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## 1. PRESS RELEASE

### Digitalization of business models through platform-based value chain management

**Moers, July 2017 - In spring of this year we published an article in the 112th issue of the German magazine „Zeitschrift für wirtschaftlichen Fabrikbetrieb“ (ZWF). In the following days we shall post some of the interesting content of the article.**

Shorter – faster – more transparent – shorter life cycles and ever faster becoming changes influence the business processes in a new way. Customers expect faster business transactions, one-stop-shop solutions and transparency in the supply chain. This is way, a new form of connectivity between the customers and business partners of the value chain is necessary.

#### **But how can companies overcome these obstacles?**

Digitalization is the key word.

Only when companies are able to digitalize information about products, customers, processes and services as well as their overall business model, can they enable the new form of connectivity.

Through these changes, a large amount of data is generated regarding the business and production processes, as well as about internal and external communication. However, the management and analysis of the data and its quality is highly important.

In the next few days we will present to you the digitalization of processes, as well as the significance of digital platforms and its importance for the value chain.

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## Five Steps to a Digital Transformation

**Moers, July 2017 - Happy customers are loyal customers – and they expect fast and reliable deliveries of their goods. Unfortunately, manufacturer and retailer cannot always pursue these wishes. This can be due to machine downtime, through missing, wrong or defect parts.**

Through the digitalization of the business, the communication between machines and employees can be enabled. For this the products are set up with RFID-Chips. They send data with information about statuses, position or errors to the cloud, so that the employees can recognize problems early or prevent them.

In order to enable the digital transformation, a clear strategy is needed. Processes, knowhow and core competences must be documented and potentials must be analyzed. In the best case, this job is done by someone who understands the topic and can realistically evaluate the potentials of the company. Often, external consultancies from the IT- field are assigned for this job.

The digital transformation consists of five phases:

### 1. Status quo analysis

- Collection of data regarding the current status of the company and business model
- Analysis from the internal perspective
- Analysis of the value chain and their stakeholder
- Goal: Clarification of the products and services of the company that is to be digitalized and integrated into a network.

### 2. Goal definition:

- Definition of goals, dimensions and framework for the new business model with help of the questions: "Where do we want to position ourselves?" and "What are our priorities? "

### 3. Best practices:

- Examination of the potentials within the company
- Analysis of best practices that would contribute to the digital transformation and be integrated into it
- Business model design, in order to create different variations and specifications

### 4. Digital Fit:

- Evaluation of the different Business model versions regarding goals, customer requirements and digital integration
- Carve out of the suitable business model

### 5. Execution:

- Finalization and implementation of the business model definition

All five phases can only succeed through their most important element: the employees and executives. It is important that people with vision support such complex projects and accompany the change.

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## Platform-based value chain management

**Moers, August 2017 - IoT, Industry 4.0 or Logistics 4.0 – the digitalization of business processes has become indispensable today. However, a complex transformation is only manageable through a high level of management, data processing and evaluation. The most suitable solution for this: a cloud-based platform.**

A cloud-based platform is permanently accessible and available, and enables an exchange of process data throughout the supply chain, as well as management of the value chain. Next to the consideration of data quality and security, a good data management is of high relevance. Furthermore, value added services can be integrated, like for example transactions and payments of contracts or the creation of invoices, monitoring and maintenance services. A platform also assist the operational business through support, hotlines, monitoring of processes for the quality management and as a method of communication.

For the digitalization of the entire value chain, also the logistic chain must be digitalized – also referred to as logistics 4.0. The result is a digital image of all objects within the logistics chain with according information, so that the physical world is connected with the digital world. Through this an identification of the surroundings through scan systems or radio-frequency identification chips (RFID-Chips) can be enabled, for example. Data is registered through the RFID-Chips and processed in the cloud platform. This way, Manufacturer, supplier and customers can communicate more simply through the cloud-based platform and make status requests.

A cloud platform additionally provides more accessible customer access and a simpler manner of communication. Furthermore, it changes its traditional distribution channels towards digital market places. With the standardization and digitalization of processes, the data collection can continuously be improved and made more efficient. In addition, the integration and the bond of the business partner enables higher creation of value.

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## From Ballast to Competitive Advantage

### The Complexity of Supply Chain Networks Requires Company-Specific Solutions

**Moers, 02. March 2015 – The whole world talks about data security, but what about the availability of data sets? In particular, the increasing complexity of business processes and supply networks makes it increasingly difficult to represent processes easy to understand and clearly. At the latest, if the direct competitor manages to secure a competitive advantage by a better use of data, a company gets under pressure. Prof. Dr. Niemann, Professor of Industrial Engineering and Business Management at the University of Applied Science in Dusseldorf, explains the situation: „ For entrepreneurs, it is especially important to find a customized solution that takes into account the particular corporate structure. Because every supply chain is different and has its own specific requirements.“**

Due to the increasing international networking of companies, larger and more complex datasets are collected. However, the data are worthless as long as a company has no possibility to analyze them and to derive decision-making aids from them. "The analysis and the visualization of data sets supports the improvement of business processes and competitive business models," Prof. Dr. Niemann explains.

#### **Intelligent Tools for Data Visualization**

To evaluate the quantities of data, companies need to have big-data-analysis tool. Special attention is put on the visualization of process data. However, for an adequate access to the relevant process interfaces, there are often no suitable tools available. The specialist explains: "No two business processes are identical.

To find a suitable presentation of the necessary data, companies often have to develop their own solutions.”

### **New Development for Data Interfaces**

The first step of the analysis process is in principle data collection and allocation. Information from different corporate divisions are often in different formats, such as Excel- or TXT-files. If companies want to feed these different formats in one program, the data must first go through a process of standardization. How such a solution might look like, has just been shown by a medium-sized company in North Rhine-Westphalia. To meet the challenge of standardizing different formats, the development team of i-tec GmbH has developed a data integrator. This innovative solution separates data and makes them available for processing and visualization.

### **Useful Visualization via APP**

Another interface between data analysis and corporate life results from the final provision of the analytical result for the individual employee. A specific business application supports real-time availability of the obtained data anytime, anywhere. Often, this type of application is used in decision processes, risk-management as well as in potential analysis. Prof. Niemann adds: „If data sets are presented in a simplified form, for a company they develop from unused ballast to a competitive advantage.”

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## 2. EXPERT INTERVIEW

with Prof. Dr.-Ing. Graduate Industrial Engineer Jörg Niemann

### Challenges „Digitalization“

**Düsseldorf, 02. March 2015 – Our era is characterized by changes. That´s why modern enterprises now do have - in order to be successful and competitive - something like an obligation for transformation.**

**Prof. Dr. Jörg Niemann of FH Düsseldorf believes, above all, in the revolutionary force of digitization.**

“Prof. Niemann, which changes do have to face modern enterprises today?”

Prof. Dr. Niemann: „ In Western industrialized countries, the compulsion for rationalization and restructuring in the business sector, which is associated with globalization, leads to a migration of easier production and services to other countries. Nowadays small and medium enterprises need to be able to derive early opportunities for new products and businesses from global trends to achieve a long-term success.”

„What are the trends that currently affect the European market?”

Prof. Dr. Niemann: „Above all there is the mega trend towards individualization, which is nourished by the desire of people for uniqueness and differentiation that poses new challenges for companies. It leads to a comeback of the customized products. On the corporate side, this demand mainly leads to higher production and delivery costs. In any case, production and consumption move closer together, and the customer takes an active part in the value chain.”

„What are the challenges companies have to face due to the trend?”

Prof. Dr. Niemann: „On one hand, such a claim has an impact on the collection of target group data. Now and even more in the future, companies are forced to

incorporate the wishes of their customers, respectively to know the preferences of their target group exactly, and to derive new services and products. On the long term the individualizing of products leads to decentralization. The number of partner increases and thus the complexity of processes. Therefore, in the future the success of a company will depend on the optimal control of processes. This brings us to another important topic: the digital representation of networks."

„What do you mean by the trend topic digitization?"

Prof. Dr. Niemann: „To manage the increasing complexity of processes in the future, an automatic provision of data is becoming more and more important. In doing so, electronic systems network to "ambient intelligence", and adjust independently and appropriately to the individual user." In addition, today it is important that there is a change not only in value added structures, but in particular in "value added product characteristics." That is to say, the client sees the benefit of a product not only by its physical properties, but increasingly also based on the potential for digital connectivity and individualization. Thus, those as "add-on" marketed product features will gain decisive importance regarding the purchase decision. This change concerning the product evaluation by the customer has to be anchored in the minds of the employees, because internally, this often means a shifting of the previous emphasis on individual departments."

„How can you face these subjects today as a company?"

Prof. Dr. Niemann: „Companies need to include these changes into their business plans. Besides the technical development of innovative features to personalize the products, the implementation of changes and the integration into an IT environment plays an important role. The required change of "mind sets" in the minds of employees has emerged to be one particular critical success factor."

## Expert Portrait

Prof. Dr.-Ing.-Wirt.-Ing. Jörg Niemann



Jörg Niemann is a professor of industrial engineering at the University of Applied Science Dusseldorf with a focus on production. Since July 2012 he is head of the Research Centre „Life Cycle Excellence“ (FLiX).

Furthermore, Jörg Niemann is member of the board at the Institute of Product Development and Innovation (FMDauto) at the University of Applied Science in Dusseldorf, as well as member of the scientific advisory board of the NUK (New Entrepreneurship Rhineland e.V.). During his activities at the Institute of Industrial Manufacturing and Management (IFF) and at the Fraunhofer Institute for Manufacturing Engineering and Automation (IPA)

Prof. Niemann was engaged with the topic “Life Cycle Management”. He worked on the topics of life cycle oriented evaluation and optimization of the economic benefits of investment. This innovative approach became known as “Life Cycle Controlling”. Whilst working on this topic he used simulation tools for a dynamic valuation and optimization of capital goods and production systems. After his PhD, he joined the ABB Automation GmbH, where he worked as a group manager on “Life Cycle Services”. Two service products that have been developed by Prof. Niemann, were awarded within the Group and received property rights. In 2012 he became Professor of Industrial Engineering, oriented on production.

### 3. Factsheets: **Lean Supply Chain Management**

#### **Challenge:**

Every day, people need products and services quickly and individually. To meet this demand, companies have to work more flexible and cost-optimized. The arising challenges are complex and multilayered. In times of "global economy" cost reduction, customer satisfaction, speed and high quality come to the fore. These demands can only be mastered with stable and standardized processes. From the point of view of total cost of ownership (TCO), value flows have to be considered integrally and have to be coordinated.

#### **Our Solution:**

The lean approach scrutinizes, while changing the existing structures.

A successful supply chain management aims to manage the existing or newly designed structures optimally. A suitable combination of both approaches result in a very powerful lever for EBIT improvement and profitable growth.

To achieve their objectives, i-tec GmbH relies on established and proven methods and standards, such as:

- SCOR model
- KAIZEN
- value stream analysis
- material flow analysis
- process mapping - and simulation
- driver tree analysis

## **Smart Service Strategy**

### **Challenge:**

The area "service" is increasingly becoming a supporting pillar within a company. The focus on this important segment ensures sustainable success.

Due to the increasing competitive pressure in the product business, the development of new products and services is the key to revenue growth.

A holistic service concept, including financial, technical and operative parameters, is an integral part of a successful business strategy.

### **Our Solution:**

i-tec GmbH has developed a modular system, which enables the targeted development of new business models.

Essential components of our modular system for business model are:

- o market analysis und benchmarking
- o analysis of target groups
- o portfolio analysis
- o development of new services and products
- o value benefit analysis
- o business case / investment consideration
- o opportunity and risk assessment

#### 4. COMPANY INFORMATION

i-tec GmbH is an privately owned and globally oriented consulting company. The major focus is on the transformation of service- and supply chain processes, with the scope of a sustainable increase in efficiency and value. Above all, successful development and implementation of innovative service strategies characterizes i-tec GmbH.

For more information, please visit [www.i-tec-consulting.com](http://www.i-tec-consulting.com).

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