

## **iTREN-2030. INTEGRATED TRANSPORT AND ENERGY BASELINE UNTIL 2030**

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**CLIENT:** *European Commission - Directorate-General Energy and Transport*

**YEARS:** *2007 – on going*

### **DESCRIPTION OF ACTIVITIES**

#### ***Objectives of the project***

iTREN-2030 strategic objective is to integrate the analysis of technology, transport, energy, environment and economic developments on the grounds of a consistent baseline until 2030 by combining state-of-the-art models in these fields.

Specific objectives of iTREN-2030 comprise:

1. To draw a consistent, quantitative baseline for technology, transport, energy, environment and economic trends.
2. To compare this baseline to past experiences.
3. To demonstrate the applicability of the combined models to test and forecast a variety of policies to fulfil the user needs of policy makers in the transport and energy fields.

#### ***Methodology***

The iTREN-2030 project is pivoted on four modelling tools: TRANS-TOOLS, POLES, TREMOVE and ASTRA. Fulfilling the objectives of the project requires linking such four models to each other. TRANS-TOOLS constitutes the accepted platform for transport network analysis for the EU. The linkage with the other models will extend the forecasting and assessment capabilities of TRANS-TOOLS to the new policy issues arising from the technology, environment and energy fields.

To achieve this objective the work has been structured into the following work-packages:

In WP1 The Forum on user needs and project linkages establishes a platform to survey and take into account the user needs of policy makers in the transport and energy field. Furthermore the WP1 will establish linkages with a number of other relevant projects.

In WP2 the work will be concentrate in achieving the time horizon 2030 in the TRANS-TOOLS and TREMOVE models. Both are only running until 2020 in their most recent versions, such that their time horizon has to be extended until 2030 to enable a coherent picture for this horizon in iTREN-2030.

WP3 will deal with translating technology and energy trends into the transport world, which is a prerequisite to add the technology and energy dimension to

TRANS-TOOLS and TREMOVE. This work will draw from other projects (e.g. TRIAS, HyWays and PREMIA) and will collect the technological parameters, investment and cost implications of new energy technologies for transport. The information will be provided to fill gaps in the four tools and to support the generation of the coherent baseline of iTREN-2030.

In WP4 the baseline until 2030 with the four iTREN-2030 will be produced. The effort will be especially focused on using the tools in a coherence way, which requires 1) to identify where one tool uses an exogenous input that can be provided endogenously by one of the other three tools and to establish a link between the tools such that the exogenous input comes from the other tools, and 2) to filter out overlaps between the tools i.e. those model elements that are endogenous for more than one model. In such cases one leading model will be defined and these elements will be harmonized. The outcome will be a coherent baseline scenario until 2030 in which all technology, energy, transport, economic and demographic developments are harmonized between the four tools.

Finally, WP5 will consist of the impact assessment of scenarios of previous studies and comparison of results. Preliminarily the iTREN-2030 baseline will be compared with the reference scenario of previous studies then some policy scenarios of selected previous projects will be simulated with the four soft-linked iTREN-2030 tools to identify and analyse the differences between the policy results. Based on this analysis revised policy conclusions will be provided.

#### ***The role of TRT***

Within the project main TRT's role is the responsibility for the production of the baseline. This means defining modelling procedures to use the four model in the most efficient and coherent way, co-ordinating the activity of the modelling teams for the calibration of the tools and preparing the output of the simulations.

#### ***The Consortium***

Seven organisations co-operate in the iTREN-2030 project. The leader of the consortium is the Fraunhofer Institute for Systems and Innovation Research (ISI) of Karlsruhe (Germany), other partners are: NEA Transport Research and Training (TTR, The Netherlands),

TRT Trasporti e Territorio (Italy), Transport & Mobility Leuven (TML, Belgium), Institute for Economic Policy Research at the University of Karlsruhe (IWW, Germany), Institute for Prospective Technological

Studies European Commission (DG-JRC IPTS, Spain), Netherlands Organisation for Applied and Scientific Research (TNO Inro, The Netherlands).

