purchases are blocked.

Chemical distribution companies embraced initially the digital transformation as it reduced costs, and are now exploring how it could provide

"The chemical distribution market is ready for this digital age."

bigger efficiencies in supply chain management which would lead to operational excellence and profitable growth.

FECC Annual Congress 2017

The European Association of Chemical Distributors (FECC) will focus its 2017 Annual Congress, held in Warsaw, Poland, 12-14 June 2017, on this digitalization. The FECC Congress 2017 will be a platform to exchange experiences among the Industry in the digital world, and provide inspiration to those who are considering how they could restructure their business model to face the challenges of today's competitive global market.

During the congress, consulting services and financial advisory firm Deloitte will analyze how data can be used to generate higher operational excellence and profitable growth. A key aspect in a scenario in which most of the customer time is spent on

product search and quoting activities, and an increasingly smaller percentage of customer time is actually spent to negotiating and purchasing.

UK chemical distributor Cornelius will exchange views on how to find value in the social media, which enable companies to reach a wider audience, attract new audiences, and most importantly engage with customers in a different way. For chemical distributors, as for other B2B companies, social media could become a cost-effective means to raise brand awareness, and boost sales.

Cybersecurity remains a challenge in the hyper-connected world when isolated systems and devices become fully integrated, and business should increase the protection measures to face eventual risks.

Strategy consulting firm Accenture will introduce the next generation of e-commerce in chemical distribution,

"Social media could become a cost-effective means to raise brand awareness, and boost sales."

and best practices of existing chemical distribution on-line platforms, corresponding to different business models like Kemgo and GoBuyChem. will be presented to facilitate an exchange of experiences when formulating a digital strategy aligned to the organizational objectives.

US Silicones specialist Dow Corning will explain its Xiameter business model experience which provides an online business model taking advantage of the integrated back-office applications, and standardized processes and services. While German distribution company Biesterfeld will share their experiences and views about the digitalization of the specialty chemicals supply chain.

In addition to digitalization, Circular Economy is another key trend in Chemical Distribution 4.0 and Safechem will explain their chemical leasing business model for a sustainable and innovative use of chemicals. This **CEFIC Responsible Care Awards 2016** winning business model has been successfully applied in sectors as different as surface cleaning, textile cleaning and asphalt analytics, and provides a close loop solution in which the chemical distribution industry plays a key role to unlock the potential of circular economy in the chemical supply chain.

The FECC Congress 2017 will deal with all these issues and support companies considering investing in digital tools to develop their business model, and eventually create new ones.

Dr. Neville Prior, president, European Association of Chemical Distributors (FECC), Brussels, Belgium

www.fecc.org





Digitalization — Challenges and Opportunities

How Can Distributors Capture the Opportunities and Mitigate the Risks of Digitalization?

Digitalization in chemicals and chemical distribution is the monetarization of data to significantly cut costs ("Operational Excellence") and to capture additional profitable growth areas ("New Business Models"). Will these digitalization trends be transformational or disruptive?

Bear those trends more challenges or opportunities for Chemical Distributors? Who will be the winners and losers among the Chemical Distributors? There are many questions that demand answers.

Digitalization — Transformational or Disruptive?

Since about 2010 all major chemical companies have started to launch digitalization projects. More than three quarters of those projects aim at cutting costs and achieving a next level of "Operational Excellence". Plants are run remotely, maintenance is increasingly done preventively and predictively, sensors and actors with data analytics are used to increase yields and selectivity in chemical processes, track-and-trace systems in-

crease supply chain efficiency and Enterprise Resource Planning (ERP)integration lowers administrative costs jointly for the producer and its large suppliers and customers. Robot Process Automation (RPA) is increasingly used to substitute repetitive. standardized tasks, which will ultimately result in a re-shoring of general and administrative tasks. Take for instance procurement: Invoice verification with or without purchase order, purchase order creation, maintenance of master data, intercompany reconciliation and netting, verification of tax ID numbers and creditor interaction, contract management, supplier payment authorization, creating reports and much more can be executed three times faster, much cheaper and most importantly much more accurately with RPA than doing those processes manually.

At the same time ERP systems are moving into the cloud, offering a new level of transparency and ad hoc information, that is increasingly needed to do better demand forecasts, have access to current business information and make better management decisions.

On the customer side digitalization leads more and more to a "dematerialization". The increasing functionality and performance of chemical products combined with a stagnating demand

> "Chemical companies move into the digital world step by step."

for materials in Western Europe leads to a declining demand for, often very different, chemical products. Some applications can be partly or fully digitalized (e.g. textile print instead of dyeing textiles, OLEDs instead of colored pigments, 3D print/additive manufacturing instead of central production).

Most of the trends which are driven by the chemical industry are transfor-



Dr. Wolfgang Falter, Deloitte

mational and chemical companies move into the digital world step by step. WIFI costs for an old, depreciated asset base, cyber security and data integrity concerns, missing vertical and horizontal integration and lack of standards are typical concerns that make digitalization at chemical companies transformational and not disruptive. However, the customer, consumer and regulatory driven trends are sometimes disruptive to the chemical and chemical distribution industries, like electric drive trains in cars, digital farming, individual self-medication, modular building constructions, and the changing demand in an increasingly circular economy. This disruption leads to winners and losers among the chemical and Chemical Distribution play-



ers, depending on their portfolio of products and solutions.

Digitalization — Challenges or Opportunities?

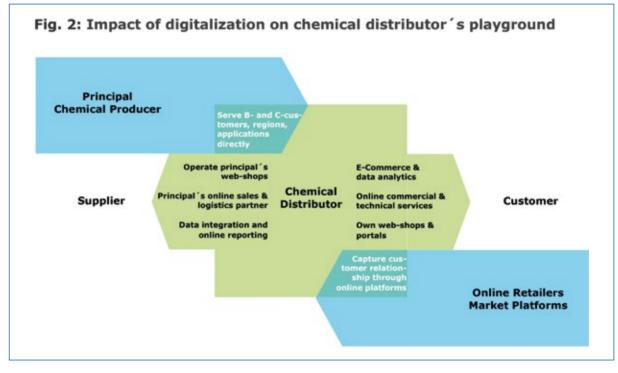
The digitalization challenge for a chemical distributor can be twofold:

- □ Forward integrating principals: Operational Excellence in supply chain & logistics as well as marketing & sales allows principals to effectively reach B- and C-customers, -regions and -application areas that they have previously handed over to chemical distributors. Track-andtrace systems, automation, and predictive demand forecasting as well as online ordering and order history, customized delivery, omni-channel customer access, e-commerce and teleservices (commercial and technical) can make at least some of the chemical distributor functionality and services obsolete.
- □ New online retailers capturing the customer relationship: Alibaba, Amazon Business, Ebay, as well as newly created chemical trading or market platforms (e.g. Bizongo, Comivo, Chembargains, ChemNet, Chemocart, HMX, Isuwang, Kemgo, Kinnek, Molbase, PolymerMarketplace) supported by significant investments of venture capital funds are currently exploring the opportunities to disrupt the chemical or chemical distributor relationship with their respective customers. A current Deloitte survey among more than 200 customers of a specialty chemicals distributor shows that online services are increasingly expected and requested by customers. As a surprise to us we learnt that 70% of customer's purchasing time is spent on product search and quotations (30% on product search, finding, and bundling and 40% on shopping history, regulatory and technical product information). Only 30% of customer time is spend on sample testing, negotiation, purchase and re-purchase.

New Digital challengers are focusing on exactly those 70% of customer time. They try to make product search and quoting easier, more convenient and more efficient.

Chemical distributors that have done their homework and built a strong position in the analogue world need not be afraid of digitalization, but should use it to run web shops and portals for their principals, move to online services and offer track-and-trace solutions. Those chemical distributors that do not





have a proprietary, complementary and full product portfolio in specialty chemicals or lack logistically advantaged local asset structures in bulk chemicals (tank farms, bulk storage, truck fleet) will probably further lose momentum and suffer. This is especially true for low value adding services, like agent, trading and drop shipping businesses as well as for large volume, standardized products and standardized terms & conditions. Many chemical distribution services, products and delivery terms and conditions are however customized and thus not easily substituted by standard offerings. This strong customization will give also smaller chemical distributors a good opportunity to live profitably with digitalization, as long as they fulfil those individual customer needs and serve the customers well.

Digitalization — Winners & Losers?

In summary digitalization brings transparency and agility that will accelerate the separation between well run, differentiated chemical distribution winners and less well run losers.

This digital divide will displace low value adding, standardized products and services of the latter. It will support those Chemical Distributors that have done their homework to build differentiating, profitable and sustainable principal and customer relationships and provide tailored services and solutions.

In order to stay a winner those companies need to complement their operating and business models by ecommerce, online services, and data analytics. The strong and big ones should attempt to control full customer contact and promote selected producers. The smaller ones should manage customer contacts on behalf of the respective principals. And the really small ones should continue to serve their customers with individualized services and integrated solutions to better fulfil their individual needs. This is how chemical distributors of all sizes can capture the opportunities and mitigate the risks of digitalization.

Dr. Wolfgang Falter, Global Chemicals & Specialty Materials sector leader, Deloitte, Duesseldorf, Germany

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Digitalization of the Chemical Supply Chain is both a Challenge and a Possibility

The digitalization of the chemical distribution industry seems to be a big step for a sector which is both mature and conservative. But, as Neville Prior, president of the European Association of Chemical Distributors (FECC) writes in his feature on page 14: "the chemical distribution market is ready for this digital age and [the sector] is increasingly looking to digital technologies as a way to better access customers." FECC has chosen the theme "Chemical Distribution 4.0" for their Annual Congress 2017, to be held in Warsaw,

Poland, in mid-June. Thus, we have asked experts to share with our readers their opinions on the impact of digitalization on the chemical value and supply chain.

Dr. Frank Jenner, Global Chemical Industry Leader with Ernst & Young, explains that "digitalization makes it possible to put the customer in the focus of all business activities."

Dr. Wolfgang Falter, Global Chemicals & Specialty Materials Sector Leader with Deloitte, predicts that "digitalization [...] will accelerate the separation between well-

run and differentiated chemical distribution winners and less well-run losers.

And David Strauss, Director Customer Solutions at E2open, provides "five tips that are important to remember as digitalization sweeps through the chemical industry.'

We wanted to know from spokespersons of leading chemical distribution companies, which risks and which chances for their organization could arise out of the digital transformation of the industry and how they are preparing for the digital age.

Their answers may reflect different strategies, but one thing holds good for all: focus on the chances and try to live up to the challenges. Because as one of the interviewees put it: "Digitalization is both a blessing and a curse."

Find out yourself if the chemical distribution market — as FECC president Neville Prior claims is ready for this digital age. Read here excerpts of what the company leaders have told us. You will find the complete statements online on http://bit.ly/cdl-opinions.

STATEMENTS

No One-Size-Fits-All Solution

"Digitalization is significantly enhancing the way DKSH interacts with its clients and customers. We are generating new customer leads through e-marketing tools, promoting products and service offerings based on specific needs generated from our CRM tools, and gaining a greater understanding of market trends through data analytics. We are capable of providing state-of-the-art customized digital reporting in real time

As a multibusiness company, we see that markets and industry segments are embracing digitalization at differing paces, so it would be impossible to conceive a one-size-fits-all solution to digitalization. We therefore believe in a more tailored approach for our B2B model while closely monitoring the developments in our units that are engaged in B2C.

As we look to continuously improve our efficiency, sales growth and competitiveness, utilizing e-sourcing solutions is high on our agenda. We develop solutions that digitize the transactional part of our busi- $\ensuremath{\mathsf{ness}}$ in line with the needs of our clients and customers — chemical

and ingredient manufacturers -, as they consider shifting parts of their distribution to digital channels. Key service offerings like formulation and registration will remain important differentiators in the value chain and will not easily be digitized.

So while we prepare for the fact that digitalization will impact the transactional level of our business, we embrace this development as it allows the distribution industry to become more cost efficient, allowing companies to focus their energy and investments on their core competencies.

'A Blessing and a Curse'

"Digitalization is both a blessing and a curse. On the one hand, digitalized sales channels will increase price and market transparency and therefore adversely affect sales prices and margins. On the other hand, the advancing digitalization creates unprecedented opportunities for new business models, new ways of selling and new channels to the market. Certainly digitalization of the supply chain across all levels will fundamentally change the rather conservative order methods of our current customers - via telephone, fax, etc.

In order to meet the challenges of the digital transformation and reap maximum benefits, we created a cross-division internal working group. Finally, we do not perceive the market developments associated with digitalization as a threat but rather as a challenge and oppor-



anaging director

'It's Going to Be a Marathon, Not a Quick Race'

"As always, innovation, no matter how big or small, creates opportunities for some while carrying burden for others. In this respect, digital transformation in chemical distribution seems to be one of these disruptors that will create a separating line between unlimited success and unavoidable failure, at least if you believe in the sometimes too overoptimistic round of experts.

We at Biesterfeld Spezialchemie also got infected by the hype and certainly believe that digitalization will be key to managing a successful future in chemical distribution. But our approach is more focused on the administrative part of doing business, ultimately adding efficiency to the procurement and sales process and making life easier for our partners. We see that our true contribution in industries' value chain is not to digitize traditional paperwork as such. Our primary role - being heavily involved in true specialty chemicals - is closely working with partners on product innovation, market development, optimization of customer formulations, providing superior technical service.



Largely, success is based on technical orientation, long-term relationship, trust and confidentiality when working with suppliers and customers. Those things are hard to replace by digital processes, meaning that transforming the chemical distribution model in the way we deploy it may naturally finds its limitations. Certainly, it's going to be a marathon, not a quick race.

Open to New Ways of Doing Business

"Today's digital transformation debate bewilders me somewhat, as this is not a new topic but one that has been around for more than 40 years. The only difference is the speed at which new and updated technology is available. Today, as back in the 1970s, the only right answer to the digital transformation debate is: ,Yes, we should introduce and use any new technology that advances our business at a justifiable cost.' For specialty distributors like C.H. Erbslöh we expect positive effects from new technologies mainly in administrative processes but also in the supply chain. We, however, see neither our workforce being reduced nor a full transformation of our point of sales to an e-commerce platform in the next five to eight years. Having said that, it is obvious that some product categories surely will be sold through e-commerce platforms in the near future. Still, we do not have a special digital agenda as new ideas, technologies and ways of doing business always have been on our agenda."



Christopher Erbslöh managing director, C.H. Erbslöh

STATEMENTS

Managing Our Work Will **Require New Skills**

"Digital transformation has been an ongoing process for years now. Companies faced with it have to cultivate their jungle of historically grown master data. In the next step, they probably will find a lack of standardization in plenty of their processes. Nobody takes care of a digital-friendly legislation, for example, European and national legal obligations are continuously rising and contribute to complexity. The extended safety data sheets are one example in this regard. Different legislation on value-added tax and its control in each European country is another one. Only companies that cut off antiquated traditions and develop skills to manage permanent change will win this competition.



Robert Späth.

Staff education will be a big challenge as well as interfaces between business partners in order to benefit from new opportunities. There will be winners and losers, but what chemical distribution is all about will not change. How we manage our work will be different and will require new skills.

Following Digital Developments

"Digital transformation is currently a widely used term that in many cases is not well understood or is simply applied as a vehicle for attention. It is clear to us that disruptive processes such as post-2007 digital communication and photography or future digital cars have changed or may change the industries involved tremendously. Keeping a linear business model for too long could leave those who aren't ready for change behind. We at the NRC Group have already implemented multiple digital measures such as electronic data exchange with warehouses and customers, and for a long time now we have been running well-established accounting systems in our subsidiaries that ensure much better controlling. We follow digital developments closely, and further measures are underway. Digital product platforms in the chemical industry have so far seen some success, but we also strongly believe in a digital future for personal contacts, especially for those involving complex specialty chemicals.



Dr. Gerd Bergmann, naging director, Nordmann, Rassmann

Digitalization Will Not Affect Everything

"Electronic platforms, so-called mouse-clicks from the 1990s, have not been accepted in the chemical distribution, because today's distributor has developed from the supplier of chemical products to a service provider. Service offers for the customer, for example, the fuel telemetry, have long since entered the chemical distribution as a form of digitalization. In the area of digitalization, the question arises whether industries that are still supplied by the chemical distribution sector will still exist in the long term because, for example, their products are replaced by the replacement of batteries for the electric motor. In the near future, simultaneous processes in communication via Whats-App, SMS or mail with customer and supplier will be further simplified. However, the coming digitalization will not affect the fact that the



selection of suppliers, products and applications for chemical products will also be faster in communication via the electronic media, but also due to the flood of the regulations is made more difficult.

Acceleration with Limits

"The digital transformation of chemical distribution will accelerate; that's a fact. However, I cannot imagine that we will trade all products digitally in the future. In some cases we are dealing with highly sensitive products, whose sales processes we have to keep in our hands. I just think, for example, of end-use certification or Responsible Care regulations. In this area, digitalization definitely reaches its limits."



Verband Chemiehande

'Digitalization Transforms Communication'

"At Azelis we place great importance on collecting and analyzing data to gain insight into marketing trends and buying behavior. Data become more than a tool — it's the first step of our sales process. By utilizing a superior ERP tool, an integrated analytics platform that allows for data mining and advanced analytics, we collect and analyze data in order to provide necessary services to our customers.

In an environment where any information is just a click away, we are aware of the way digitalization transforms communication and the way we handle information. Digitalization as the main force behind the standardization of back-office processes has far-reaching consequences. With increased process efficiency, we can focus more on formulation development and our customers. Further down the road, this opens up a new world of possibilities for specialty chemicals distributors - a world in which highly personalized services and customized products are not only here, but here to stay."

"Digital transformation is often seen as a job-reduction specter, but at

Bodo Möller Chemie we associate it rather with a thought-out digital

strategy to link in chemical distribution CRM/ERP/MIS and finances using integrative systems. In this way we can achieve operational ex-

cellence while never losing our flexibility, our compact knowledge and understanding of our customer segments and needs. To us, digital business models mean optimizing administrative functions to pro-

mote our international interconnections, integrate new business fields more easily and on the whole, align the organization with added

value. Thus, we have declared digital transformation a top management issue and put the entire IT landscape to the test, to be adapted

according to all issues important to us and for future challenges. Our

claim is not only to be good, but very good - without disregarding



Jürgen Rietschle

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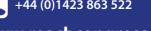


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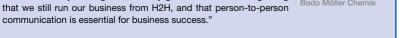
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Digital Transformation — a Top Management Issue

STATEMENTS

Investment in Digital Technologies

"At BÜFA, the chances of digitalization are weekly discussed in a meeting where members of all our business areas and different business processes take part. We look at every process that is relevant for our value chain - from supplier to customer - and try to find step-by-step digitalization projects that will improve our performance. We are keen to reach a continuous flow of information throughout the supply chain without any media change. Additionally we ask ourselves if there are possibilities that digitalization could replace the existing business models. This question already led to the formation of BÜFA-i, a start-up within the BÜFA group that develops an online marketplace for chemical trading and that can - among other things - enlarge our geographical reach. Generally, BÜFA seeks to increase efficiency by investing in digital technologies



elix Thalmann, CFO.

The biggest risk I see at the moment concerning digitalization is being too slow. To be able to successfully implement this paradigm shift, it is essential to engage all employees in the process.

Service Is at the Core of **Our Business Model**

"Harke Group started very early with the process of digital transformation, so now we can look back at almost two decades of experience in this area. We therefore see chances for us rather than risks in it.

A first and important step towards digital transformation was at the end of the 90s: upgrading the ,backbone of digital transformation, 'our ERP system, to a state-of-the-art system of the industry (SAP R/3), Shortly after upgrading our ERP, we also started our first steps in building our own online shops. We changed our web interface and catalog soon to an own-developed database and product catalog based on Typo3 in connection with MySQL and PHP, which we still use today. To us this solution offered more flexibility and cost effectiveness. Very early we also joined social media platforms and nowadays are



dent. Harke Group

very actively promoting our services and products as well as offering plenty of information to our followers in all main social media channels.

In general there is a danger in the process of digital transformation to only look at saving costs, resulting in disadvantages for the business partners. For us digital transformation means offering the customer above and before all additional possibilities, services and choices, with an individual, personal service always being at the core of our business model

According to the above philosophy and because almost all documents concerning the order process are digitized in our company, we are currently aiming at offering to our customers more and better online access to those digitized documents. Another step in the long-lasting and continuous process of our digital transformation.

A Chance for Better Customer Service

"Digital transformation already takes place in the chemical industry Industrial costumers send requests for quotations via browser supported websheets. Here you have the opportunity to offer more products at the same time through the internet. This process will probably be developed further in the future.

Some bigger costumers already require all distribution be carried out via a web interface. That means orders will be sent via the system, the confirmation happens to be forwarded via the same and even the invoicing and the payment will be processed that way.

Since companies use different kinds of systems, it may take some time to get used to it. The big players offer webinars to help out. All of this is time-consuming and binds resources. Customers most of the



time have very strict deadlines to fulfill. The contact from human to human is somewhat also being lost

For a small company in distribution the situation is very challenging. However, digital transformation can be seen as a chance for better service for our customers.

We Actively Face the Challenges

"It has always been a tradition at Overlack Group to actively deal with ongoing developments, gather information and if necessary react. We began analyzing our processes very early on and have been exploiting the advantages of digitalization. With an internal team, supported by external expertise, we defined areas that we can make more efficient through digitalization, for example storage and logistics, procurement and distribution. However, we also realize that internal processes such as in-company communication, HR and administration could be more efficient as well. Here we see great potential for making our company more agile and resilient. We also take things one step further and have asked ourselves what the business model of a distributor could be like in the future. Here again, we actively face the challenges and analyze the possibilities of disruptive changes to



the chemical distribution market, for example market or industry platforms. That's where we see the biggest challenges. At the same time it is also a big chance to get closer to the customer and to offer more effective service.

In addition to all the developments in the area of digitalization, as always the important thing is the basics that make our company competitive, such as good Europewide coverage, a fullline portfolio with a focus on specialty chemicals and good customer-oriented services.

Challenges for Pharmaceutical Logistics in South Africa

In a worldwide comparison Africa is currently a very small and economically sub-scale and micro-fragmented market. It accounts for just two percent of the global pharmaceutical market, and when South Africa is excluded, has approximately half a percent of the global market spread across about 40 different countries in Sub-Saharan Africa.

In Africa, there is a constant shortage of skilled workers and supply chain infrastructure. Storage capacity and quality storage facilities are scarce. Building a new pharmaceutical warehouse poses its own challenges, as engineering specs and limited oversight may result in defects like concrete that crumbles under the wheels of a forklift. With the exception of South Africa, most African countries also have poor road infrastructure, fragmented airline routes and insufficient



Imperial Logistics
Group, Garden View

flight connections for airfreight, which compromises pharmaceutical logistics.

Security risks prevalent in Africa's pharmaceutical supply chain include not just theft, but also sub-standard counterfeit products that can jeopardize the reputation of established brands. One of the biggest obstacles hampering healthcare delivery in Africa is the lack of harmony in drug regulations across the continent. Since each country has different regulations, product registration becomes extremely complex and costly. As a result, many drug companies are not registering medicines in African countries.

As Africa's leading partner in the healthcare supply chain, Imperial has taken up the continent's challenges, and offers holistic supply chain solutions to deliver essential medicines to those in need. For multinational pharmaceutical manufacturers, Imperial's solutions mitigate the risks and complexity of doing business in Africa. With multiple clients benefiting from its established, proven network, infrastructure, people, systems and continuous improvement initiatives, Imperial creates scale and reduces the risks for global companies in African markets.

Dr. Birgit Megges and Dr. Michael Reubold, CHEManager

Nexeo Takes DSM Nordics Supply from K.D. Feddersen

US chemicals distributor Nexeo Solutions has agreed with K.D. Feddersen — a German-based engineering thermoplastics distributor — to acquire inventory and service customers currently supplied with DSM products in the Nordic region. The transition of customers from K.D. Feddersen Norden was expected to be completed on or before Apr. 3.

Nexeo said the agreement, which has DSM's support, reflects its continued focus and commitment to optimize service and enhance its strategic position in the Nordic market. The distributor has recently expanded its team in the region to better position it for growth. Shawn Williams, SVP of plastics at Nexeo Solutions, said the company sees a lot of development op-

portunities for DSM's growing portfolio in the Nordics. This latest deal is the fifth distribution agreement made by Nexeo so far this year. In February. the company expanded its partnership with China's Wanhua Chemical to include the northeast and mid-Atlantic regions of the US for aliphatic diisocyanates. It also became the distribution partner of Colonial Chemical for the

personal care market in northeastern US states and on Mar. 1, the supplier of Solvay's Rhodoline defoamer products in the US. Canada and Mexico.

In January, the partnership with Silberline Manufacturing was expanded with national key accounts in the coatings, printing ink and plastic markets for special-effect and performance aluminum pigments. (dw, rk)

Natural Ingredients Continue to Tempt Consumers

Cornelius Group, a European distributor of ingredients for the personal care industry, claims the more 'natural' the ingredients used in a product, the more attractive it is to consumers.

Natural ingredients are more popular than ever before as consumers' negative perception of synthetic chemicals continues to grow within the personal care sector.

Rachael Atwell, business development manager, care products at Cornelius, said: "In view of the growing public awareness of the need to minimise chemical substances, and the increasing demand for natural ingredients, the personal care industry is searching for new formulations to follow this trend."

Plant derived ingredients are growing in popularity with the use of bamboo increasing as a particular example. Care companies are adding bamboo to formulations due to its hydrating, nourishing and soothing properties.

Bamboo is high in natural silica, which has restorative effect and works to prevent premature ageing and aids skin regeneration. The natural ingredient is also rich in antioxidants and has antibacterial and anti-inflammatory properties, which help to reduce free-radical damage to the skin.

Attwell added: "Asian beauty products have seen a popularity boom in recent years. Bamboo is a material that has been popular in the Korean beauty arena and is now making its mark in the Western market place.

"In addition to its moisturising qualities, it is also considered sustainable. It's ability to grow so fast makes it very attractive as a sustainable raw material." (rk)

Odfjell Orders More Chemical Tankers

Norwegian shipping and tank terminal company Odfjell has signed a letter of intent with China's Hudong-Zhonghua Shipbuilding for two additional chemical tankers with stainless steel cargo tanks at a cost of about \$116 million.

The vessels have a deadweight (dwt) of 38,000 with 40 tanks and a cargo capacity of about 45,000 m³. The Chinese yard is already building four 49,000 dwt vessels with 33 stainless steel tanks for Odfjell.

The Bergen-headquartered group said the yard is one of the very few Chinese construction companies able to meet Odfjell's quality standards for building advanced chemical tankers.

This latest order follows two longterm charter agreements announced in February and March as well as the purchase of the chemical tanker Bow

Earlier this month, Odfjell said it had concluded bareboat charter agreements for two 36,000 dwt chemical tankers with 28 stainless steel cargo tanks.

The vessels will be built at an unnamed Japanese shipyard and be delivered in O4 2019 and O2 2020. The agreements will run for a minimum of 10 years.

Odfjell CEO, Kristian Mørch, said the charter agreements were a capital efficient way to achieve part of its tanker replacement program and growth targets.

Odfjell has also paid about \$16.7 million to exercise its purchase option for the Bow Architect, a 30,000 dwt stainless steel chemical tanker with 28 cargo tanks that was built in 2005, since when it has been on longterm charter to the Norwegian shipper. (eb, rk)

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The African Journey

Time to Understand and Improve Your Pharma Distribution Footprint in Africa

Africa is one of the most promising pharmerging markets. For a recent project, pharma supply-chain experts from Camelot Management Consultants visited more than a dozen countries in Africa to gain a detailed picture of current pharma distribution capabilities for 2-degree to 8-degree Celsius distribution. Their conclusion: Now is the time for pharma companies to reshape their African footprint and thus prepare themselves to secure future growth opportunities.

With a total population of 1.2 billion and increasing wealth among the middle class, the African pharma market is expected to reach a compound annual growth rate (CAGR) of 8%–11% resulting in an overall market opportunity worth \$35 billion by 2020.

Opportunities and Challenges in Africa

By 2050 Africa is expected to exceed the population of China and India, with 60% of Africa's population being urbanized by 2050 and the number of middle-class households amounting to 130 million as early as 2020. The traditional medicine-man culture is changing and with this, the domestic demand for high-quality, international-standard medicines, diagnostics and prevention is increasing. Millions of patients are not diagnosed and not receiving treatment yet, which represents a multimillion-dollar opportunity. The potential of new innovative medicines should not be underestimated either.

Despite these promising developments, pharma distribution on the African continent still faces some significant challenges and risks. Problems with security, unstable political situations, and the fact that 30% of the medicines sold are counterfeit are the key issues. It is definitely a challenge to find a well-established infrastructure and to be able to distribute pharma products within controlled environments and the required temperature ranges.

With distribution often managed by third-party distributors and several subcontractors, the actual processes and mechanisms of the markets are still not very transparent for a lot of pharma companies. In consulting projects with pharma producers, Camelot has found cases where — even to the surprise of the pharma producer — the price add-ons by various parties were at patient level adding 70% to 200% of the pharma company's initial product price.

This is one of the reasons pharma companies increasingly demand enhanced transparency and stronger control over the distribution of their own products in the African market.

Africa Does Not Equal Africa

Africa consists of 54 complex and diverse markets, which, as a result of European colonialism, are highly heterogeneous in their economic evolution, pharmaceutical growth, business ethics, languages and trading blocs. To build up a successful and sustainable pharma-distribution operation, the peculiarities and key characteristics per country and region need to be evaluated carefully.



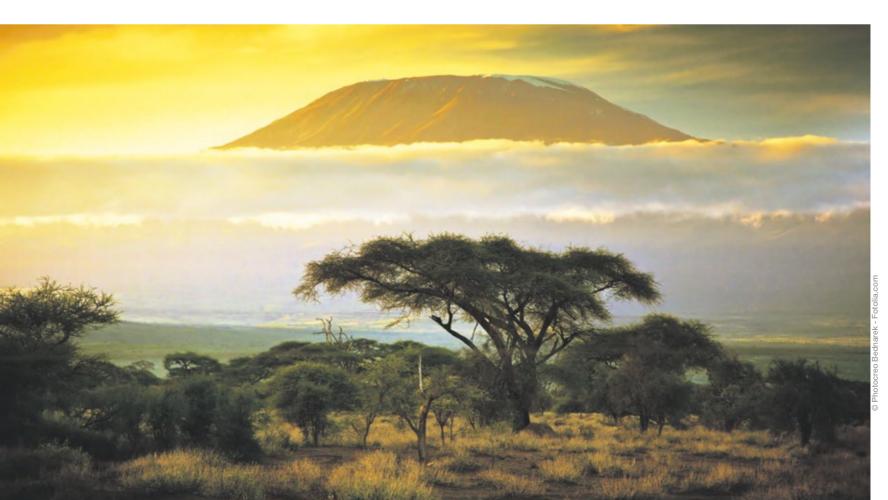
Andreas Gmür, Camelot Management Consultants

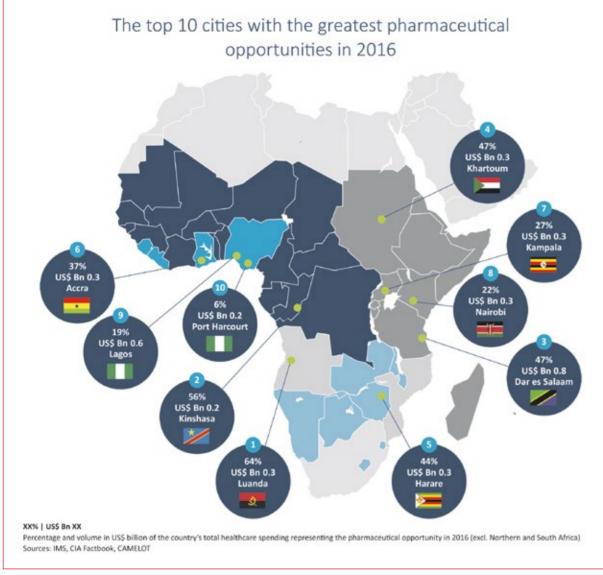


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Reuter, Camelot
Management
Consultants

The North African countries, which are often considered part of the Middle East business region, are where pharma distribution is best established today. Central and Southern Africa can be categorized into six subregions: French-West Africa, East Africa, Southern and South Africa, Niger Region, and Portuguese Africa. The differences among these regions, e.g., regarding import regulations, language, or air and sea connections, need to be considered when designing the distribution strategy for Africa.

Depending on the products and market situations, alternative distribution solutions might be established





The top 10 cities in Central and Southern Africa with the greatest pharmaceutical opportunities in 2016.

for prioritized countries, assuming a critical volume of product sales is reached. With the growing demand for medicines, new opportunities and new infrastructure developments are currently evolving rapidly in the African markets and are attracting a wide range of investors. Getting the distribution of pharma products under their own control will certainly help pharma companies to better control the flows, increase sales and also reduce the prices and improve quality for the patients — resulting in a more profitable and economically sustainable business in Africa.

Getting to Know the Market

Building relationships with the different pharmaceutical stakeholders (e.g., pharmacies, wholesalers, doctors, public officials, banks) is key to the success of pharmaceutical suppliers in Africa. Therefore, it is very important to have a strong local workforce, either provided by the pharmaceutical company directly or through its appointed distributor. It is very helpful to go to the "shop floor" in the market to get a feeling of how business is done and to collect special information, e.g., visit pharmacies to find out about "special" product prices or whether life-saving products are constantly available.

New Logistics Solutions on the Horizon

Logistics infrastructure for pharmaceutical products is generally acceptable at least in the big cities, and in some cases it meets high standards at the main distributor/wholesaler level. However, the infrastructure and storage conditions of secondary wholesalers are very poor. The reason is that compliance monitoring is generally not strongly enforced along the supply chain because of the limited margins the secondary wholesalers make.

In the past, road transportation was very insecure, so many pharma companies exported pharma directly into the countries via airfreight into the main cities. Because destination airports lack cold-storage capacity, distributors have to pick up the goods immediately to ensure proper cool-chain handling. However, in the last couple of years road corridors for secure land transportation have been developed. Therefore it has become more viable to enter the African market via a regional hub and have further distribution inland via road transportation.

Imperial and Bolloré are examples of logistics service providers investing heavily in their own infrastructure, such as ports and rail networks, to gain control of the transportation chain. This enables them to offer active temperature-controlled transportation services within and between some of Africa's main countries and cities. This provides opportunities for the pharma industry to "open"

regional distribution centers and replenish via sea instead of airfreight. In this way, 4 out of 5 euros on average can be saved just by switching the transportation mode.

Some countries and companies are already piloting drone solutions and have started building drone hubs for further distribution of the last mile in rural areas. While in Europe drone solutions encounter various legal hurdles, such new technologies could be an interesting spin on lastmile distribution in Africa, providing a fast fix for missing road and network infrastructures.

Taking The First Steps

In the sub-Sahara region, 2016 economic development showed a negative per capita income growth rate and was therefore not too promising. This is related to the post-Ebola recovery and the low oil price. The outlook for 2017 and 2018 is more promising with an expected gross domestic product growth of 2.9% and 3.6% per annum. The major risks for GDP development in the region are the slowdown of China's economic growth, political uncertainty in Europe, and US policy uncertainty.

However, in the mid- and longterm, Africa and especially the sub-Sahara region are very promising markets. The sooner pharma companies sharpen their footprint the better their chances to be in pole position when the race starts.

As a starting point, it is important to gain transparency on market pricing of the products for the end customer and to track the origin and extent of the price markup through the whole distribution chain. Distribution costs and routes currently in use should be evaluated and compared against alternative distribution and regional distribution center models to enter Africa from the east, west and south coasts. It is advisable to get firsthand knowledge of local markets. If the market volume is big enough or sales forecast is promising, opening a local affiliate might be the right way to achieve a positive business case in the mid-term. See you in Africa!

Andreas Gmür, partner, and Constantin Reuter, principal, Camelot Management Consultants, Munich, Germany

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Chemical Logistics Companies Have to Catch Up

Efficiency of Value Chains around the World is on Trial

Right now, chemical logistics companies around the world are facing major challenges. Transport Logistic, the 16th International Trade Fair for Logistics, Mobility, IT and Supply Chain Management, will show how they are dealing with those challenges and what potential solutions are available. From May 9-12, 2017, more than 2,000 companies from more than 60 countries will showcase themselves in nine exhibition halls at the Messe München trade-fair center.

Organizers are more than optimistic that the fair will once again surpass the record number of exhibitors and visitors from 2015. The upcoming exhibition will occupy more than 112,000 m² of exhibition space — broken down into nine halls as well as the outdoor site and railway track space.

Specials for Chemical Logistics

Transport Logistic features a number of attractions especially for chemical logistics companies. For instance, on Wednesday, May 10, 2017, CHEManager is hosting a conference titled "Chemicals industry: Transport

infrastructure — Vision and reality" as part of Forum III in Hall B2 (starting at 10:00). After all, an intact, well working and intermodal transportation network is very important to the chemicals industry: What is the situation right now? Where is action needed, especially as a result of the new 2030 Federal Transport Infrastructure Plan? These are the issues that the experts at this event will deal with. Speakers who are expected include Gerd Deimel, Spokesman for the VCI Initiative Verkehrsinfrastruktur. Martin Schwemmer from the Fraunhofer Center for Applied Research on Supply Chain Management, Dr. Carsten Hinne from DB Cargo, Contargo managing director Heinrich Kerstgens and Michael Kriegel from Dachser.

Transport Logistic is a central meeting place for visitors from the chemicals and pharmaceuticals industry: The ITCO Pavilion has been an important part of the trade fair for years. According to Dr. Robert Schönberger, exhibition group director for Transport Logistic: "The ITCO Pavilion is convincing because of active and attractive invitation management. Its organizers always manage to bring customers and suppliers together that suit each other perfectly." This year more than 60 member companies will be in Munich to exhibit on more than 1,400 m² of space at the ITCO Pavilion and to inform visitors about their latest products and

Global Networking Calls for International Transport and Logistics Service Providers

Players in the chemicals industry and in chemical logistics operate in a complex international environment. "Despite protectionist trends in several regions of the world, demand for networked value chains will remain high in the future," says Prof. Carsten Suntrop, managing director of the chemicals consulting company CMC² in Cologne and lecturer for management at the European University of Applied Science at Rhein/Erft. "Due to global networking, international corporations also want international logistics service providers to establish standards in transport and storage chains and in site logistics that are internationally uniform."

Against this backdrop, increased transparency is absolutely necessary when it comes to the share of valuechain and production costs that can be attributed to logistics costs. "That is because logistics costs, which generally account for three to eight percent, can in some cases account for as much as twelve percent of overall costs. As a result, chemical logistics within chemical companies are now the focus of considerably higher operational and strategic attention," explains Suntrop. "This awareness should then result in higher and urgently necessary investments in logistics infrastructure and intellectual capital, for instance by hiring more supply chain managers or project employees."

The pressure to cut costs will continue to exist in chemical logistic. But in most cases, actually forcing prices down has not led to success for quite some time. Suntrop says: "Instead, the trend is toward cooperative cost management. Concepts such as inter-organizational cost management along the value chain are resulting in increased coordination between parties and the increased exchange of planning and control data and improved controllability." Service providers and shippers must work together to search for concepts that make the value chain more competitive.



Ticket Information

Visitors who are interested in attending the fair can purchase a ticket online and enjoy affordable Early Bird prices. The Print@home Ticket gives registered visitors direct access to the show — without having to wait in line. Details are available online at bit.ly/tl-ticket.

Shippers Expanding Core Competencies to Include **Chemical Logistics**

This could result in more chemicals companies outsourcing their logistics to specialists. Possible advantages: Making up for the chemical industry's tariff disadvantages compared to logistics companies as well as economies of scale that would also apply to logistics tasks that are specific to chemicals - such as production logistics — for logistics service providers. Depending on the supply chain type (lean/agile/innovative) this could also result in more shipping companies establishing chemical logistics as a core competency, especially if doing so would help them to distinguish themselves from their competitors.

"But despite the pressure on costs, everyone involved in the chemical logistics process will have to establish new safety supply chain initiatives,"



The fair "Transport and logistics" is a central platform for Chemicals and Plastics areas

predicts Suntrop. "Cutting costs must not under any circumstances result in marginal logistics concepts that are

unacceptable when handling hazardous goods and materials." Examples would be reducing the quality of em-

ployees, cutting back on maintenance measures or failing to meet compliance requirements. That is why there will be counter-movements to improve compliance and to meet safety requirements.

There is still another problem that urgently needs to be solved. "When it comes to digitalization, several studies have indicated that chemical logistics in particular is one of the poorest performers among the top branches of industry," says Suntrop. "Innovative concepts such as the universal control and tracking of shipping units, active scheduling of freight carriers to loading sites and process/IT standards for check-in and check-out processes at chemical locations within seconds must also be developed." Answers to these issues will also be available at Transport Logistic, (sa)

www.transportlogistic.de







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Closer Look on Freight Rates

A Barometer for Freight Rates in the European Chemical Industry

Creating more transparency for the chemical industry's European transport market is the purpose of the Fraunhofer freight cost barometer, which has been published in the German edition of CHEManager newspaper twice a year since 2016. The barometer clearly illustrates developments in freight costs for the Full Truck Load (FTL), Less-Than-Full Truck Load (LTL) (0.5–7.5 t) and Bulk Tank segments.

More than ten well-known companies from the European chemical industry, which have been comparing anonymized data in their own Freight Benchmarking Group since 2005, provide the basis for the data. The group receives scientific methods and professional group facilitation from the Fraunhofer Center for Applied Research on Supply Chain Services SCS in Nuremberg as well as an antitrust lawyer.

The freight cost barometer devised for CHEManager represents the highest aggregation stage of the benchmarking evaluations. In addition, twice a year the group participants receive the detailed information relevant for them based on relations and regions. As well as price developments over time, the current absolute prices can also be compared. Using three selected excerpts, current benchmarking group results are presented below.

Mixed Results for Freight Rate Development in 2016

For the freight cost barometer, the price changes of all relations are aggregated into a clearly structured diagram (fig. 1). For European road freight transport, Fraunhofer SCS's evaluation of freight rate benchmarking for 2016 reveals a slight price decrease in the Bulk Tank segment, price

stagnation for packaged goods in the Full Truck Load (FTL) segment, and an increase in freight rates in the Less-Than-Full Truck Load (LTL) segment.

In the previous half-yearly evaluation up to April 2016, prices had gone down in all transport segments (Bulk Tank: -0.7%; FTL: -1.9%; LTL (7.5 t): -1.7%; LTL (2.0 t): -1.6%, and LTL (0.5 t): -2.5%). This was attributable in part to the sharply falling price of diesel (-11.1%). Analysis of the current evaluation period, however, reveals that the price of diesel has increased for the first time in a few years, going up by over 2%. Consequently, other market developments - such as changes in capacity and demand — are stronger causes for the development of freight rates.

In the Bulk Tank segment, the slight decrease (-0.6%) holds throughout almost all observed country relations, although the strength of the reductions varies. For example, tours from Benelux countries to Italy show a reduction of over -2%, whereas the prices for internal German tours remained largely stable. The situation is



Florian Mägerlein, Fraunhofer SCS

different for the FTL segment, where we can see strong regional differences, such as price decreases of up to -2.4% for Germany-Czech Republic relations and price increases of almost 3% such as for France-Benelux, but where overall prices are stagnant (-0.1%). For the Less-Than-Full Truck Load segment, once the freight rates across all observed European countries have been aggregated, there is a price increase in each weight category (LTL (7.5 t): 0.8%. LTL (2.0 t): 1.2% and LTL (0.5 t): 0.5%). Consequently, although there are regions in all three segments where freight rates have fallen, the price increases for certain relations, such as Germany to Switzerland, have been all the more pronounced.

Normalization of Rates after the Economic Crisis

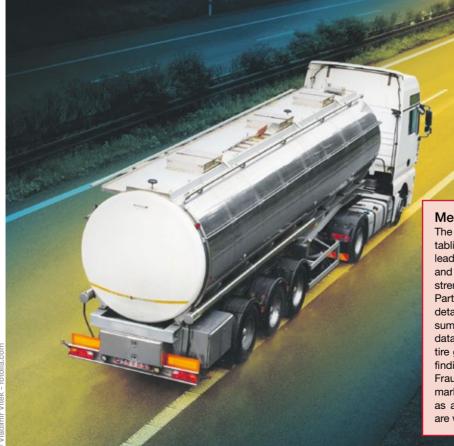
Figure 2 displays the price index development of freight rates for all Bulk Tank tours that start in Benelux countries. Starting at the price index of 100, the graph shows the development of prices over time, using the



The Freight Benchmarking Group for the European chemical industry was established by Fraunhofer SCS in 2005 and currently comprises more than ten leading chemicals companies. The group provides chemicals manufacturers and feedstock suppliers with anonymized freight rate comparisons, helping to strengthen their negotiating position and improve their procurement strategies. Participating companies receive benchmark findings twice a year in the form of

detailed country- and region-specific reports plus summary reports on general market conditions. The data is made available online via a web portal. The entire group convenes once a year to evaluate selected findings. At these meetings, invited experts and Fraunhofer researchers give presentations on current market trends. The benchmarking group is structured as an open working group, and suitable companies are welcome to join.





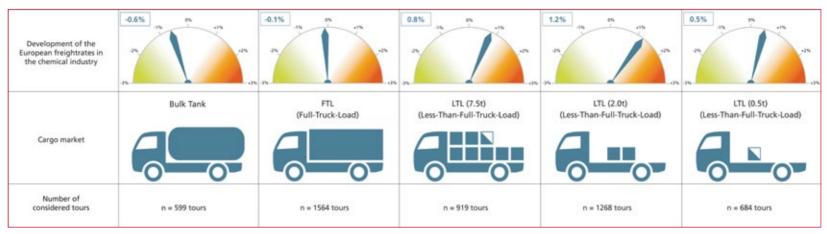


Fig.1: Freight cost barometer based on the recent evaluation of the Freight Benchmarking Group for the European chemical industry, the diagram shows the development of freight rates as per the effective date of October 1, 2016 (compared to April 1, 2016).

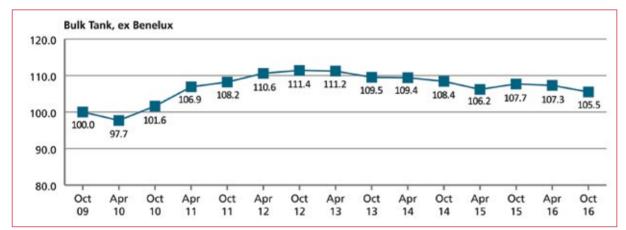


Fig. 2: Index development of freight rates for Bulk Tank tours starting in Benelux countries.

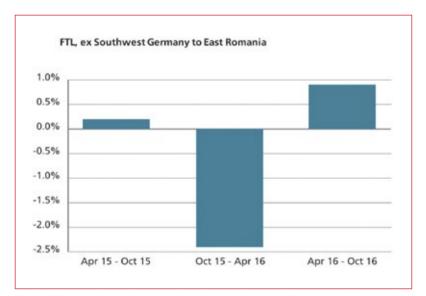


Fig. 3: FTL rate change for tours from the southwest of Germany to the east of Romania (April 2015 – October 2016).

rate of October 2009 as the reference value. Their progress is depicted for the last seven years, with two reference points a year. The curve shows that in 2010, following a sharp decline in freight rates precipitated by the global recession starting in 2008 (not illustrated), a turnaround occurred and prices rose again. Over the next three years, a mark-up of over 14% lifted freight rates almost to their pre-crisis level, reaching a high of 111.4 in October 2012. Beginning with April 2013, a phase commenced in which prices either stagnated or dropped by up to -2% per half-year period. The only exception is the period from April 2015 to October 2015, for which the index temporarily increased again from 106.2 to 107.7.

Rate Change – Bucking the Wider Trend

The rate change illustrates the current, specific price changes. While aggregated information — such as that provided in figures 1 and 2 — gives an overview of trends, freight rates are usually negotiated on a more regionalized level. These more specific prices often follow larger developments. But as capacity and demand may differ in each region, it may be necessary to take a closer look at the resulting deviations. Figure 3 provides an excerpt of a more in-depth analysis. It shows the changes in the last three half-year periods for FTL tours going from the southwest of Germany to the east of Romania. It gives a good example of how regionalized freight rates often develop differently and more distinctly than their aggregated trends. From April 2015 to October 2015, the freight rates for these tours first rose slightly (0.2%), followed by a sharp fall (-2.4%). The last bar shows a rise of 0.9% for the period from April 2016 to October 2016, even though European FTL tours in general stagnated (see fig. 1: -0.1% for FTL).

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The Benefits of Safe Handling

The Chemical Supply Chain and Its Worldwide Need for Tank Containers

The International Tank Container Organisation (ITCO) represents the international tank container industry to the public and to governmental bodies. Its mission is to promote and represent tank containers as safe, cost-efficient and flexible means of transport. In doing so, the organization has a strong focus on enhancing technological and business developments. Tank containers are used for a wide range of hazardous and non-hazardous cargoes, such as chemicals, petro-chemicals, food-grade commodities, gases, and powders. They are designed for safe, intermodal transport, as they can be easily moved by truck, train, and ship. In January 2017 Reginald Lee has been elected to the position of president of ITCO. CHEManager Distribution & Logistics asked him about the organization, about the tank container industries' and users' needs.

CHEManager Distribution & Logistics: Mr. Lee, in your opinion, what is the main task or core mission of ITCO today?

R. Lee: The core mission of ITCO is to promote the tank container as the safest, most cost effective mode for transporting bulk liquids in the worldwide liquid supply chain.

Focusing on the chemical industry: What are the principal topics ITCO deals with?

R. Lee: First of all stands safe handling of the tank containers and ensuring the people and the environment are protected at all times during loading, transporting, discharging. This implicates also that any waste product and washing water used during the cleaning of the tanks are professionally disposed of in accordance with international and local government regulations.

Where in the world we can find the hotspots of tank container use and

R. Lee: The current hotspot for the tank containers is Asia and here China is not only the main producer but also the biggest user. We notice a growing rate by double digits year on year.

Multimodality is essential in transport of tank containers and the exchange of carriers. In this context, how do you rate the potential of multimodality in Europe, Asia, the Americas and finally Africa?

R. Lee: Asia Pacific I see as the biggest user of tank containers for the next decade, mainly because they have no real liquid infrastructure except drums and tanker ships. Tank containers are just a big stainless steel re-unsalable drum and can also take the place of small tanker ships. The Asian companies are happy to make changes if it works out cheaper, they are not stuck with traditional modes as other regions.

Europe is already well established and I do not see big expansion, just more of the same, substituting tank containers for road tankers and using the railways more. In my personal view, America is not prepared to change. If America would allow tank containers on double stacker trains — as a normal — they would see big advantages. However they are too tied up with rail tank wagons and many chemical companies use these as part of their companies' static storage, plus they do not like to change what they already have established.

Does ITCO force structural improvement in this regard? If yes how?

R. Lee: ITCO is a trade organization. We cannot force structural changes. We can advise. We can recommend and show companies the benefits.



Reginald Lee, president, International Tank Container Organization (ITCO)

Referring to supply chain safety and risk: What do you think about the significance of global standards?

R. Lee: There is always room for improvement. But in Europe we have a very rigid code of practice arrived at after many years of hard work by all involved in the liquid supply chain. We need to transfer its knowledge to Asia and help them to understand the benefits of safe handling will always bring in the best rewards.

Where is the main need for action?

R. Lee: Main need I see in joining ITCO and @tco into one organization for the benefit of all in the liquid supply chain. Working together to ensure we are the safest, most environmentally friendly and cost effective mode for distributing bulk liquids in support of our customers.

www.itco.org

About ITCO

The tank container industry is on the one hand an asset driven industry with a strong focus on all technical issues of designing, manufacturing and maintaining high quality tank containers. On the other hand the industry puts a lot of efforts into minimizing the risks associated with working at tank containers. ITCO is very much involved into standard setting and guidelines that make sure that all people involved in loading, discharge, storage, cleaning, repair, shipping/rail terminal operations can work safely at tank containers.





Preferred European Pharma Gateway

A large number of pharmaceutical manufacturing is based in Belgium and Brussels Airport in particular is located in the middle of one of the European pharma clusters. For Brussels Airport was clear that aligning and standardizing the pharma handling processes between supply chain partners was the only effective way to guarantee the correct handling of pharmaceutical cargo in an end-to-end integrated cool chain.

Regulations are increasing around the world. Processes and specialized equipment are becoming more complex. Specific training is required to ensure staff handling the products has good pharma awareness; and multiple audits are imposed by companies and regulators. Therefore, all the service providers active at the airport — airlines, handling agents, forwarders, trucking companies — must adopt a more aligned model.

This means working collectively with all business partners and service providers to craft supply chains for optimal end-to-end visibility and reliability.

Confirmation as Preferred Pharma Gateway

In order to achieve this Brussels Airport cargo community has collectively focused on a set of common priorities over the past years, confirming it as a preferred pharma gateway.

- ☐ Investing in specialized and dedicated pharma infrastructure
- ☐ Training staff in order to lock in pharma expertise and create awareness on every level in the organization
- ☐ Managing the complexity and number of handovers from the moment the goods are transported to the airport, to the point at which they are handed over to the customer at the destination
- □ Working collaboratively with the International Air Transport Association (IATA) in developing and implementing an air cargo handling standard: the Center of Excellence for Independent Validators in Phar-

maceutical Handling program, or "CEIV Pharma". In this pilot project 19 companies based in the cargo zone of the airport participated to certify the airport cargo community, covering the entire cold chain throughout the airport.

More recently the Brucargo community developed the Airside Pharma Transporter, an innovative transport solution to avoid extreme temperatures during the airside transport of temperature sensitive pharma shipments. This conditioned trailer keeps pharmaceutical shipments within the correct temperature limits during transportation between warehouses and aircraft at an affordable cost.

The Brussels Airport cargo community would not have been able to position itself as a preferred pharma gateway without the relentless support and participation of all strong partners. It is a remarkable success story of community collaboration.

Nathan De Valck, Cargo & Product Development manager, Strategic Development, Brussels Airport, Belgium

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Chemspec Europe 2017

The 32nd edition of Chemspec Europe will take place on May 31 - June 01, 2017 in Munich, Germany. The event includes an exhibition as well as conferences and seminars and offers ma-

nufacturers, suppliers and distributors of fine and specialty chemicals a dedicated marketplace to meet with buyers.

www.chemspeceurope.com

FEICA 2017 Conference and Expo

The Conference and Expo of the Association of the European Adhesives and Sealants Industry (FEICA) on September 13 - 15, 2017 in Forte Village, Sardinia, Italy, provides insights into the

key issues affecting the industry and networking opportunities for formulators and materials suppliers to discuss the business environment.

www.feica-conferences.com

FECC Annual Congress 2017

The Annual Congress of the European Association of Chemical Distributors (FECC) attracts hundreds of delegates, from business leaders to stakeholders, every year. In 2017, from June 12-14, the congress will take

place in Warsaw, Poland, providing a vibrant setting for leaders from the chemical distribution industry to network, generate new business and reinforce relationships.

www.fecc.org

CPhl Worldwide 2017

CPhI Worldwide is the leading networking event and exhibition in Europe dedicated to pharmaceutical research and development, trends, products and services, including APIs, excipients, ingredients, contract re-

search and custom manufacturing, process and packaging equipment. This year's edition will be staged at Frankfurt am Main, Germany on October 24 - 26.

www.cphi.com

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