

Chapter 4

ECORadar–Shakti: An Interactive Knowledge Base Contributing to the Greening of an Indian Megacity

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ABSTRACT

This chapter describes concept, design and future implementation of a knowledge based Internet portal - ECORadar Shakti India - aimed at small and medium sized enterprises of the Indian megacity Hyderabad. The portal sets out to use the simplest and most persuasive means to motivate and enable sustainability management in those enterprises that have so far taken little or no interest in this aspect of management. Hyderabad, a prime example of an emerging mega city, is a laboratory where the goal of becoming a sustainable mega city faces of difficult challenges. The intention to work towards a sustainable future will be difficult to achieve without adequate data, tools and implementation strategies. The research idea of this approach in Hyderabad was set up in a research program funded by the German Federal Ministry of Education and Research (BMBF).

INTRODUCTION

The trend towards urbanization and the increasing number and size of metropolitan areas and megacities in all parts of the world but especially in the developing and newly industrializing countries is a striking example of global change. This restructuring

and urban condensation of humankind is happening at an enormous speed that challenges innovativeness and strategic agendas of politics, economics and civil societies. Metropolitan regions and megacities are focal points of sustainable development because they give rise to massive problems in all three dimensions of sustainability. At the same time, however, opportunities arise for innovation strategies and

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for the support of efficient, compact and sustainable economic systems and lifestyles. Viewed from this perspective, such cities are more and more becoming arenas of decision about global sustainable development. Today's megacities are of particular political interest because they offer the chance for precautionary intervention and targeted urban development in order to prevent economic, social and ecological crises and to preserve or create scope for action.

Hyderabad, India's fifth largest city is one of these "megacities". The SHAKTI¹-project, funded by the German Federal Ministry of Education and Research aims to develop collaborative learning and planning processes to design and implement sustainable solutions for urban infrastructure (Schwaiger, Wall & Gotsch, 2007). Among other SHAKTI-initiatives, which aim directly at the improvement of the urban infrastructure e.g. mobility or housing, the project "ECORadar-Shakti" is aimed at small and medium sized companies (SME) of the Hyderabad metropolis. It sets out to use the simplest and most persuasive means to motivate and enable sustainability management in those enterprises that have so far taken little or no interest in this aspect of management.

The concept and prototypical implementation of ECORadar was originally developed in Germany. It was especially designed to help SMEs in Germany to enhance their corporate sustainability management systems. The purpose of this chapter is to describe the process of transferring ECORadar from a highly industrialized country - for whose needs it was originally developed - to an area with very high rates of growth in all terms. The two geographical areas could not be more different from each other: Germany with its very high standards in terms of environmental and social protection and advanced managerial knowledge base on the one side. An Indian megacity counting 6.8 million inhabitants², a population growth rate of more than 3% per year, environmental and social standards comparatively poorly developed.

In the second chapter the original concept and scope of ECORadar-Shakti as an interactive, internet-based knowledge base to support corporate sustainability management is shown. The third part describes the results of the authors research work on site in Hyderabad and derives design concepts to be applied to an ECORadar prototype which is planned to be implemented in the city of Hyderabad. The last part evaluates the project status and describes further steps of development.

THE WEB-BASED ECORADAR-TOOL

A large variety of research has been published in the field of environmental management during the last 20 years. The problem is the conversion of this knowledge into enterprise practice. Development-target of the ECORadar-portal is to reduce the information costs of those SME enterprises, which are interested in environmental management. In order to achieve this target, a strategic Community concept of the third generation has been developed in order to build a knowledge-community in the SME sector (Kreeb 2002).

The main emphasis of the ECORadar-community is on the knowledge field and the service and project-areas. The community started as a project-community. In the beginning, ECORadar, as a classical research project, is measuring the success by certain criteria focusing on timeframe and milestones (Bullinger 2002). An additional feature is the use of a virtual project team (scientists, consultants, entrepreneurs). A virtual cooperation has been realized by establishing a specific editorship- and tele-cooperation system. These project-communities represent the preliminary stage on the way to a knowledge-community. ECORadar is a knowledge network stretched beyond the limits of individual universities and enterprises.

Wenger & Snyder (2000) describes the knowledge-community as a "flexible organizational unit,

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