



## TABLE OF CONTENT

Key Note: Sustainable Development – Technology – Culture. Remarks to their Relationships	6
<i>Gerhard Banse</i>	
Industrial Engineering and Management Study Programs in Austria: Status Quo 2018	17
<i>Bernd Markus Zunk, Sigrid Weller</i>	
Lean Education: provider of system-thinking, ethics and sustainability competencies	23
<i>Anabela C. Alves</i>	
The smart supply chain and supply chain collaboration	30
<i>Carina Pimentel, Susana Azevedo, João Matias</i>	
Ethics and tradition as a source of innovation. The German Armed Forces tradition as an example case	37
<i>Eberhard Birk</i>	
Constituency and Reliability of Questionnaires	43
<i>Adrian Stere Paris, Constantin Târcolea</i>	
Marketing Research for Innovating the Teaching Methods at the Film University	50
<i>Laura Lăzărescu-Thois</i>	

Frameworks for Shaping Sustainable Cities	55
<i>Ildiko Tulbure</i>	
The future of electric cars	62
<i>Rickarda-Maria Raduta, Razvan-Andrei Tudor, Andrei Niculescu</i>	
Lean Management and its Implementation in Romanian Companies	68
<i>Andreea-Gabriela Bratu, Ioana Raluca Guică, Elena Laura Trifan</i>	



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**Key Note: Sustainable Development – Technology – Culture.**  
**Remarks to their Relationships**

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**ABSTRACT**

During the past decade research in the field of Sustainable Development (SD) has taken more and more attention to the interdependences between SD and technology (T) at the one hand and between SD and culture (C) (in terms of requirements, linkages, connectivity, behavioural and educational content) at the other hand. This offers the chances (i) to clear the importance of T for SD, (ii) to differ “cultural sustainability” from related perspectives (i.e. a regional one!) and (iii) to look closer to these interdependencies of SD, T and C in a multidisciplinary “overall view”. But: SD, T and C are fuzzy terms. In the discussed relationships T means sociotechnical systems in contexts of designing/production and using, C means “patterns of” and “practices of” (perception, behavior, communication, consumption, production...). So we must discuss a “triple”: SD – T – C. The importance of C for T begins with the selection of fields of technological development, goes up to real specific technological solutions and their acceptance (which includes preferences and evaluation criteria as well as their hierarchy) and ends at patterns and practices of using (not only in an individual manner). The relationships between SD and T are related to the question of the contribution of a specific technological solution to more or less SD (especially for efficiency, sufficiency, and consistency). This leads to three problems: (i) the problem of knowledge for, (ii) the problem of evaluation of (this includes technology assessment!) and (iii) the problem of implementation of technological solution(s). The discussion on C and SD takes place on a high abstract level so far, it’s about the concept of C on the one hand and to (culturally) blind spots in the current debate on sustainability on the other hand. The “C” (“cultivation”) of SD is the “Sustainabilization” of the C lacking sustainability by today. The main and important question that arises concretely is the question of the cultural connectivity of sustainable solutions (mostly T based) nowadays.

**KEYWORDS:** Sustainable Development, Technology, Culture, Technology-Culture Relationship.

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**Industrial Engineering and Management Study Programs in  
Austria: Status Quo 2018**

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**ABSTRACT**

Industrial Engineering and Management (IEM) graduates are still in high demand in the labour market throughout Europe. From the point of view of Austrian Higher Education Institutions (HEIs) that is very gratifying. However, the high demand in industry during the last years lead to the introduction of many additional industry-driven IEM degree programs in Austria. This causes a dilution of the high quality standards of the IEM education established by the Austrian, German and Swiss Associations of IEM. Therefore, this study aims at an investigation of the educational standards within the existing IEM study programs at HEIs in Austria and presents an update of a former empirical IEM study conducted in 2014. Based on the analysis of primary data derived from two survey studies among IEM students and IEM professionals the results of this study provide insights for HEIs, human resources managers (HRMs) in firms as well as prospective IEM students.

**KEYWORDS:** Higher Education Institutions, Study Programs, Industrial Engineering and Management, Qualification

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## **Innovation and Sustainability 2018 Innovation, Sustainability and Ethics**



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### **Lean Education: provider of system-thinking, ethics and sustainability competencies**

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#### **ABSTRACT**

Lean Education (LE) derives from a methodology that emerged in the industry and nowadays was spread to all industries and services, including the education services, not only as a way to improve these services but, more important, as a pedagogical platform to innovate the learners curricula and better prepare them to professional world. Lean Education drives content and competency mastery, providing system-thinking, ethics and sustainability competencies to future professionals. The pertinence of professionals, engineers or others, to learn Lean Thinking principles and the need to educate all people on those is admitted by industry and academics communities. This is the glue that link academic and professional worlds that have been separated for a long time by an invisible barrier apart them from working together. Nevertheless, the fact is that academia is preparing the future professionals and to achieve this preparation a better match between what professional needs and academic teaches must be in tune. Despite the important role of the academy in forecasting future needs, practitioners are generally in a better position to do so because they are closer to the marketplace and to their corresponding needs. So, a joined work must be done between these two worlds adopting a common platform of understanding and practice and Lean Education is capable to provide this.

**KEYWORDS:** Lean Education; competencies, System-thinking, Sustainability, Ethics.

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## **The smart supply chain and supply chain collaboration**

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### **ABSTRACT**

With the advent of the Smart Manufacturing concept there is a growing interest from academics and practitioners in the study of its importance and effects on the Supply Chain Management (SCM) field. Thus, the aim of this work is to study the influence of Smart Manufacturing (SM) technologies in the Supply Chain (SC) collaborative relationships among SC partners and to determine levels of incorporation of those SM technologies in the SCM process as well. In this sense, a presentation of a summary of the literature is firstly included. Secondly, a conceptual model is presented to support a future case study research.

**KEYWORDS:** Smart Supply Chain; Smart Manufacturing; Supply Chain Collaboration; Emerging Technologies

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**Ethics and tradition as a source of innovation. The German  
Armed Forces tradition as an example case**

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**ABSTRACT**

With the advent of the Smart Manufacturing concept there is a growing interest from academics and practitioners in the study of its importance and effect on the Supply Chain Management (SCM) field. Thus, the aim of this work is to study the influence of Smart Manufacturing (SM) technologies in the Supply Chain (SC) collaborative relationships among SC partners and to determine levels of incorporation of those SM technologies in the SCM process as well. In this sense, a presentation of a summary of the literature is firstly included. Secondly, a conceptual model is presented to support a future case study research.

**KEYWORDS:** Ethics, Tradition, Innovation, Armed Forces.

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## **Constituency and Reliability of Questionnaires**

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### **ABSTRACT**

The paper offers an interesting solution to solve the quality and marketing problems with design applications of the surveys by means of the modern statistical tools. The study proposes a comprehensive description of a computer aided procedure for the analysis of the consistency and reliability of questionnaires. The paper details the conditions and meaning of a questionnaire using special Cronbach's alpha index. An important index of measurement quality is the degree to which a test score is consistent. The quality of the questionnaire as a whole is assessed by estimating its internal consistency (reliability) and is statistically associated with positive organizational performance. Surveys analysis is especially valuable in improving questions which will be used again in later tests.

A questionnaire example, which consisted of six questions and seventeen respondents, was employed to present some statistical evaluations of the quality. For each omitted query the coefficients score is over the limit value from above, which consolidates the general Cronbach's alpha score 0,8530. A matrix scatter plot displays the individual scatter plots for the correlations. The numerical results were obtained on different software ways of data processing and were comparable.

**KEYWORDS:** questionnaire, consistency, reliability, Cronbach's alpha index

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**Marketing Research for Innovating the Teaching Methods at  
the Film University**

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**ABSTRACT**

A market research about the attitude towards Romanian films serves as a starting point in innovating teaching methods at the Film University, Bucharest. Knowing what the spectators appreciate regarding movies, will help students and filmmakers focusing not only on their own artistic ideas but also on the preferences of their audience.

**KEYWORDS:** market research, filmmaking, attitude, Romanian cinema

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## Innovation and Sustainability 2018 Innovation, Sustainability and Ethics



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### Frameworks for Shaping Sustainable Cities

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#### ABSTRACT

Nowadays humanity is confronted with a number of environmental and social challenges, being stringent need to debate and solve them. By this sustainable development has indeed been approved as the potential answer to global complex challenges of economic, ecological and social nature. Currently a hard debate takes place concerning its successful operationalisation on different levels. Gaining operationalisation strategies on local level means implementing urban sustainability for cities. The desire to shape sustainable cities is worldwide a pretty debated topic, also in Eastern European countries. In this regard recent debated strategies are involving innovation, having as basic elements the concept of *decoupling* and avoiding *rebound-effects* especially by using *Technology Assessment*. Another newly discussed strategy is basing on using *renewable energy resources*. By applying mentioned directions together with strategies for *sustainability education*, important steps for *shaping sustainable cities* could be got. Gaining a *general methodology* would represent main advance in this field.

**KEYWORDS:** Sustainable City, Urban Development, General Methodology, Technology Assessment

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**The future of electric cars**

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**ABSTRACT**

Nowadays it is to observe that an ascending number of drivers are starting to notice and use electric vehicles. This paper aims to present some of the advantages of electric cars compared to the conventional vehicles, as well as the main obstacles encountered when purchasing them.

**KEYWORDS:** electric car, electric engine, environment-friendly, EV (Electric Vehicle), Romania

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## **Lean Management and its Implementation in Romanian Companies**

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### **ABSTRACT**

The revolutionary principles underlying Toyota's philosophy have long stirred the interest of many world-class entrepreneurs. With a crystal-clear organizational structure and a well-established production flow, both based on cultural and industrial concepts, the Toyota Production System (TPS) is presenting to date a significant profit margin in the automotive sector. The question that can be asked is whether such a philosophy can indeed be taken over by other firms outside the Toyota framework, especially in the Romanian market. The answer to this question will be gradually given in this work through a presentation of The Toyota Production System – its principles and values - and its interdependency with The Toyota Way and lean management, all of which will be followed by a case study, having an example of lean management implementation in a Romanian company as basis.

**KEYWORDS:** Lean Management, TPS, The Toyota Way, Implementation, TOPEX

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