

**SUSTAINABLE MOBILITY TERMINOLOGY: TOWARDS  
UNIFICATION AND STANDARDIZATION**

**TERMINOLOGIJA ODRŽIVE MOBILNOSTI: KA UJEDNAČAVANJU  
I STANDARDIZACIJI**

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**ABSTRACT**

*As the scientific and technical terminology plays one of the major roles in good-quality teaching and learning of languages for specific purposes (LSPs), this paper aims at providing a systematic insight into the problems encountered during the process of making a multilingual dictionary in the field of sustainable mobility, ICTs and sharing economy for Transport and Traffic Engineering (TTE) students. Terminological discrepancies and varieties, notional ambiguities, lack of unified and standardized specific terms in available relevant literature and other representative issues occurring in English, German, French and BCMS languages are presented and classified and solutions proposed in order to achieve a high-quality level of this and similar publications both from the standpoint of linguistics and technology.*

**Keywords:** terminology, sustainable mobility, transport(ation), sharing economy, ICTs, standardization, unification

**REZIME**

*S obzirom da naučna i tehnička terminologija ima jednu od najvažnijih uloga u obezbeđivanju kvalitetne nastave i učenja stranih jezika struke, ovaj radi ima za cilj da pruži sistematski uvid u probleme izrade budućeg višejezičnog rečnika održive mobilnosti, IKT i ekonomije deljenja namenjenog studentima Saobraćajnog fakulteta Univerziteta u Beogradu. Izložene su i i klasifikovane terminološke neujednačenosti i razlike, pojmovne dvosmislenosti, nedostatak harmonizovanih i standardizovanih termina na engleskom, nemačkom, francuskom i jezicima našeg regiona u raspoloživoj relevantnoj literaturi. Za ove i druge karakteristične teškoće, predložena su rešenja kako bi se postigao visok kvalitet ove ili sličnih publikacija, kako sa jezičkog, tako i sa tehničkog stanovišta.*

**Ključne reči:** terminologija, održiva mobilnost, transport, ekonomija deljenja, IKT, standardizacija, ujednačavanje

## 1. BACKGROUND

The ever growing pace of technological and scientific progress nowadays is not always accompanied by adequate linguistic tools support. This does not imply, though, that languages are not properly equipped or developed enough to express immediately the latest or the most sophisticated technological inventions or processes. On the contrary, even in the course of making our Basic Multilingual (Serbian, English, French, German) Dictionary of Transport and Traffic Engineering [1], we were confronted with a proliferation of terms whose meanings were, if not identical, then very similar, with just nuances distinguishing them. Synonymy is well known both in science and technology [2] and therefore should find its place in specialized dictionaries or glossaries as it will be discussed below. The above phenomenon is also due to the double nature of technical/engineering sciences. On the one hand there is the abstract, theoretical aspect of science, and the practical discourse of engineering on the other. But both discourses tend to be accurate, rigorous and articulate, so how come lexemes *autonomous vehicle*, *self-driving vehicle*, *driverless vehicle*, *robotic vehicle* are all valid? How to create a solid lexicographic publication, a pertinent reference for students and professionals that should assist and guide them through the long process of learning a foreign language for specific purposes? Not to mention that the above occurrence concerns a monolingual level only: things get more complicated when it comes to bilingual or plurilingual relations. Therefore, the latter will not be treated separately or in detail, but merely as illustrations, emphasizing specific interlingual aspects.

## 2. MONOLINGUAL CONSIDERATIONS

In spite of the multilingual character of our dictionary, the English language imposes itself first, being a *lingua franca* of today's science, especially in the field of technology and engineering [3]. Nevertheless, examples and difficulties within other treated languages at a monolingual level and their interrelations will be given too.

The initial problem for us is to choose the most adequate title for our new dictionary of sustainable transport and/or sustainable mobility, to decide between those two. We are more inclined to use the former given our affiliation. But more important, though, is the question what is the relevant terminology covered by that particular domain of sustainable development: how to delimit its terminological scope in terms of selection and number of entries? What with related disciplines and their specific terminology? Whether to opt for the most frequently used terms only, and this based on which corpora and which criterion of frequency? How to treat synonyms – by redirecting and referring one word to another? To some of those questions, the answers could be rather easily provided: i.e. starting from the very definition of sustainable transport/mobility and related terms such as ecomobility, it is clear that all the passenger and freight transport modes, infrastructures, their (non-)polluting capacities, environmental effects and indicators are to be included [4]. *Idem* for related domains – ICTs, climatology, digital economics, sharing economy and associated terminology, prove to be *sine quibus non* [5].

As for the lexicographic scope or volume, it has its academic constraints bearing in mind whom the publication is primarily addressed to (students) as well as the curricular requirements. But some other issues are more difficult to handle. So, let us try to classify them and see if a step can be taken towards a unified relevant terminological base.

### 2.1. Synonymy

Sustainable mobility and/or sustainable transport, sustainable mobility and/or ecomobility seem to refer to a single notion, at least in use [6, 7]. But are these pairs or each of the words synonyms? Sustainable and ecological outside the mentioned collocations are not, and transport and mobility although used as such imply somewhat nuanced distinctions: transport

in terms of conveyance of people or goods, while mobility in this very semantic field is a broader concept because it also includes individual movement – walking, for instance. This has its specific economic, political, social and cultural connotations. It seems that we should not wait anymore for institutions, organizations etc. to transport us, as it is more expensive and polluting. Humans are being responsabilized in order to be in charge of their own mobility in every respect. Anyhow, all these entries should be included in the dictionary, but to provide a good-quality acquisition of terminology it is to be emphasized that foreign languages should be taught and learned in context (CLIL, i.e. content and language integrated learning is a remarkable option and practice) and whenever possible in action [3, 8].

## 2.2. Notional discrepancies and ambiguities

“One of the challenges in developing a consensus around the goal of sustainable transportation is a lack of consensus around the terms used to define and describe sustainable transportation. Our goal in this project was to assemble a list of relevant terms and provide clear and simple definitions“ [9]. In this respect, the terms *transport(ation)* and *transit* are striking examples. Beside the difference between British/North American varieties, it is important to compare the respective definitions. According to the Cambridge Dictionary [10], both *transport(ation)* and *transit* are defined as “the movement of goods or people from one place to another“ and (in Business English) “a system of vehicles, such as buses, trains, aircraft, etc. for getting from one place to another“. But, the abovementioned glossary [9], i.e. the researchers and experts from California make a difference between *transit* and *transportation*, defining *transit* as a transportation service of conveying passengers and used primarily in the collocations *public/private/mass transit*. It is also specifically preferred to *public transportation*. Furthermore, there is no reference to *transit of goods or freight*, or goods *in transit*, mentioned in the Cambridge Dictionary.

## 2.3. Let's get digital: mixing terms and notions, signifiers and signified

In line with the above, although a somewhat particular linguistic case, let us take the example of *digital transition* vs. *digital transformation*. Respective definitions and meanings are not identical as testified by scientific and professional community [11]. References include as well the terms *digitization*, *digitalization* and *informatization*. In order to distinguish between those, verbal forms are suggested (*to digitize information*, *to digitalize processes*, *to informatize a system or society*). However, this is not easily feasible in a terminological publication as examples, definitions, explanations are to be avoided. Furthermore, in French for instance, *digital* (feminine form *digitale*) does exist (the Centre National de Ressources Textuelles et Lexicales gives only one meaning, not equivalent to the English one – *empreintes digitales* – fingerprints), but when relating to technology is in fact an Anglicism, its French equivalent being *numérique* (noun *numérisation*) [12]. Thus, we have both *transformation digitale* and *numérique*. Plus, the terms usage shows merging of the two meanings. “Les technologies wearable pourraient bien changer la donne, en permettant au secteur d’amorcer sa transition digitale à grande échelle...” [13] Students and learners know that terminology is constantly being misused. However, even lexicographers may be misguided when seeking advice and confirmation from experts in the field. To clarify the above dilemma, digital transformation concerns businesses and industries, so it is possible to present it lexicographically as *digital (business) transformation*, *digitale Transformation (von Geschäftsmodellen)*, or *transformation numérique/digitale (des entreprises)*, but there is still a serious “lack of consensus” whether digital transition should be considered as synonymous with digitalization or digitization. The array of terms including *digital/internet economics*, *network economics* vs. *digital* or *platform-based economy* may present double confusions. The first one is again the above case: the given signifiers digital/internet/network referring to

a single signified notion. The second one is that for economy and economics two signifiers exist with two different meanings, the economics being the economic science, not the economic activity. This is particularly interesting when we bear in mind the French polysemic equivalent *économie* or our *ekonomija*, which are signifiers with multiple referents (but let us not forget there is *ekonomika* too).

#### **2.4. Polysemy**

The focus here is on various meanings of a term within the very field of transport science and industry. A specific word may denote different concepts depending on what branch its referent belongs to - air traffic, logistics, railway, road or water transport, telecommunications or postal traffic (*port* in English or *port, gare, station* in French, *Port* in German). Words rarely, and luckily, function outside a context, but such a rare exception are dictionaries. Generally speaking, terminological ones tend to solve the problem by numbering the entries or various equivalents, or by indicating the field the term refers to. Sometimes they include illustrations or photographs. The other approach whereby identically spelled homonyms are just listed one after another without specifying whatsoever may distract the users. Unification or standardization are needed even concerning the layout of lexicographic publications that aim to be scientifically recognized. Still, the intended public/users are not a homogeneous group even in the case of TTE students. The dilemma whether to use the same pattern for the new dictionary, which means numbers for different equivalents, but not for polysemic entries as in [1], still persists.

#### **2.5. Discursive varieties**

We have all heard about soft transports, soft modes and means of transport or soft/clean/green technologies. This is not just a dichotomy between the formal vs. informal register. *Soft* and *green* in such contexts are constantly being employed by experts, analysts, journalists, politicians and may be found in a wide range of official documents (not only in speaking) instead of more formal adjectives alternative, ecological, environmental-friendly. In fact, this is just one illustration of how non-scientific terms and professional, engineering, journalistic jargons are penetrating the scientific discourse. This may sound as linguistic purism, but our students are taught TTE and related sciences, therefore it seems indispensable to make a distinction between scientific and non-scientific communication. On the other hand, when learning and teaching a foreign language such limitations are seldom sustainable, especially at basic or intermediate levels. As far as lexicography is concerned, unless encyclopedias and exhaustive large-volume dictionaries are dealt with, indications of registers, discursive types and genres prove to be rather burdensome. At the interlingual level, the issue of soft transports becomes all the more delicate. If Serbian admits *meke tehnologije* for soft technologies, it is hardly acceptable to enter *meki vidovi saobraćaja* in the dictionary as an equivalent for soft modes of transport. The solution may be to refer to clean or green transport, but it is not completely satisfying.

#### **2.6. Regional and local varieties**

British/American morphological variations concerning spelling (digitise/digitize) or suffixes (transport/transportation) can be marked rather easily in dictionaries by means of abbreviations listed in short introductions and guides to users. This also applies to broader intralingual differences for other languages (Austrian or Swiss varieties of German; Canadian, Belgian or Swiss French). The variations are not solely grammatical, though. We have already mentioned above the lexeme *transit*, characteristic of US English when coupled with *public* to denote the organized transport of passengers. Another interesting example is *paratransit*. According to the English Oxford Living Dictionaries [14], even spelling is

different since the word is spelled *para-transit* and classified as US English. It generally refers to flexible transport services or alongside-of transit [9] or demand-responsive transport [15]. However, frequent applications of the term could be limited to US American usage of accessible transport, i.e. special transport services for people with disabilities as shortened for ADA (The Americans with Disabilities Act) complementary paratransit.

Moreover, there is also some locally specific terminology. *Jitneys* or *dollar vans* are terms that cannot be classified anymore only as belonging to the informal register or US English varieties. In fact, they are semi-formal commuter vans or collective taxis associated locally to New York in the first place [16]. Consequently, such terms could be included as separate entries in the dictionary, but care should be taken to find a proper balance for other similar cases in other relevant branches of the studied field and other treated languages. And of course to give adequate multilingual equivalents, which is a very tackling task. From the standpoint of bilingual and interlingual correspondences and equivalences, we cannot avoid mentioning the issue of Anglicisms which are being uncritically introduced into all spheres of science and technology, not only in Serbian [17], but in German and French as well. However, in some particular dialectal cases such as *jitney*, English loan words seem justified if grammar and other linguistic principles and rules of a specific language are taken into account and respected.

### **3. TOWARDS UNIFICATION AND STANDARDIZATION: AVAILABLE ONLINE DOCUMENTS AND SOURCES**

In our country EUROSTAT and the National Statistics Agency recognized the need of standardized terms in order to harmonize and comply with international/European standards in the field of transport statistics [18]. In spite of a rather narrow domain, the dictionary constitutes a major reference for our mother tongue, as it concerns transport. It includes Serbian, English, French and Russian terminology along with Serbian definitions and explanations, divided in chapters according to the modes of transport (rail, road, inland waterways, maritime, oil pipeline and intermodal) and subdivided according to the more or less unified recurrent pattern (infrastructure, means of transport, enterprises, traffic, transport, energy consumption). More important, this is but the first volume as the introduction states that the next phase which is already under way will encompass environmental protection terminology, especially relating to its financial and market indicators.

National terminological standards are unavoidable references and deserve special consideration. The only officially available online corpus is the terminological base on the site of the Institute for Standardization of Serbia [19]. However, it is not exhaustive and sustainable transport terminology should be searched for through related fields and disciplines or within general standards. From the lexicographic point of view, it may be referred to in the process of terms verification, while collecting potential entries seems to be rather challenging a task since browsing is made difficult without hyperlinks between terms. It is similarly organized as the Bosnian BAS, which proposes its Terminological Dictionary of Standardization in Bosnian, Croatian, Serbian and English, with definitions in Bosnia's official languages [20]. It is important, though, that the BAS obviously plans to include French and German equivalents too, because there are sections provided to the purpose. An advanced and very useful resource from the region is the Croatian Terminology Portal [21]. Unfortunately, the project was (temporarily?) stopped in 2014 due to lack of investments and consequently does not include the latest terminological contributions. However, it is an excellent practical example because of a user-friendly interface, clear and well structured contents and exhaustive sources of various information for all language professionals, standardization experts, *et al.*

As for the EU multilingual terminological thesaurus EuroVoc [22], it is an undoubtedly useful lexicographic resource, but despite its relevant site sections Transport, Environment, Energy and its comprehensiveness as regards languages included, it has quite a limited number of sustainable transport entries. Furthermore, Serbian terminology does not seem to be always reliable since unstandardized and incongruous with corresponding vocabulary in EU official documents (*prevoz, saobraćaj, transport* for instance).

#### 4. POTENTIAL RECOMMENDATIONS

Everything aforementioned leads to the conclusion that unification and standardization of terminology relating to sustainable mobility and transport are indispensable. That is something that applies to all scientific and professional areas [17]. To achieve the best-quality results, a multidisciplinary approach imposes itself as a fundamental principle. It means that not only engineering and technological experts should collaborate in order to harmonize terminology, definitions, scopes of meaning, but they should be constantly working with linguists, lexicographers, language professionals as well. Multidisciplinary expert teams and normative bodies are to set clear rules for unification of the existing terms, but also for introduction of the new ones. Some efforts have already been taken, as stated above. But these should be conducted on a larger scale and at a more intensive pace given the speed of technological innovations. In addition, relevant bodies and institutions should also strive for generally unanimous abiding by the adopted rules and principles [17].

However, instead of ultimate recommendations or conclusions, let us underline the importance of this type of conferences and their comprehensive multidisciplinary programs which is sound and solid evidence of good practice and a raised awareness of the issue.

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