

Available online at www.sciencedirect.com



Transportation Research Procedia 22 (2017) 509-518



19th EURO Working Group on Transportation Meeting, EWGT2016, 5-7 September 2016, Istanbul, Turkey

A General Morphological Analysis to Support Strategic Management Decisions in Public Transport Companies

Maria de Fátima Teles ^a*, Jorge Freire de Sousa ^b*

^a CP-Comboios de Portugal, E.P.E., Praça Almeida Garrett, Estação Porto São Bento, Porto, 4000-069, Portugal ^b FEUP and CEGI – INESC TEC, Rua Dr. Roberto Frias, Porto, 4200-465, Portugal

Abstract

This paper presents a General Morphological Analysis (GMA) meta-model aiming to help decision-makers wishing to integrate sustainability concerns into the company strategy. This is made by joining Operational Research (OR) analysts, decision-makers and stakeholders as participants in the problem structuring and formulation process. This is particularly relevant in societal issues, where public transport companies are particularly important. Indeed, public transport companies play a quite visible role in the dimensions of corporate social responsibility, namely because of four reasons: (i) they provide daily services crucial to mass customers' mobility; (ii) their investments are usually of high value and rather sensitive to technological development; (iii) they play a crucial role in the energy sector and (iv) are strongly dependent upon macro-policies.

© 2017 The Authors. Published by Elsevier B.V. Peer-review under responsibility of the Scientific Committee of EWGT2016.

Keywords: General Morphological Analysis; Environmental Management; Strategic-Decision Making.

1. Introduction

GMA is a problem-structuring and problem-solving technique, designed for multi-dimensional, non-quantifiable problems where causal modeling and simulation do not function well (Ritchey, 2006). The authors consider that GMA offers an opportunity to explicitly materialize and propose a possible typology of decision-making modelling methods to approach different types of problems within the discussed context. With the help of this meta-model it is

10.1016/j.trpro.2017.03.069

^{*} Corresponding author. address: mariafatimateles@gmail.com, jfsousa@fe.up.pt

Peer-review under responsibility of the Scientific Committee of EWGT2016.

possible to provide the design of different ways to address problems, promoting and enhancing the transference of knowledge to and within the public transport companies. We see companies as living 'cells' in the economic and social structure where specific characteristics (such as learning, diversity and self-organization) must be present in order to assure resilience and sustainability when dealing with problems.

The motivation and scope of the research are presented in a diagrammatic form in Figures 1 and 2. The foundations and development of the GMA to support public transport company managers are then described and deserve a close-up detail in Table 1. Finally, two examples of application of the proposed GMA to public transport decisions are presented. These applications act as a "trigger" for further research and field tests.

MOTIVATION

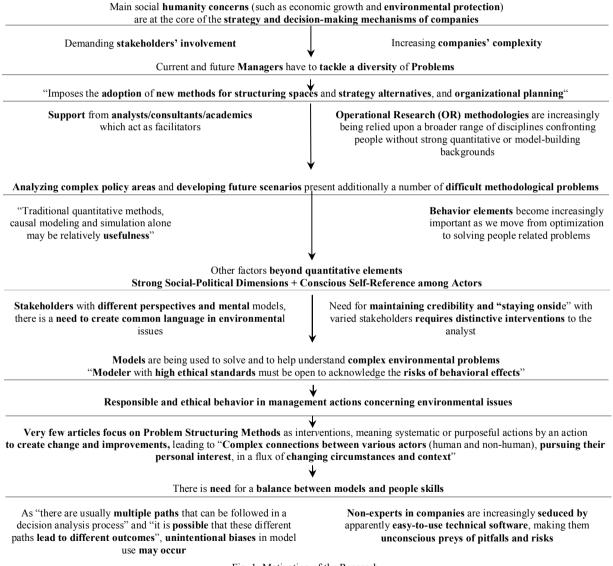


Fig. 1: Motivation of the Research

دريافت فورى 🛶 متن كامل مقاله

- امکان دانلود نسخه تمام متن مقالات انگلیسی
 امکان دانلود نسخه ترجمه شده مقالات
 پذیرش سفارش ترجمه تخصصی
 امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
 امکان دانلود رایگان ۲ صفحه اول هر مقاله
 امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
 دانلود فوری مقاله پس از پرداخت آنلاین
 پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات
- ISIArticles مرجع مقالات تخصصی ایران