

Audience Measurement for Outdoor Advertising based on Data Collection using GPS Devices

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1. Introduction

In intermedia competition, the poster medium competes with the print media, TV, radio, cinema, and the Internet. To position itself in the market, it needs performance data that satisfy the growing requirements of customers in a market environment characterized by increasingly fierce competition. These customers demand hard data that facilitate, if possible, comparisons between the different media.

2. Objective

SPR+ investigates the media performance of poster campaigns and individual billboards on the basis of the individual contributions made by the poster sites involved in the campaign.

Two research objects are derived from the research objective.

- Population of a conurbation
- Poster panels/poster sites

3. Methods

a.) Data acquisition



Fig. 2: SPR+ Mobilitymeter®

SPR+ defines Geocells, i.e. geographic sectors within a conurbation whose residents display homogenous mobility behaviour relative to the core city.

SPR+ records the routes of the persons in the random sample with a GPS device developed especially for this purpose (SPR+ Mobilitymeter®).

The tracks of all with GPS measured test persons correspond to the mobility of the representative random sample.

For each poster panel, an individual visibility area is defined, i.e. the geometric area from which the panel can be theoretically viewed.

Finally, the system computes the relationship between the tracks and the visibility areas, yielding passages as a result. Each passage is then weighted on the basis of the SPR+ weighting criteria, and the final result of this operation is the poster contact.

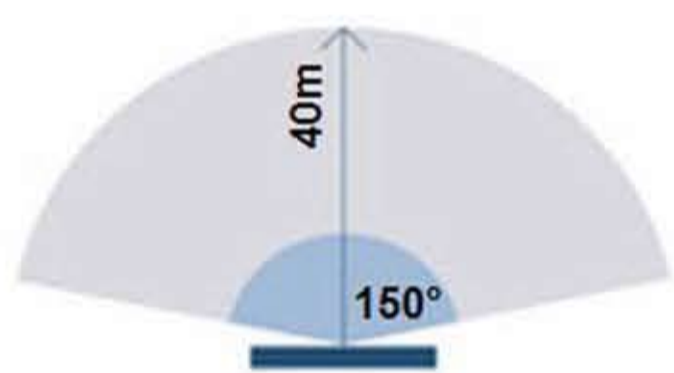


Fig. 3: Standardized visibility area of a panel

b.) Modelling

One central criterion for the rating of poster campaigns is reach. Poster reach states the percentage of population that passes a selection of posters within a previously defined interval of time.

The concept of reach has parallels with event analysis (also: survival analysis). It examines the probability of, and the time period until, the occurrence of an event.

The application of survival analysis methods such as the Kaplan-Meier method makes it possible to include objects (test persons in outdoor advertising) who drop out of the study before the event has occurred. These objects can thus be included in the study for the duration of the observation period and censored after they have dropped out.

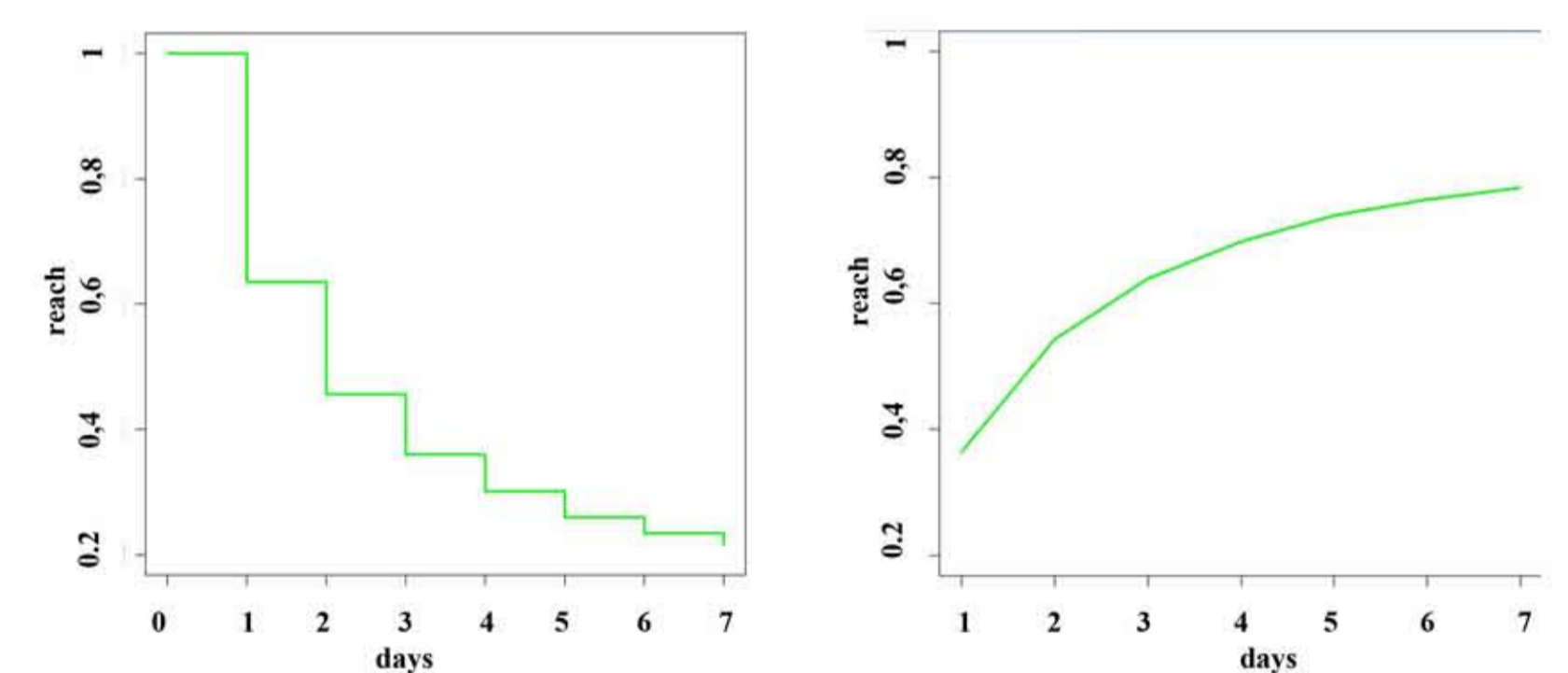


Fig. 4: Survival and reach of a poster campaign

4. Results - Planing Tool SPR+ Expert

- Total performance in a defined universe (classical performance)
- Performance in the selected target areas (classical performance)
- Performance contribution per panel (contact value)

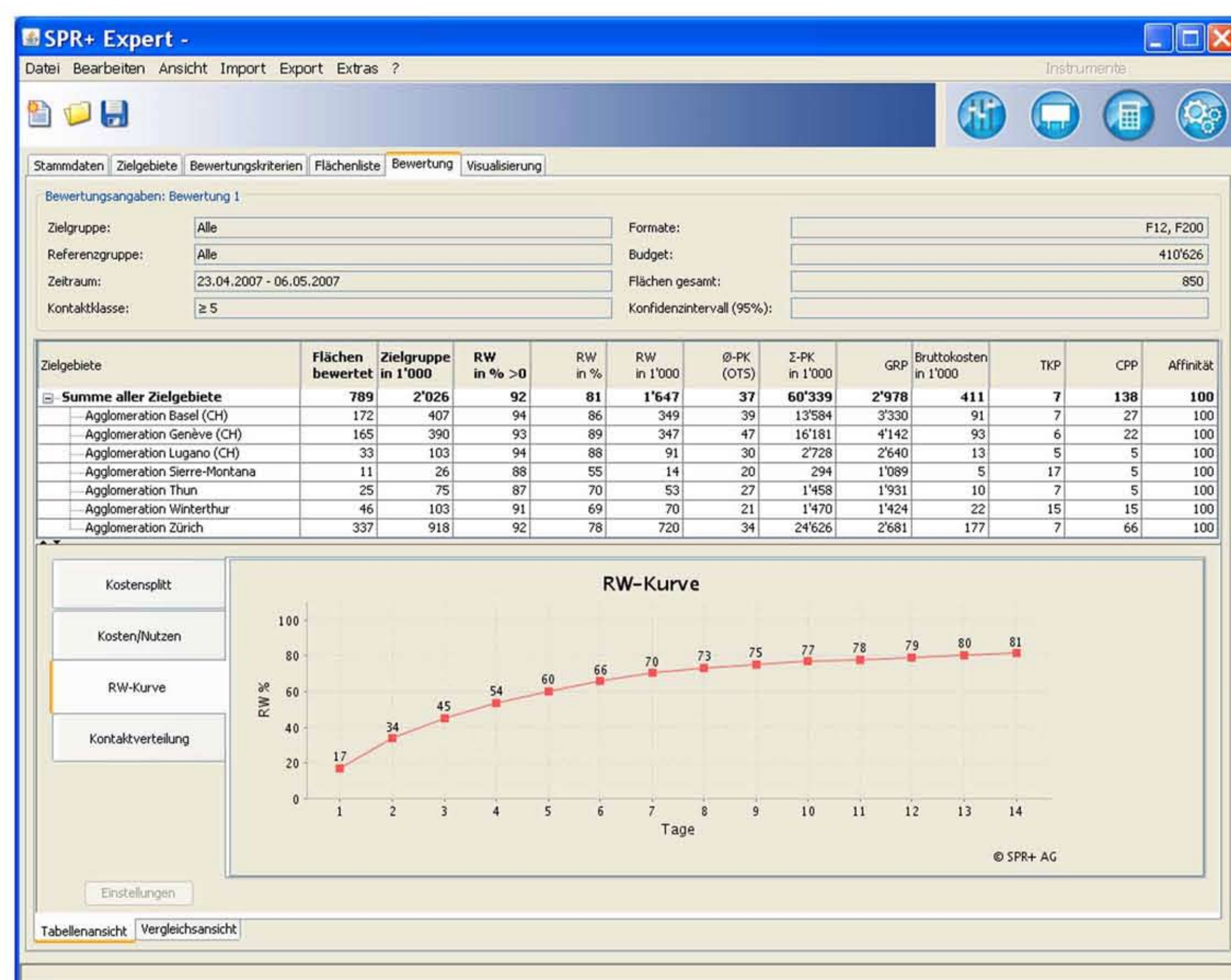


Fig 5: SPR+ Expert Planning poster campaign rate

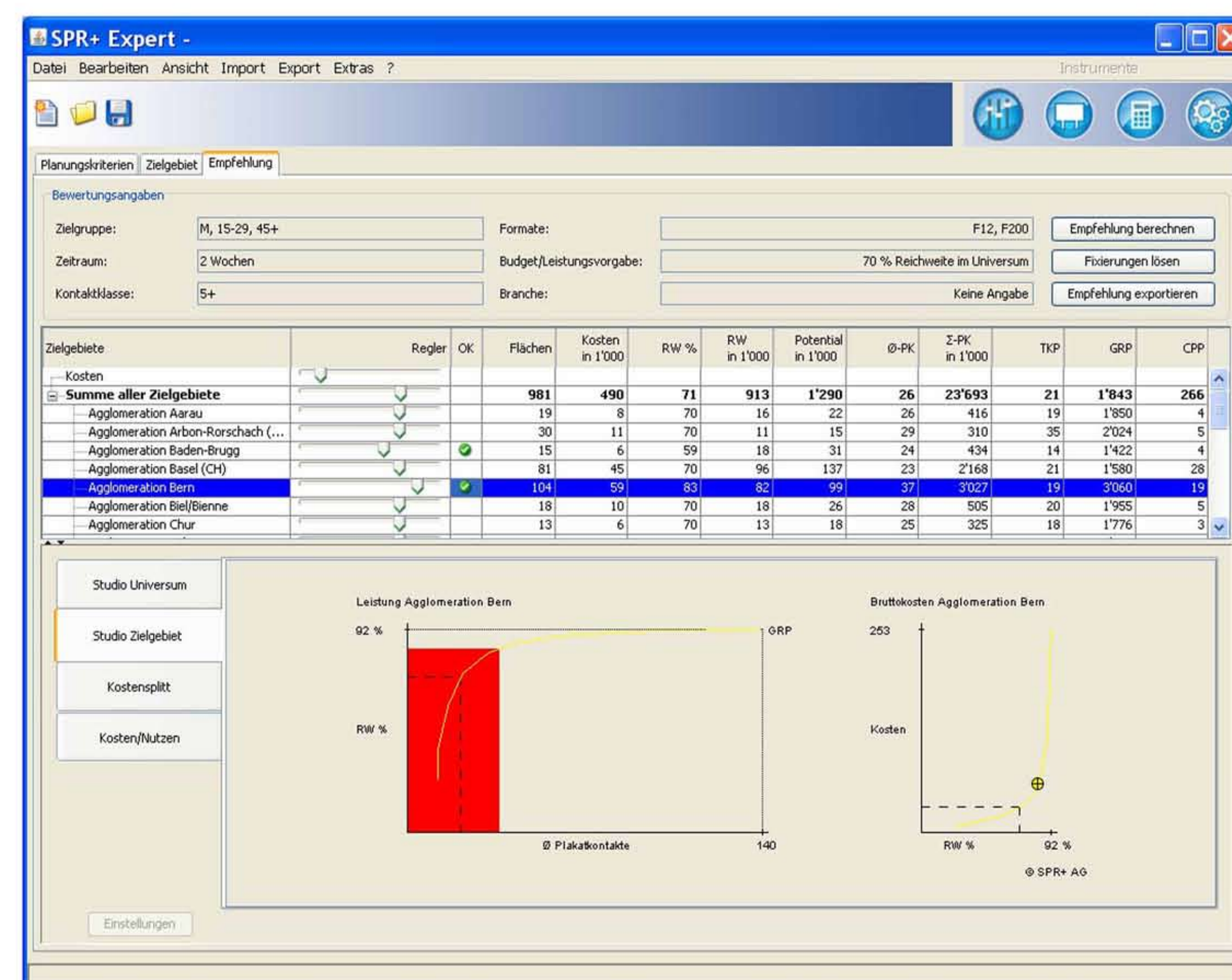


Fig 6: SPR+ Expert Studio recommendation

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