

D7.8 Methodology to measure the success of BODEGA solutions - Summary

The deliverable 7.8 presents the design methodology and criteria for measuring the success of the project solutions (e.g., recommendations, training programs). The work is based on the studies conducted in WP3 and WP4 where the aims were in understanding and modelling the human factors in border control.

The deliverable presents first the human factors in border control and after this the human factors framework developed in the project is introduced. After these, the different solutions created in the project are shortly presented. These solutions include: the recommendations created during the project, the training game for border guards (BodeGame) and for travellers (GamePass), and Decision Support System (DSS). These all solutions will be made publicly available through the internet platform, PROPER toolbox, which integrates the project results and solutions to be easily adopted by stakeholders in border control.

Development of the toolbox is an iterative process; it will be evaluated with the targeted end users and updated accordingly the comments gathered in these evaluations. The deliverable presents different methods that can be used in evaluations to ensure that the toolbox and its content (recommendations, training games and decision support system) is useful for the end users. These methods include surveys, interviews and interactive workshops. In addition, the evaluation is done against the pre-defined success criteria, which is defined in the deliverable.

The deliverable presents the advantages of using the system modelling and simulation as a tool to evaluate the impacts of various technologies and policies to border guards' human factors in border crossing point. System modelling and simulation is an appropriate method to understand holistically complex systems like border crossing. Systems modelling approaches can aid in explaining why a given service system has behaved in a certain way or how it might behave in different future scenarios. Simulation enables testing policies under different assumptions and uncertainties, which may reveal counterintuitive behaviour of the system. Simulation is also the only option when testing in practice is difficult if not infeasible. In the context of border control, it is possible to inspect the system by using several performance metrics that evaluate differences of alternative combinations of policies and technologies. The measures can also include selected human factors such as situation awareness, motivation of border guards, workload, stress, and trust. In addition, customer satisfaction, fluency of the border crossing, waiting times etc. can be included to the simulation model to show how these affect to the BGs and BC performance.

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