

Prof. Dr.-Ing. Bernd Noche

Seminar Vorstellung SS 17

Big Data and Digitalization in Supply Chain and Logistics

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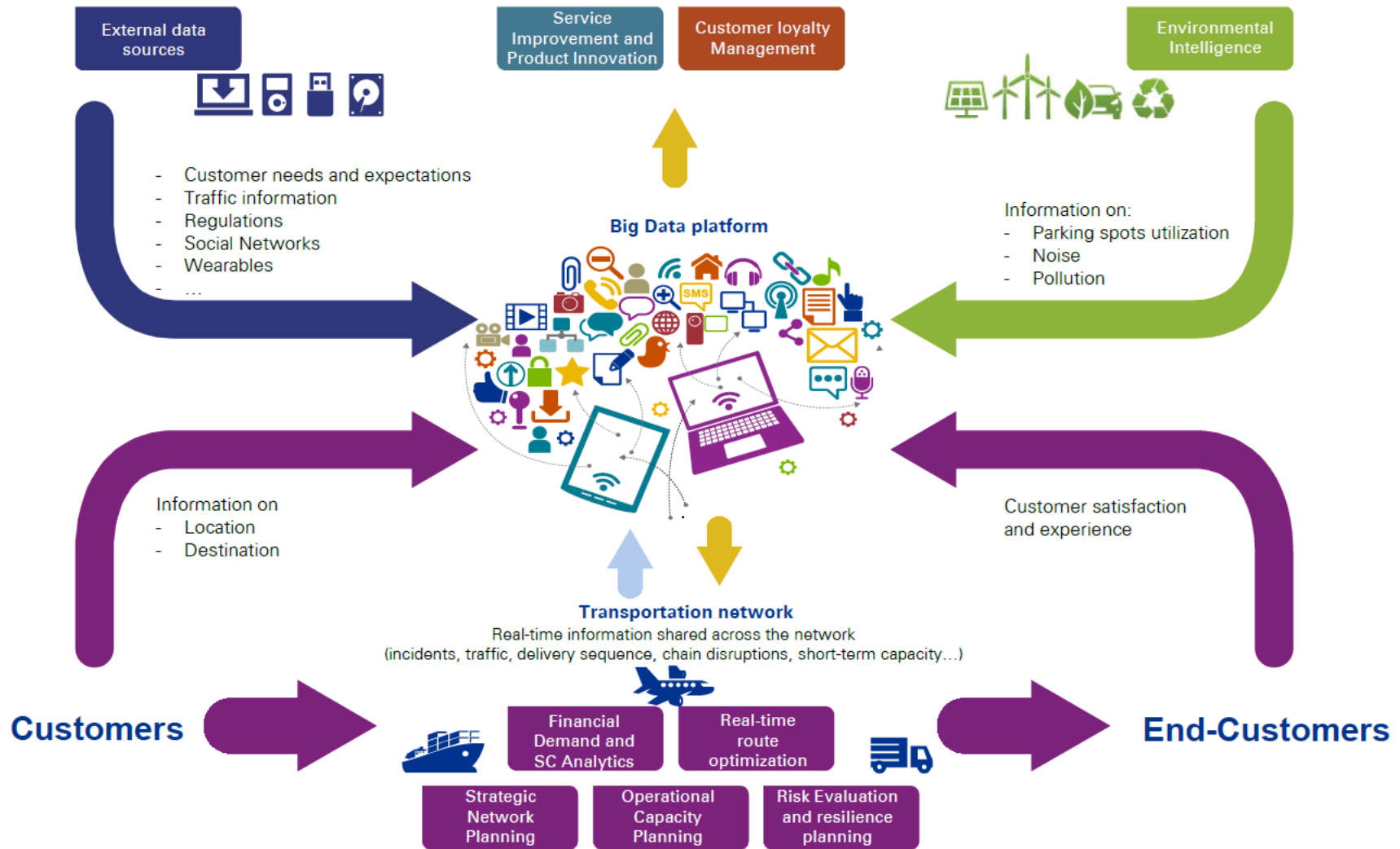
Big data and Logistics



Quelle: 2015 KPMG Luxembourg, big data: the future of logistics

Big data and the logistics industry should actually be a dream team. Logistics service providers move masses of goods and there is constantly more and more of it. At the same time, they gather data sets that are just waiting to be turned into information that supports decisions. They capture and track the origin and the destination of the shipments, their size, weight, and their current location.

Digitalization in Supply Chain



Quelle: 2015 KPMG Luxembourg, big data: the future of logistics

Big Data Analytics in Supply Chain – „4Vs „

- **Volume:** referring to the amount of data
- **Velocity:** referring to frequency or speed by which data is generated and delivered
- **Veracity:** referring to data quality
- **Value:** referring to the benefits from the analysis and use of big data

Seminar Topics

1. Big Data modeling and analytics - review of methods, models, algorithms

- a) Innovative methods for big data analytics
- b) OR techniques with a particular emphasis on algorithms for BDA
- c) Forecasting models by using big data and business analytics
- d) Data visualization

2. Big Data modeling and analytics - review of Decision Making methods and real case studies

- a) Analyzing customer preferences based on environmental impacts
- b) Value, Performance measures and models for decisions using BDA
- c) Use of non-parametric methods such as Fuzzy Cognitive Mapping to support quantitative management decision making
- d) Real case studies focusing on BDA adoption for supply chains and logistics , such as e-commerce, digitalization in production.

Seminar Topics

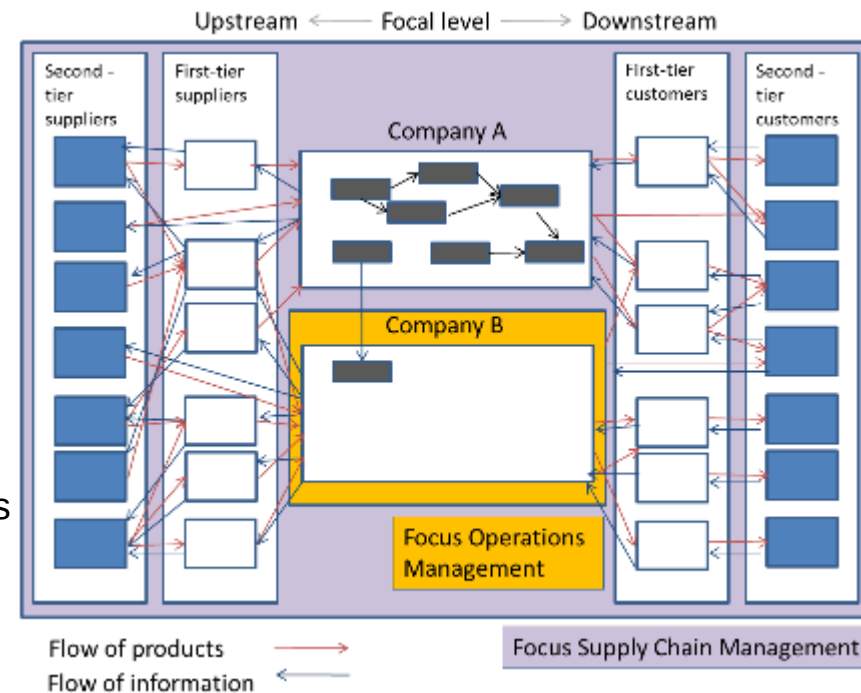
3. Digitalization in Supply Chain and Logistics – Automotive Industry 1

a) Process analyze (Procurement, Production, Distribution and Disposal Logistics)

- how do the characteristics of the different manufacturing tiers within the supply chain influence the process
- Systematic description
- process simulation and visualization
- Sankey diagram, Layout depiction

b) Impacts and requirements analyze

- Social, economic and environmental aspects
- Strategic, tactical and operational levels
- Hardware, software



Seminar Topics

4. Digitalization in Supply Chain and Logistics – Automotive Industry 2

a) Digital disposition and documentation

- From Lean Production to Industry 4.0: comparison and improvement
- Resource, production, distribution plan
- Coordination of complexity in dynamic environment

b) Performance evaluation and optimization in supply chain

- review of evaluation and optimization methods, models, algorithms
- Impact & criteria - Evaluation index system
- Classification and decision making
- Evaluation model to scenarios and case study

Seminar Topics

5. Digitalization in Supply Chain and Logistics – Pharmaceutical Industry 1

- a) Process analyze (Procurement, Production, Distribution and Disposal Logistics)
 - how do the characteristics of the different manufacturing tiers within the supply chain influence the process
 - Systematic description
 - process simulation and visualization
 - Sankey diagram, Layout depiction

- b) Impacts and requirements analyze
 - Social, economic and environmental aspects
 - Strategic, tactical and operational levels
 - Hardware, software

Seminar Topics

6. Digitalization in Supply Chain and Logistics – Pharmaceutical Industry 2

a) Digital disposition and documentation

- From Lean Production to Industry 4.0: comparison and improvement
- Resource, production, distribution plan
- Coordination of complexity in dynamic environment

b) Performance evaluation and optimization in supply chain

- review of evaluation and optimization methods, models, algorithms
- Impact & criteria - Evaluation index system
- Classification and decision making
- Evaluation model to scenarios and case study

Organisationsinformation

Wichtige Punkte

Bevorzugte Sprache
Gruppe
Final Presentation

English (Deutsch ist auch ok)
Max. 4 Studenten
20 Min. je Group

Wichtige Termine

Einführungs- und Beratungspresentation 20. Apr.2017

Anmeldungsfrist: 21. Apr.2017 ab 9 Uhr - 30. Apr. 2017 bis 23:55 Uhr

Erster Betreuungstermin 03. Mai. 2017

Zweiter Betreuungstermin Mitte Juni. 2017

Final Presentation Mitte Juli. 2017

Abgabe

1 x gedruckt (geheftet), 15 – 20 Seiten 1 x CD mit Word Dokument (eingeklebt)

Anmeldung zum Seminar

Moodle

<https://moodle.uni-due.de/course/view.php?id=10464>

Einschreibeschlüssel: tulsose

Einschreibung direkt in Ihr(e) Thema (Gruppe)!

Bitte beachten Sie:

Anmeldungen sind nur verbindlich über Moodle möglich!

Es ist keine spätere Abmeldung mehr möglich!

Anmeldung zum Seminar

Big Data in Supply Chain and Logistics (WS16/17)

[Dashboard](#) ► [Wintersemester 2016/17](#) ► [Ingenieurwissenschaften](#) ► [Transportsysteme und -logistik](#) ► [Big Data in Supply Chain and Logistics \(WS16/17\)](#)

NAVIGATION

Dashboard

- Website-Start
- Website

Dieser Kurs

- ▼ **Big Data in Supply Chain and Logistics (WS16/17)**
 - Teilnehmer/innen
 - Auszeichnungen
 - Allgemeines
 - Organisation
 - Seminarablauf / Course schedule
 - Thema 1: Big Data in Transportation and Route Plan...
 - Thema 2: Big Data in Supply Chain
 - Thema 3: Big Data in Manufacturing and Production...
 - Thema 4: Big Data in Inventory Manafement and Ware...
 - Thema 5: Big Data in forcasting and risk management
 - Seminarergebnisse / Results
- Meine Kurse
- Kurse

Big data and the logistics industry should actually be a dream team. Logistics service providers move masses of goods and there is constantly more and more of it. At the same time, they gather data sets that are just waiting to be turned into information that supports decisions. They capture and track the origin and the destination of the shipments, their size, weight, and their current location.

Recent studies in the field of big data analytics have come up with tools and techniques to make data driven decisions. Analyzing and interpreting data in real time can assist enterprises in taking better and faster decisions to create new products and services for their customers, optimizing the product process. It will also help them to improve their logistics and supply chain design and management by reducing costs and forecasting risks.

Bei Interesse schreiben Sie sich bitte direkt in das ausgewählte Thema (Gruppe) ein. Der Einschreibeschlüssel lautet: tulsose

Bitte beachten Sie: Anmeldungen ausschließlich über Moodle. Danach ist keine Abmeldung mehr möglich!

If you want to participate, please register direct into your choosen topic (group). The key is "tulsose".

Please notice: Participation only via Moodle. Thereafter is no possible checkout.

 Nachrichtenforum

 Anmeldung

Klick hier zur
Anmeldung!

Organisation

 Seminarbedingungen

 Seminarpräsentation

Anmeldung zum Seminar

Big Data in Supply Chain and Logistics (WS16/17)

UNIVERSITÄT
DUISBURG
ESSEN

Offen im Denken

[Dashboard](#) ▶ [Wintersemester 2016/17](#) ▶ [Ingenieurwissenschaften](#) ▶ [Transportsysteme und -logistik](#) ▶ [Big Data in Supply Chain and Logistics \(WS16/17\)](#) ▶ [Allgemeines](#) ▶ [Anmeldung](#)

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📧 Nachrichtenforum

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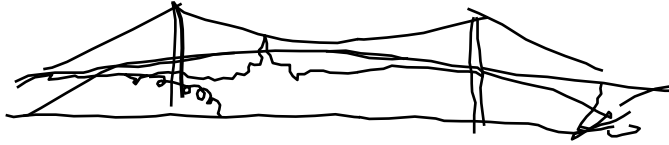
Getrennte Gruppen

0 Antworten anzeigen

Gruppenwahl	Gruppe Beschreibungen anzeigen	Gruppenmitglieder / Maximalzahl	Gruppenmitglieder Anzeigen
☐	Thema 1 - Gruppe 1	0 / 4	
☐	Thema 2 - Gruppe 2	0 / 4	
☐	Thema 3 - Gruppe 3	0 / 4	
☐	Thema 4 - Gruppe 4	0 / 4	
☐	Thema 5 - Gruppe 5	0 / 4	

Meine Wahl speichern

Direkt in Thema
Einschreibung!



Vielen Dank für Ihre Aufmerksamkeit!



**BIG DATA
IN LOGISTICS**

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