



## ***Small cEIS coordinAtion for Multi-tenancy and Edge services***

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### **Deliverable D8.7**

## **Techno-Economic Analysis and Commercialisation Plans**

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## **Abstract**

In this deliverable, the results of the technoeconomic analysis are presented. The technoeconomic study is built upon the business cases discussed and modelled under the related deliverable D8.4 of the SESAME project. This document presents the detailed procedure for the analysis of the SESAME project's business perspectives. Future advanced services will be delivered in a complex and dynamic environment that involves many different market players and/or actors. This document describes the market conditions and dynamics, the technologies and architectures as well as the potential for a profitable business case of a Small Cell Network Operator (SCNO).

In this new era, the role of the infrastructure owner (i.e.: SCNO) will be of high importance. SCNO is expected to provide wholesale access to Mobile Network Operators (MNOs) which, *in turn*, will offer advanced / value added services to their customers. Enhancing the user experience by such services (e.g. immersive video services) will attract customers and increase their willingness to pay.

Many market players such as content providers, advertising agencies etc., may be involved in this "SESAME" migration. The extension of new service offerings would, indeed, demand a few or several market players to take active part in this procedure. It would also demand different complexity and cost/revenue analysis for all the involved parties.

Following the definition of the appropriate service sets, and taking into account the forecasted global mobile technology penetration since launch as well as the services adoption mix, a comprehensive technoeconomic model has been developed. The model aims to simulate the scenario of a SCNO providing wholesale access to MNOs.

During the research phase of this study, a large amount of data has been taken into consideration. The inclusion of all this data, for thoroughness reasons, has resulted in a very thick document. Therefore, it has been deemed appropriate to include only the most important information in the deliverable.

The results of the model include a detailed analysis of all the investments and the cost components of the SESAME SCNO, its operational expenditures, its revenues and the financial outcome as expressed by the financial indices mentioned above.

The profitability of a SCNO deploying a network in a stadium has been presented through specific calculations. The results, in terms of the economic indices used (NPV, IRR and payback period) are interesting and also encouraging. In detail, the model calculated a Net Present Value (NPV) of ~705k€. The payback period is ~6,5 years.

Sensitivity analysis is used to identify the most critical parameters affecting the Operator's performance but also to find the impact of specific uncertainties regarding market and technical inputs. Service tariff levels have the greatest impact. In detail, as it will be shown, an increase of 20% in service tariff levels leads to more than 2 times larger NPV.

Outlining the findings of this effort, acceptable business opportunities can be observed through these calculations. Agreements with MNOs for infrastructure usage and with content providers give to SESAME SCNO enough space for business opportunities and acceptable profit margins. Operators and service providers interested in entering the market can exploit this information. The overall results of the work concerning the economic viability of the a SCNO are positive and forecast a profitable entry in the specific market.