Forschungsinstitut –
Unternehmensführung, Logistik und Produktion
Univ.-Prof. Dr. Dr. h. c. mult. Horst Wildemann

Bachelorarbeit

Identifizierung von Case Studies zu datengetriebenen Produktdesign

Fragestellung:	Wie lassen sich systematisch Case Studies von datengetriebenen Produktdesign ermitteln?
Beginn:	Ab sofort möglich
Bewerbung:	Kurzbewerbung mit Lebenslauf und Leistungsnachweis bitte an dominic.schober@tum.de

Ausgangssituation und Problemstellung

Der rasche technologische Wandel und sich ändernde Kundenbedürfnisse stellen die Unternehmen bei der Gestaltung ihrer Produkte vor immer größere Herausforderungen. Produkte müssen ein breites Spektrum an Kundenbedürfnissen erfüllen, da Kunden weltweit Produkte für unterschiedliche Märkte nachfragen. Gleichzeitig werden die Produktlebenszyklen kürzer und Nachhaltigkeit immer wichtiger. Unternehmen müssen deshalb am Design- und Entwicklungsprozess ihrer Produkte ansetzen. In der heutigen Geschäftswelt haben Unternehmen Zugang zu einer Fülle von Datenquellen, die oft ungenutzt bleiben. Produktdesign ist keine Ausnahme von diesem Trend. Zukünftige Produkte erfordern eine verstärkte Interaktion zwischen Benutzer, Produkt und Hersteller. Designer müssen sich auf Daten stützen, um Kundenbedürfnisse zu erkennen und darauf zu reagieren.

In practice, the potential of Data-Driven Product Design for developing new products is becoming increasingly recognized. Currently, most use cases are based on existing data sources, such as online reviews, databases and social media. Data-driven product design involves using data to inform the development of products. In recent years, many research papers have emerged in this field, emphasizing the associated challenges. The main problem is the lack of concrete knowledge about how to implement and utilize data-driven product design effectively. Case studies offer an opportunity to learn from existing implementations and provide inspiration for your own projects.

Inhalt der Bachelorarbeit

- **Einarbeitung in die Literatur zu Data-Driven Product Design und Case Study Research**
- **Erstellung einer Methodik zur Identifikation aller relevanten Case Studies auf empirischer und literaturbasierter Basis**
- **Gegebenenfalls Recherche und Zusammentragen der Case Studies**

Allgemeines

Eigene Themen sowie externe Arbeiten sind nach Absprache ebenfalls möglich. Der Beginn ist ab sofort möglich. Eine zeitnahe Durchführung ist erwünscht.

Kontakt:

Dominic Schober (dominic.schober@tum.de)

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Bachelor's thesis

Identification of Case Studies on Data-Driven Product Design

Topic Question:	How can case studies of Data-Driven Product Design be systematically identified?
Start:	Possible as of now
Application:	Short application with curriculum vitae and transcript of records to dominic.schober@tum.de

Initial situation and problem definition

Companies are facing ever greater challenges when designing their products due to rapid technological change and evolving customer needs. Products must meet a wide range of needs, as customers worldwide require products for various markets. At the same time, product life cycles are getting shorter, and sustainability is becoming increasingly important. Companies must therefore focus on designing and developing their products. In today's business world, companies have access to a wealth of data sources that often remain unused. Product design is no exception to this trend. Future products will require greater interaction between users, products, and manufacturers. Designers must use data to identify and respond to customer needs.

Practitioners are increasingly recognizing the potential of Data Driven Design for creating new products and systems. Data Driven Design use cases currently mostly rely on existing data sources such as online reviews, databases, or social media. The research field is at an early stage. Generally, the term 'Data Driven Design' is used to describe the use of data during the product design process. Most of the research on Data Driven Design has only emerged in recent years and is emphasizing the challenges of Data Driven Design. The main issue identified is a lack of concrete knowledge on how to implement and make use of Data Driven Design. However, an investigation into the consumer perspective on the perception of Data-Driven Design has not yet been conducted.

Thesis parts

- **Familiarization with the literature on Data-Driven Product Design and Case Study Research**
- **Creation of a methodology to identify relevant case studies on an empirical and literature-based basis**
- **Possibly searching for and compiling the case studies**

General

Own topics and external works on Data-Driven Product Design are by arrangement also possible. It is possible to start immediately. A timely execution is encouraged.

Contact:

Dominic Schober (dominic.schober@tum.de)