

An introduction to persuasive systems design for sustainability

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Abstract—*Persuasive systems design can be applied to applications for green information systems and technology and sustainability. Beyond sustainability, we claim that the topics addressed in this presentation will play a centermost role in most of software design in future and they will become relevant for all software business. Results from a variety of research projects utilizing the PSD model and the BCSS framework will be presented.*

Keywords—*Behavior change; Behavior Change Support Systems; BCSS; persuasive technology; Persuasive Systems Design; PSD; software engineering; sustainability*

I. INTRODUCTION

A growing number of software, systems and services are being developed to influence users' attitudes and behaviors in areas such as fostering health and promoting sustainability. This presentation will describe conceptual frameworks for researching, designing, and evaluating such systems for sustainability, known as the Persuasive Systems Design (PSD) model [1] and the Behavior Change Support System (BCSS) framework [2].

II. BACKGROUND

The Persuasive Systems Design (PSD) model describes the process for persuasive systems development and it explains what kind of software functionality may be implemented in the system [1]. The model helps select effective persuasive features, and categorizes them into primary task, computer-human dialogue, system credibility, and social influence. It also highlights fundamentals behind any such system and ways to analyze contexts for persuasion. The PSD model [1] and Behavior Change Support System (BCSS) framework [2] can be applied for a wide variety of purposes [3-10], including design and development of full-fledged software systems [11], experimental technologies and lighter applications or applications of basic technologies [12, 13], carrying out intervention outcome and user experience research [14, 15], carrying out literature reviews and systematic evaluations of applications [16-18], as well as actual software programming [19].

III. CONTRIBUTION

The topics addressed here are of critical importance for influencing use and usage behaviors of green information systems and technologies for the better and to live more sustainable everyday lives [20-22]. Moreover, we put forward the claim that the topics will play a centermost role not only in sustainability and green IS/IT but in most of software design in future and they will become relevant for

all software business. Results from a variety of research projects utilizing the PSD model and the BCSS framework will be presented.

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