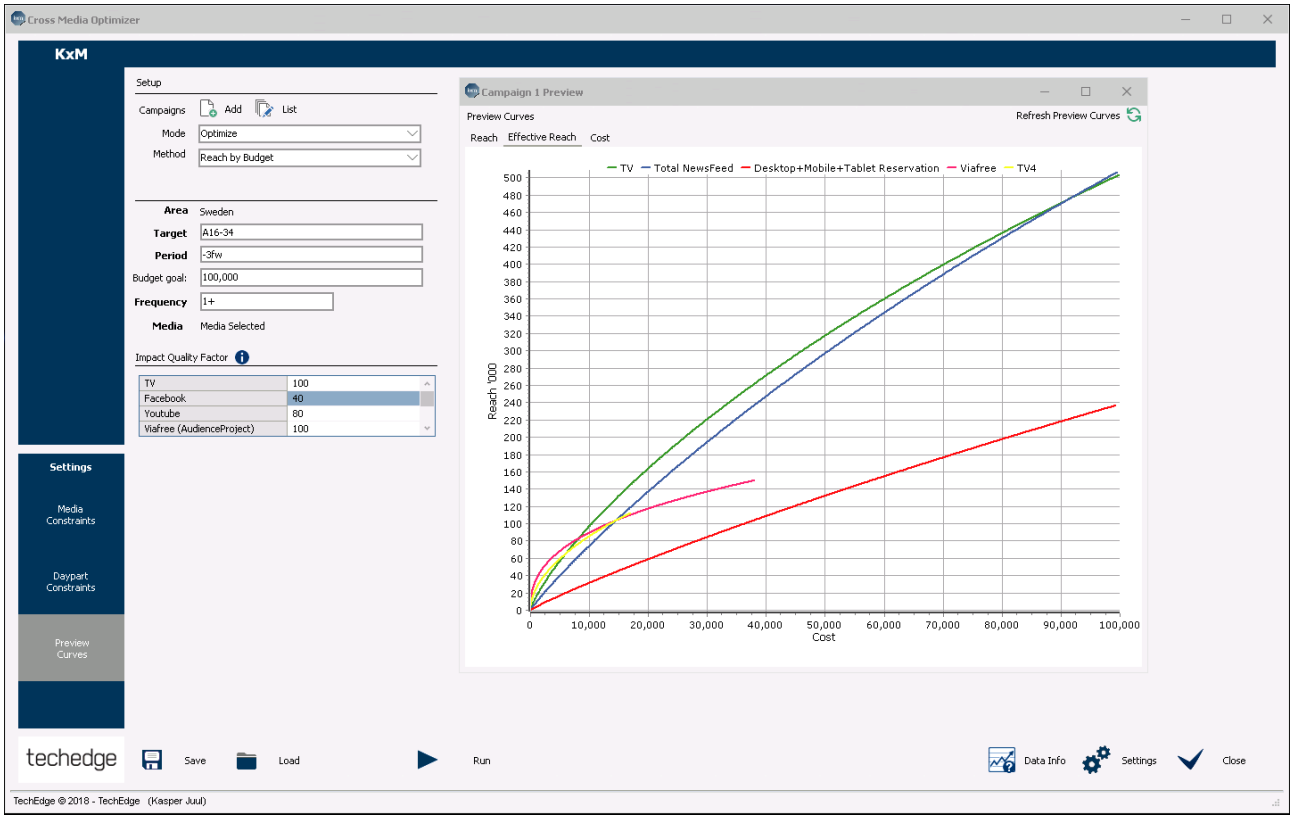
KxM

Cross Media Optimizer



KxM is a cross-media optimization tool that combines empiric data sources to estimate effective reach and frequency (R&F) and impressions for an advertising campaign across different media types.

In the absence of true single-source data, the KxM model is based on data from the official Television Audience Measurement (TAM) panel combined with reach curves from other media types (e.g. Online, Radio, Cinema etc.). KxM finds the optimal budget allocation between media to maximize effective reach.

KxM handles all data logistic issues as it is automatically fed with updated TAM data, as well as reach curves from Facebook, Google and other media groups. The data provides information about the ability of each media to generate reach for a number of impressions and related cost.

TechEdge engages with Media owners to make sure the model takes into account any media-specific parameters, such as the frequency capping offered by some online media owners.

KxM's main objective is to provide a transparent model that allows the user to make qualitative adjustments which have a direct impact on the results. As the data comes from different sources that are not always directly comparable, planners have the opportunity to adjust the model through a number of parameters which serve to align the data and media types.

Combining respondent level data with Reach Curve data

TV impressions and reach are computed directly from the respondent-level TAM panel according to "Gold Standard" rules. Impressions from reach curves are later added to these respondents.

The reach curve will report the corresponding reach for a given budget or rating. These rating and reach numbers are converted to ratings (000) and reach (000).

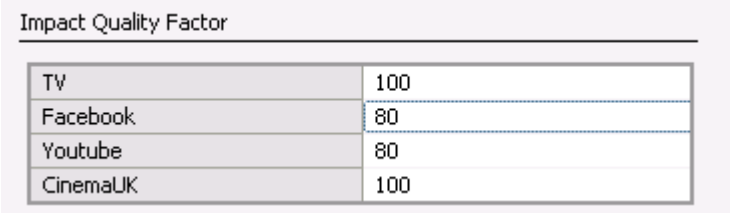
The model ensures that impacts are distributed across the respondents such that the ratings (000) and reach (000) are correct for each media group reach curve. Because the model works on the respondent level, impacts for each respondent are additive. It is therefore straightforward to compute and estimate cross-media reach and frequency.

The data, and subsequent results, can be adjusted by the following parameters:

- Impact Quality Factor
- Technical Penetration
- Demographic Distribution

Impact Quality Factor

Planners can define how effective a Media Group is for the specific campaign. The Impact Quality Factor scales down the impressions, and thereby also the reach, allowing the planner to estimate the actual media effect from the reported Opportunity to See (OTS). A value of 100 mean that every OTS is effective (in terms of reaching its audience), whilst a value of 50 means that only 50% of the impressions will be counted for the "effective impressions and reach".



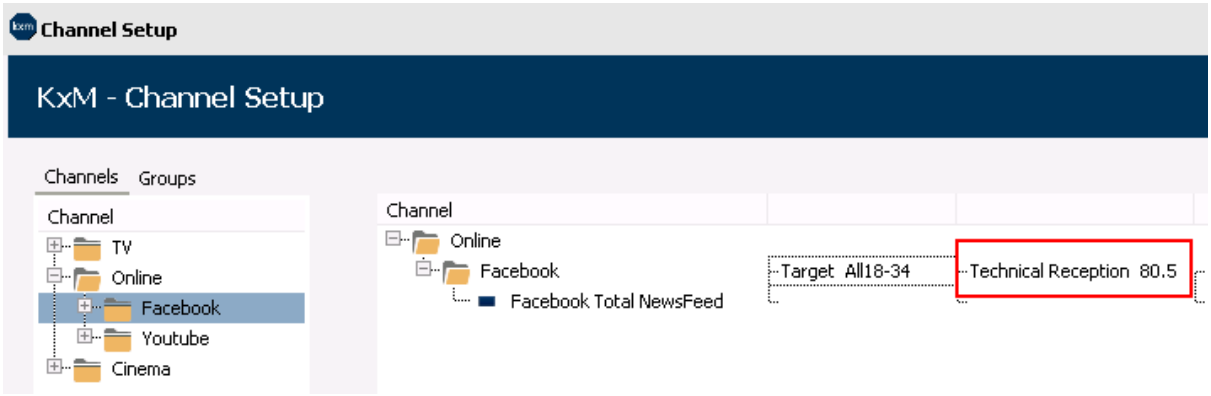
For example, if a planner believes that the Impact Quality Factor of a You Tube commercial is index 80 of a TV spot, KxM will adjust the number of impacts, and consequently the reach, to report effective reach and impressions rather than the OTS.

Technical Reception %

The Technical Reception parameter is used to align universes between different media groups. The planner can adjust how large a proportion of the population actually get exposed

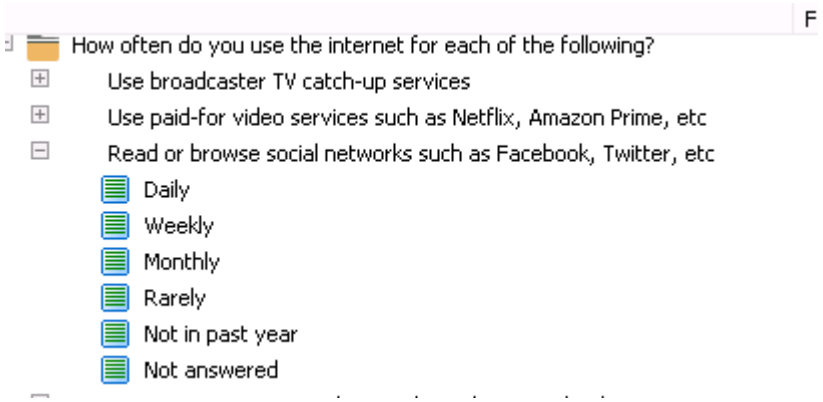
for a media group. This is useful for example when an Online reach curve is based on subscriber information where a person can have multiple logins.

In the UK this factor will be pre-populated by TechEdge based on BARB APC demographic variables as shown below:



In the example above 'Facebook Total News Feed' has been selected as the online media, with a target group of Adults 18-34. Selecting this combination automatically sets the Technical Reception index at 80.5.

This index is calculated using a question regarding frequency of social media usage in the BARB APC survey:



The total BARB universe of Adults 18-34 is 13.2m (the total target universe). If this target is filtered to only include those panel members who read or browse social networks daily/weekly/ monthly the universe decreases to 10.6m (the total target universe using social media). The Technical Reception Index is then calculated as:

$$\frac{Total\ target\ universe\ using\ social\ networks\ ('000)}{Total\ target\ universe\ ('000)}\ x\ 100$$

E.g. in the example above:

Technical Reception Adults 18-34 = $\frac{10{,}620}{13{,}194}$ x 100 = 80.5

The factor is compared to the media groups reported ability to deliver reach (maximum level of reach the media can achieve). The model compares the technical reception to the reach

curve maximum reach level and adjusts the media group ability to generate reach proportionally.

The rating(000) which the model will deliver for the media group will remain unaffected, whilst the reach(000) will change, and the parameter will consequently lead to a change in the frequency levels delivered by the media group.

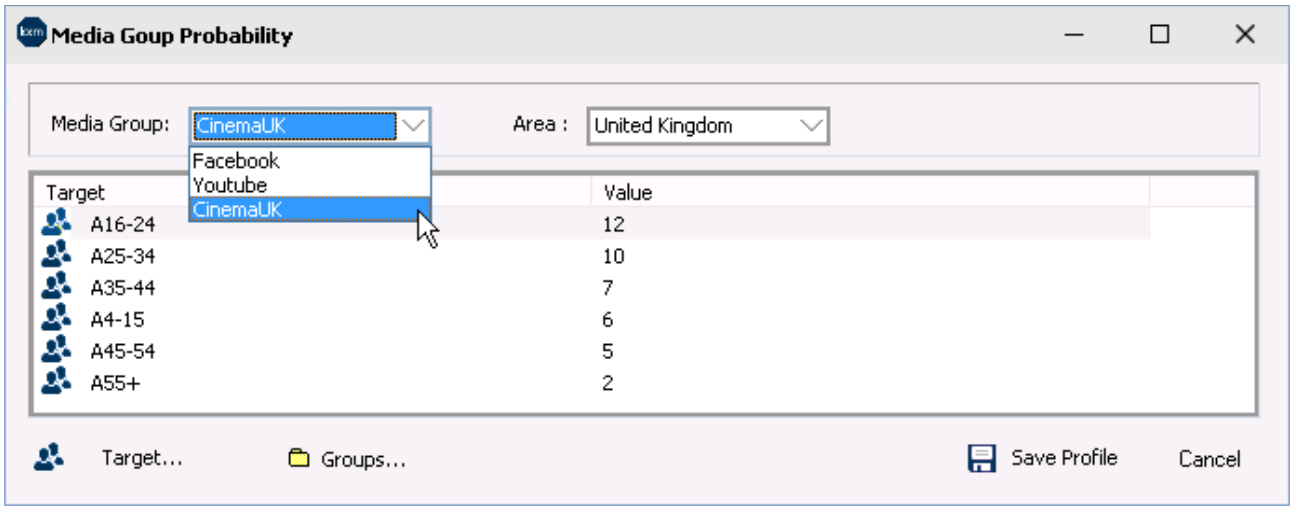
Demographic Distribution

The Demographic Distribution parameter controls the probability of a person being selected to be reached by a media group, and which impressions are selected from a reach curve for this media group.

If the model is using a reach curve for 18+ adults to estimate the R&F for Cinema, a respondent should not have an even chance of being selected, as young people go to the cinema more frequently than the older segments of the population.

The Demographic Distribution parameter specifies a number of mutually exclusive target groups, and allows the planner to describe how often in a period of time a respondent in each target will have an Opportunity to See this media group.

The model will normalize these values and create a probability for each respondent to be the one selected to be reached. All respondents in the same target group will have the same probability of being reached.



If we use Cinema as an example, the values reported are the number of times a respondent in a given target group is likely to go to the cinema in a year. A 16-24-year-old person will go to the cinema around 12 times per year on an average whilst a 55+ year old person will frequent the cinema only twice per year. In this case the model will automatically select a person being 16-24-year-old 6 times more often than it will select a 55+ year old.

Europe

TechEdge A/S
Voice: +45 35 31 40 80

Asia Pacific

TechEdge Asia Pacific
Voice: +65 6602 8114

UK

TechEdge UK Ltd.
+44 20 7100 9948

US

TechEdge America Inc.
Voice: +1 305 890 2941

Email: mail@grouptechedge.com

Web: http://www.grouptechedge.com

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