



Minor eBusiness NEU: Analytics in eServices and Operations

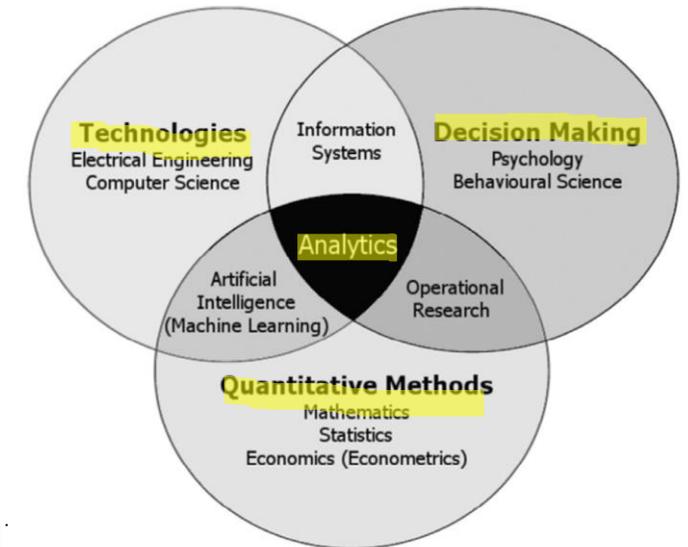
Univ.-Prof. Dr. Jan Fabian Ehmke, Assoz.-Prof. Dr. Wenjie Tang





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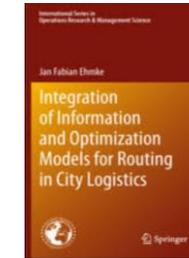
- New minor on the **interface of Business Analytics and E-Business**
- Methodologically and research-oriented with examples from relevant applications
- Goal: Solid methodological knowledge for the **statistically sound analysis of large amounts of data** in business decision making, esp. eServices and Operations
- Provide access to Business Analytics methods for BWL students
- Allow for extending of visualization knowledge for Business Analytics student





Univ. - Prof. Dr. Jan Fabian Ehmke – Curriculum Vitae

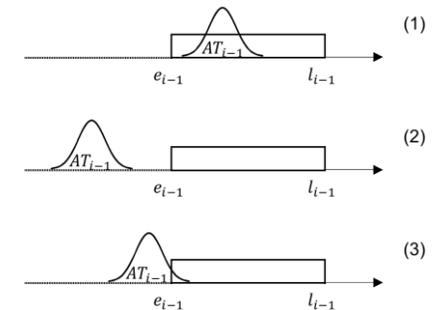
- 2007 | TU Braunschweig: Diplom Wirtschaftsinformatik
- 2011 | TU Braunschweig: Dissertation *Integration of Information and Optimization Models for Routing in City Logistics*
- 2012 | U Iowa: PostDoc at Department of Business Analytics
- 2013 | FU Berlin: Assistant Professor Advanced Business Analytics
- 2016 | Viadrina: Associate Professor BWL/Business Analytics
- 2017 | OVGU: Professor of BWL/Management Science
- Since April 2020: Professor of Business Analytics @UV





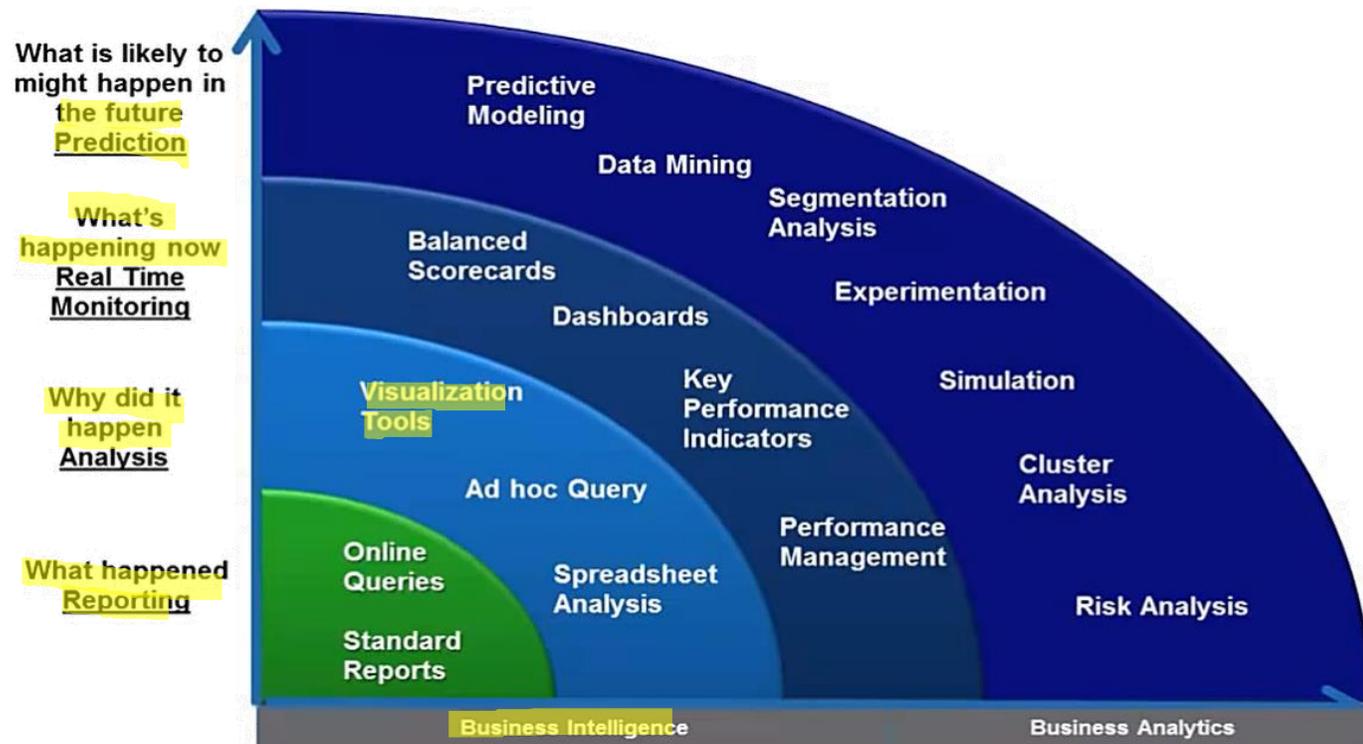
Teaching and Research

- Research Methods
 - Business Analytics and Data Mining
 - Dynamic and Stochastic Optimization
- Teaching
 - Business Analytics, Doing Data Science
 - Advanced Computational Transportation
- Recent Research Projects
 - E-Fulfillment
 - Intelligent Urban Transportation
 - Reliable Multi-Modal Travel
 - Customer-induced Orchestration of Services





What is Business Analytics?



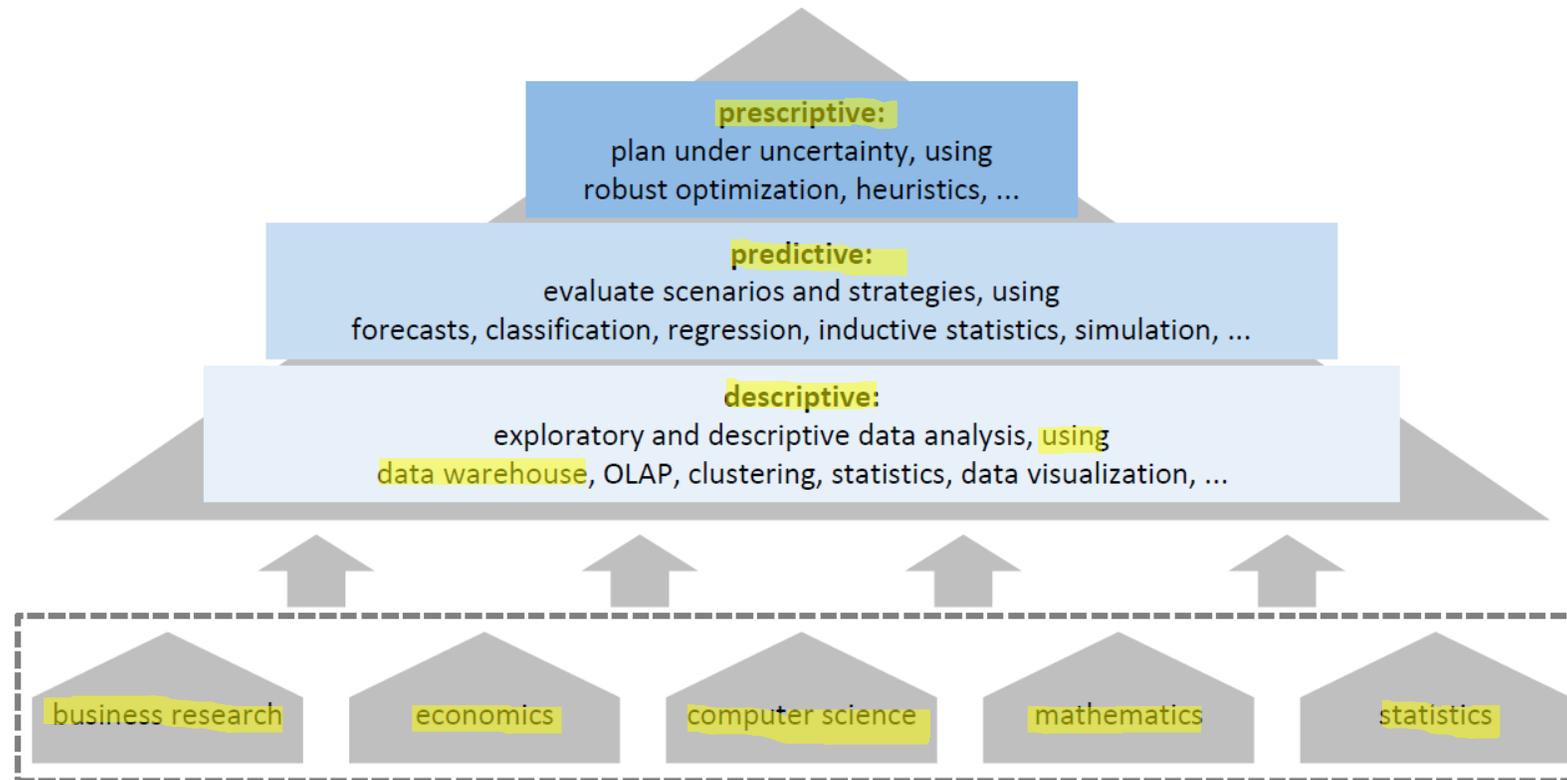
INFORMS defines **analytics** as the **scientific process of transforming data into insights for the purpose of making better decisions.**

Analytics is always an **action-driven approach**. There is always a decision to be made when we look at doing analytics.

Business analytics: ensure our analysis is driving **business action**.

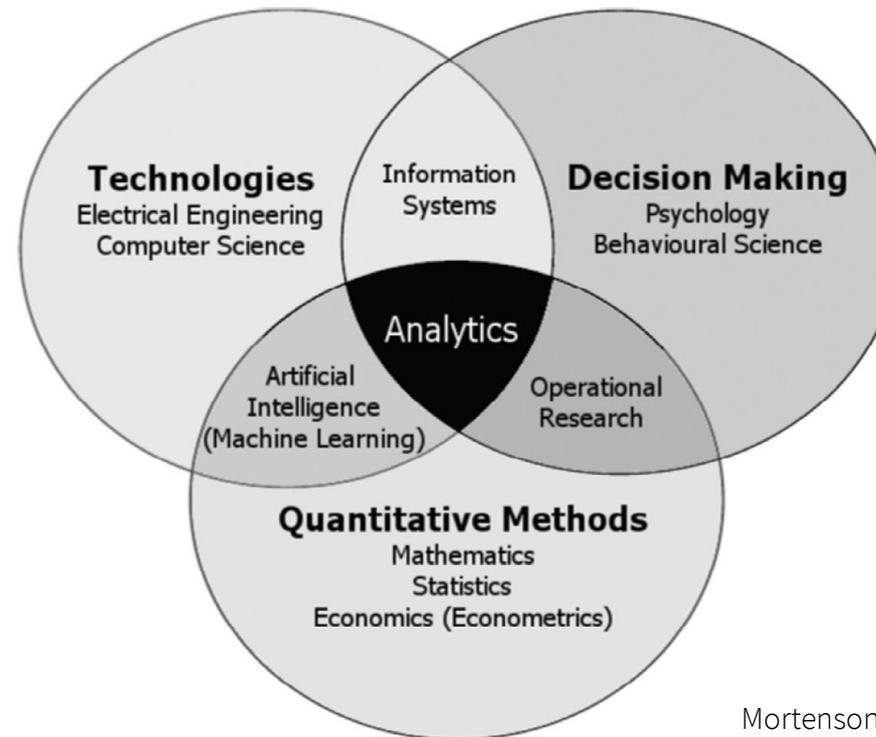


Methods of Business Analytics





Analytics and Related Disciplines



Mortenson et al. (2015)



Minor eBusiness NEU (Master BWL)

Fundamentals (12 ECTS)	Statistical Learning and Analytics (Tang, 3 SSt, 6 ECTS)	Business Intelligence & Advanced Analytics (Business Intelligence, Data Warehouse, Data Mining, OLAP, Big Data, Predictive Analytics) (Ronaghi & Karragiannis, 3 SSt, 6 ECTS)	Transportation Analytics & Optimization Tools* (Vehicle Routing Problems, Exact and Heuristic Optimization Techniques, Metaheuristics, Implementation) (Tilk, 3 SSt, 6 ECTS)
	Advanced Business Analytics (Data understanding, Supervised & Unsupervised Learning, Association Analysis, Model Evaluation) (Ehmke, 3 SSt, 6 ECTS)		
Applied/ Special Topics	Applications of eServices and Operations (2 SSt, 4 ECTS)		
	Simulation I (Söffker, Stefan)	Transportation Analytics* (Tilk)	Metaheuristics (Scherr)
Seminar	Advances in eServices (2 SSt, 4 ECTS)		
	Seminars on Recent Topics offered by Ehmke, Söffker, Strauss, Tang		

* If you have chosen this class as fundamental, it cannot be chosen as elective and vice versa.

 Not offered in summer 2023



Minor eBusiness NEU (Master Business Analytics)

Fundamentals (12 ECTS)	 Statistical Learning and Analytics (Tang, 3 SSt, 6 ECTS) 	Transportation Analytics & Optimization Tools* (Vehicle Routing Problems, Exact and Heuristic Optimization Techniques, Metaheuristics, Implementation) (Tilk, 3 SSt, 6 ECTS)	
	Visualisation and Visual Data Analysis (Visual design principles, data acquisition and representation, data interaction principles, evaluation of visual analysis systems) (Möller, 3 SSt, 6 ECTS)		
Applied/ Special Topics	Applications of eServices and Operations (2 SSt, 4 ECTS)		
	Simulation I (Söffker, Stefan)	Transportation Analytics* (Tilk)	Metaheuristics (Scherr)
	Advances in eServices (2 SSt, 4 ECTS)		
Seminar	Seminars on Recent Topics offered by Ehmke, Söffker, Strauss, Tang		

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Technical Details

- Note that when registering through u:space, you need to select
 - *Eb: KU Einführung ins Electronic Business (4 ECTS, pi)*
 - *Eb: UE Case Studies of E-Business and e-Logistics (4, ECTS, pi)*
 - *Eb: SE Neuere Entwicklungen im e-Business und e-Logistics (4 ECTS, pi)*as „Studienplanpunkt“ for the Fundamentals courses.

- For the electives SE Advances in e-Services (4 ECTS), KU Special Topics in e-Services (4 ECTS) and KU Applied Topics in e-Services (4 ECTS), you need to select
 - *eb: Wahllehrveranstaltung E-Business (8ECTS)*as „Studienplanpunkt“.

- The SSC will take care that everything corresponds with the new lectures and corresponding ECTS.





Interested in writing your Master thesis with us?

- We offer topics in the area of Business and Transportation Analytics, such as:
 - Customer experience in multimodal travel itineraries
 - Truck and drone delivery in the field of e-fulfillment
 - Prediction of traveler behavior
- Our expectations:
 - Your minor is eBusiness, Smart Production or Supply Chain Management
 - You are interested in and have experience with quantitative techniques (mathematical modelling, programming, analysis of large amounts of data, etc.)
- More information:
 - Have a look at the potential topics in [our list](#)
 - Suggest your own topic and submit an exposé
 - More details [here](#)





Minor eBusiness NEU: Analytics in eServices and Operations

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- For more information, see details on the minor's webpage:
<https://bda.univie.ac.at/teaching/master/minor-analytics-in-eservices-and-operations/>
- Further questions: please contact us via busan.bda@univie.ac.at

