

VERIFYING THE BRAND EFFECTS OF DIGITAL DISPLAY

Anders Lithner, Inizio and Johanna Olsson, Mediekompaniet

Abstract

This paper describes a new, standard measurement of brand effects of digital advertising. The concept integrates survey data with big data from publisher's ad servers. Control-exposed analyses are carried out that identifies effects on brand awareness, knowledge, consideration, preference and purchase intent. The measurement is in regular use by a majority of Swedish media houses and more than a thousand campaigns have been measured. The paper describes the methodology and presents examples of the findings. Inizio is the research company behind the concept that has been developed in close cooperation with clients. One pioneer client is Mediekompaniet, the network of almost all local newspapers in Sweden. Together Inizio and Mediekompaniet tell the story of this new standard measurement. The paper starts with putting the concept into a bigger perspective.

1. Introduction

The question had been collecting dust on the shelves at the Inizio office for quite some time, ages to be honest, when all at once it became urgent. Several of Inizio's publisher clients simultaneously started to say the same thing: the years of perpetual growth in ad spend in our digital channels are over. Either we come up with a way to demonstrate how banner advertisement contributes, not just by generating clicks and instantaneous e-shopping but to the brand building and long term conversion, or we accept that the peak is now and that onwards we will find ourselves increasingly squeezed between TV and YouTube on one side and social media and search on the other.

The two authors of this paper were walking back from lunch through the archaic quarters of 13th century Stockholm when Johanna joined the chorus and aired the same discouragement on the behalf of Mediekompaniet. We need to come up with a new measurement, one that captures the brand impact and that is simple enough to be repeated as often as it takes. Well, Anders boldly replied, Inizio might just have the outset of something along the lines of what you are looking for, and then he concluded that seeing it come true was going to take a lot of Johanna's expertise and feedback, close collaboration and a lot of piloting.

That is exactly what happened. Mediekompaniet along with a few other media houses started to pilot what is now a method for identifying brand effects that, within the past year, has been adopted by a majority of the Swedish national media owners and some across Europe – a method that has breathed new life into the talks and negotiations between media owners, agencies and advertisers. More than one thousand campaigns have been evaluated in total. Sharing experiences and pointing out pitfalls and possibilities is what this paper is about. Of course general findings from Mediekompaniet's measurements will be presented as well.

2. Background

In this section we will briefly discuss the situation on the market that led to the development of the measurement, starting from the big picture and zooming in on the peculiarities of the market for digital display advertising.

2.1 Publicists Looking for Digital Revenue

In the late 1990s some publicists became as enthusiastic about internet ad revenues as others were worried about print circulation loss. What was the nature of this alien phenomenon called the World Wide Web, was it friend or foe? Was it really going to become as big as the trend spotters claimed?

Now, two decades later, the question is not whether digitalisation will impact printed media. What keeps the typical publisher up at night is rather the challenges in scaling the digital revenues to levels on which the business can be sustained, before the decreased print revenues have it swiped away all together.

Though innovative ways of taking up this challenge has appeared, for most media houses the logic of the new business resembles the logic of the old: either you sell your content to an audience or you sell your audience to advertisers, and preferably you do both. Companies such as Spotify and Netflix clearly manage to get paid for digital content, but getting paid for general news produced by journalists has proven to be difficult when packaged for digital platforms. However, as long as the content is free, attracting big audiences to online news services seems easy enough. Thus selling the audience to advertisers looks promising. One important obstacle remains: in order to get sufficiently paid from advertisers for ads exposed to these big audiences, the publisher needs to prove that it works – that the advertisers' campaigns are creating the desired effects.

For a company like Mediekompaniet, operating at the Swedish media market, the competition for digital ad spending has increased rapidly during the last half decade. To be among the first actors to be able to offer a measurement and a method to show agencies and advertisers the effect of a digital campaign, has definitely been a comparative advantage. But already, it is starting to become just as much of a hygiene factor as in other media channels.

Another important development in the industry to be aware of and to take actions on is the media agencies increasing demands on media owners and their representatives to take on a more advisory and consulting role. To be able to live up to this it is very important to have a well-functioning measurement method to build knowledge from with a profound base where to continuously search for answers regarding digital advertising.

2.2 The Need to Uncover Effects beyond Imps and Clicks

The story is the same for every new media format claiming its place in the advertisement ecosystem. First a small clan of brave advertisers will spend some money pioneering the new way of communicating. Eventually the big spenders may follow, if – and only if – there is data on the market showing that the new format is working. This was as true for commercial radio and television (born as late as the 1990s in Sweden) as it is now for mobile ads, online video, native marketing, internet of things and whatever new carriers of commercial messages that will emerge before the ink on this paper is even dry.

This is the reason why media currency research has been so important. The national readership surveys, the people meter systems and such industry standards are exactly that: the data on the market that shows that the format is working, hence keeping the wheels spinning. These currency measurements are typically overseen by some kind of joint industry committee that funds the collecting and reporting of trustworthy data to the players in the market.

The digital landscape is different. Not because measurements are unimportant, but because measurement is happening whether we want it or not. There are plenty of industry initiatives across the world to run jointly agreed upon audience rating measurements of websites, some good, some not so good. But it cannot be helped; it is in the nature of anything digital, that all transactions are logged as they happen, with or without the funding of any industry body.

Therefore regardless if there is good reach and frequency data on the market or not, the actual business deals tend to be made upon the technical counts from the systems that distribute the ads. Such data is limited – it normally knows nothing about the persons behind the devices to which the ads has been served – but it is exact and it is free. An ad server that is told to deliver a banner one million times does exactly that and then spits out a receipt saying one million, plus-minus zero. Why base the deal on a measurement that costs money and only makes estimates?

Another reason why the technical counting plays such an important role has to do with all targeting taking place in the digital sphere. Industry audience measurements may tell you how big a website is, as a reliable number of individuals with demographic characteristics, rather than just the number of computers and ad impressions. But advertisers are normally only buying very skewed fractions of that audience anyway. If the ad is distributed one million times, across five different websites, but only to web browsers who are (1) surfing from a geo point close to shopping centres where the advertiser is present and (2) has previously been used to read articles on a specific subject, what does it matter what the individual five websites' general audiences looks like?

By and large the publishers find themselves trading on data that may be free, as it is imbedded in the distribution systems, but that fails to meet the more important need – the need to prove that digital advertisement really works and create effects. In most cases the technical data only reveals the number of times an ad has been requested and what fraction of those impression were followed by a click. The good systems can also tell what proportion of the ad impressions were actually in somebody's screen, as opposed to above or below the scroll of the browser; how many unique browsers that was exposed to the ad and sometimes for how long. But it still does not uncover anything about the effects of these impressions, except the Click Through Rate (CTR), which of course only illustrates the tiny fraction of visitors that act instantaneously on a commercial message, and not the traces that the ad leaves in peoples' minds that may position the advertiser at the top of the menu when the consumer is about to buy whatever the ad is about.

Discussions around the need for knowledge and data about the effects of digital advertising is what eventually led to the development of the measurement presented in this paper.

3. Causality – the Campaign Chicken and the Brand Effect Egg

Campaign measurements are nothing new. It makes sense to make a distinction between measurements constructed to identify the reach of a campaign and the reception of the creative content, from measurements designed to identify the effects of the campaign on KPIs important to the advertiser. A campaign may be seen and even liked by many, without affecting KPIs like brand preference and sales. In this case brand effects are the grail that we are looking for. Albeit somewhat unsubstantial in the counting of computers rather than persons, the mere reach of the campaign is – as mentioned above – summarized by the technical data from the ad server.

In our efforts to design a standardised concept to help publishers show the brand effects of digital advertising, we rejected two approaches early on. One of the rejected approaches was econometric modelling. Inizio conducts such analysis for brand owners, but firstly it is unpractical for publishers to design a measurement that needs performance data from the advertiser to be implemented. The advertiser may be reluctant to share such data and even if not, the logistic challenge of collecting and formatting such data makes this path unsuited for standard reporting on a large number of campaigns. Secondly the KPIs provided by different advertisers would vary so much that it would be next to impossible to create the kind of benchmarks needed to tell the difference between failure and success, e.g. with statements such as ‘this campaign was more successful than average’.

Traditional brand tracking was rejected as well. To time stamp campaign activities and look for peaks in brand tracking data is a well-tried approach to identifying brand effects of advertising. However, the digital campaigns are typically only one part of the advertiser’s communication activities. Consequently it would often be hard to attribute a peak in a tracking curve only to one digital campaign in one publisher’s network.

That pretty much left us with some kind of campaign-centric approach. This too is a well-tried path. Media owners often run surveys asking people whether they have seen a piece of advertisement, with follow-up questions about interest in the product and purchase intent. The problem with this is that it cannot be used to establish the direction of causality. People surely may become more interested in a product because they have seen an ad for it, but they may equally well have noticed the ad because they were interested in the product in the first place. Hence the title of the paragraph: the campaign chicken and the brand effect egg. In ad observation-based studies nobody can tell which comes first.

Our way around this problem is to drop the ad observation altogether. We are not comparing brand perception and intent to take action between those who have *observed* an ad and those who have not. We are comparing the same things between those who have been technically *exposed* to the ad and those who have not. By integrating the survey data with the ad server log we know who belongs to which group. Not even the respondents themselves know this. It does not matter how interested you are in something, you cannot force the ad server to serve an ad for that product. So, if the brand is more positively rated by those who are exposed than by those who are not – and this is the only difference between the two groups – we know that it is the exposure that created the attitude and not the other way around.

4. The Controlled-Exposed Paradigm

It is fair to say that the research on which the concept presented in this paper is built belongs in a different paradigm than most survey based research. At the core of most survey research project lays the idea of asking a sample of people and then infer the answers of that sample to a wider population.

In this case we are not very interested in the point estimates as such. Instead our focus is on the *differences between* two sub samples – one exposed and one not. It is not of paramount importance that the sub samples themselves are representative of the website audience. The key lies in the difference between the two samples – two samples that are identical in every aspect but one. They are sampled the same way and at the same time and the only difference between them is that one by chance has been exposed to a campaign and one has surfed the same site as much but without being exposed. In that respect this project resembles experimental medical research where one group is given proper medicine and another is given sugar pills looking the same, without the individual respondents knowing to which group they belong. Except in this case the sampling and the data collection is not situated in an experimental or laboratory setting.

As discussed further down we have been able to quantify the findings from these studies to the point where we can report the effects in eyeballs and money. This however can only be achieved by combining the survey data with distribution data and information about the campaign cost.

This controlled-exposed paradigm is not new. It is nonetheless uncommon in the media research community and initially it posed a bit of a challenge to describe the method to agencies and advertisers receiving the reports. Now, some 60 measurements later for Mediekompantiet and more than a thousand measured campaigns across different media groups in Sweden and neighbouring countries, people are getting used to the methodology and the key metrics of the report.

In getting acceptance for the results it has no doubt also been helpful that both Facebook¹ and Google² now offer efficiency measurements of their own performance as commercial vehicles resting on the same kind of controlled-exposed comparisons.

So, that is where we find ourselves: with a method that isolates brand effects of digital advertising by single source connections between short survey questionnaires and the big data that sits in the publishers’ ad server systems. We shall soon have a closer look at the methodology itself and discuss some of its pros, cons, benefits and limitations. First, lets us just say a few words about the companies co-writing this paper.

¹ www.facebook.com/business/news/value-of-video

² www.thinkwithgoogle.com/products/brand-lift.html

5. About the Presenting Companies

As mentioned the development of the concept presented in this paper rests on close collaboration between Inizio and a few of the company's closest clients. The relationship between Inizio and Mediekompaniet goes a long way back and contain far more than campaign measurements.

5.1 Mediekompaniet

Mediekompaniet is owned by the regional and local media houses around Sweden. It serves as the owners' actor on the national market and as the natural partner for Swedish advertisers desiring to reach an audience outside Sweden's three largest cities (Stockholm, Gothenburg and Malmo), from Haparanda in the north to Ystad in the south of Sweden. The local multi-platform media houses offers several channels and advertisement's solutions, all included in Mediekompaniet's product portfolio; Web-TV, Native, Mobile, Desktop, Printed media (paid morning newspaper, free distributed editorial papers, commercial inserts), digital OOH etc. Mediekompaniet reaches 4, 5 million Swedes every day and reached nearly €60 million in revenue in 2014.

Another, just as important part of Mediekompaniet's core mission, asides being the owners' national sales organisation, is to be the hub of the owners' business development. Most of last year's efforts have been directed towards setting up and developing the mobile channel and programmatic buying. In making a gradual digital transition, reliable measurements of advertising effects have been a key ingredient. Of course Mediekompaniet keep developing the printed business model as well. Mediekompaniet also serves as the regional and local media houses' voice in the Swedish media debate.

5.2. Inizio

Inizio is a Swedish research company with much of a digital focus. Inizio was founded in 2003 by a small group of leading market research consultants. Their vision was to use new approaches, transforming data into insights and business advantage, guided by the customer's unique requirements rather than just selling one more survey.

Today Inizio offer a multifold product portfolio linked to strategic advisory services. Aside from running campaign measurements for numerous media owners, including the digital brands of Bonnier, Schibsted, Sanoma, Ebay and networks such as Mediekompaniet, 203Webgroup and Widespace, Inizio also works closely with many of the big advertisers and their agencies in the Scandics. Since the summer of 2015 Inizio is the Vision Critical partner for the Nordic countries. Furthermore Inizio is behind the most talked about political poll in Sweden and operates and co-owns several research panels.

Inizio has worked closely with Mediekompaniet for several years; therefore joining hands with Mediekompaniet in the development of a new approach to digital ad measurement came very naturally.

6. Digital Admap

On the market the concept presented in this paper is known as *Digital Admap*. It is a research product designed to identify the brand effects of digital advertising. The concept rests on surveys that are single source connected with big data.

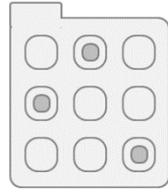
6.1 Concept Description

In brief: visitors of websites are asked about their relationship with a brand. The answers are then cross analysed against cookie-based information about each respondent's exposure to a particular advertisement campaign on the devise used to complete the survey. This information is extracted from the cookie-based data collection that is done by the website, normally as part of the ad server system.

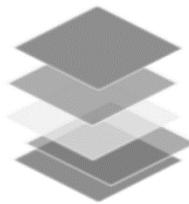
In order to secure that sufficient numbers of exposed and non-exposed respondents complete each survey the questionnaire is fired off as an overlay inline survey on the publisher's websites using retargeting algorithms. The questionnaire is shown to every n:th visitor in each of the two targets, starting the day after the campaign is taken off the website. The overview below briefly describes the steps involved.



1. Retargeting
Sampling by identifying visitors (cookies) who has been exposed and visitors that has not



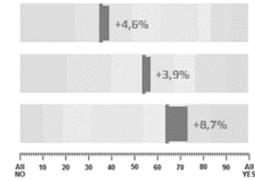
2. Inline survey
Collecting brand perception data by a short questionnaire published to the retargeting samples



3. Data integration
Integrating the self-claimed survey data with the big data in the campaign exposure log in the ad server



4. Analysis
Identifying effects on brand KPIs of exposure to the campaign, using regression analysis



5. Reporting
Delivering ready-to-market-reports that summarizes any identified effects in comprehensible graphs

6.2 Omni Channel, Omni Platform, Omni Format

Mediekompaniet has predominantly used *Digital Admap* to illustrate the brand effects of banner ads on desktop websites. However Mediekompaniet is a network of almost a hundred websites, which points to the fact that the concept easily works across many domains as long as the ad server cookie is the same all over. Mediekompaniet also uses different ad formats, like top panoramas and modules incorporated into the content flow. Sometimes campaigns spanning over several formats have been grouped and reported as total campaign effects, sometimes the formats have been kept apart and compared to each other in reporting.

Mediekompaniet has also started to use *Digital Admap* to identify the effects of ads on mobile websites. For other publishers mobile has been the primary focus. The concept works as well for desktop, tablet and mobile, both on sites and in apps, and it has been widely used to evaluate everything from traditional banners to rich media and video. Furthermore clients use the concept to uncover the effects of any kind on content. Traditional advertising still dominates, but native advertising and sponsored content are also evaluated, by Mediekompaniet and others.

As long as there is an audience to ask survey questions to, a way to do that and a digital distribution of content – banners, films, sponsored articles or whatever – that can be logged to identify who has been exposed to what, the concept works and is used on a regular basis by different digital media.

7. Methodology

In summary: visitors of a website, tablet site, mobile site or app are prompted with a very short survey about their relationship to a brand. This survey pops up to a tiny fraction of the audience as they are visiting the site again, once the campaign is taken off the air. The survey is targeted both to visitors who previously have been exposed to the campaign and to visitors who have not, in proportions dictated by the deployed statistical procedure's need for certain sample sizes in order to identify (relatively small) effects significantly. The answers are then cross analysed against cookie-based information about each respondent's exposure to the campaign, on the device used to complete the survey. This information is extracted from the cookie-based data collection that is done by the websites themselves. In the Mediekompaniet case, as in most other cases, this data comes as an integrated part of the ad server system. In some cases third party cookie measurement systems are used and in some, Inizio provides the cookie-based tracking solution needed to log campaign exposures.

The paragraphs below will dig into the different aspects of this methodology, starting with the questionnaire about people's relationship with the advertiser's brand.

7.1 The Questionnaire

The questionnaire is a survey conducted on the actual websites or in the tablet or mobile apps where the campaign has been running. It is crucial of course that the visitors of the digital channel do not feel hassled by surveys. Therefore the questionnaire is very short, the sample sizes are kept at the minimum requirement for statistical significance and the design and wording of the questionnaire ensures high participation rates so that it takes as few promptings as possible to achieve target sample sizes. The JavaScript file that makes up the questionnaire also has a cookie system of its own, so that anybody who has been prompted with a survey, weather they completed it or not, is left unprompted for a period of time decided by the publisher; normally a month. The survey presents itself as a whole on the visitors screen. There is no popup asking people to take a survey to which they may say no or, if they say yes, redirects them somewhere else. The survey and its four questions are right there on the screen for everybody to see that it is almost as fast to complete as it is to click away.

As mentioned earlier benchmarking is one of the principal ideas of the concept. In order to know whether an effect really is to be considered big, it needs to be compared to the average of other measured campaigns. For that reason the questions are almost always the same. Exceptions do occur, but in the absolute lion part of all surveys carried out, for Mediekompaniet and others, the questionnaire contains four questions that are based in branding theory and of interest to all advertisers. They all use seven grade scales. These questions are:

1. *How familiar are you with [category] [advertiser]*
(for example ...the [furniture store] [IKEA])?

The scale goes from 'never heard of' to 'very familiar'.

2. *If you were to buy [product/category] would you prefer [advertiser] or some other brand?*

The scale goes from 'prefer other brand' to 'prefer [advertiser]'.

3. *How likely are you to buy [product/category] from [advertiser] within the coming [time frame]?*

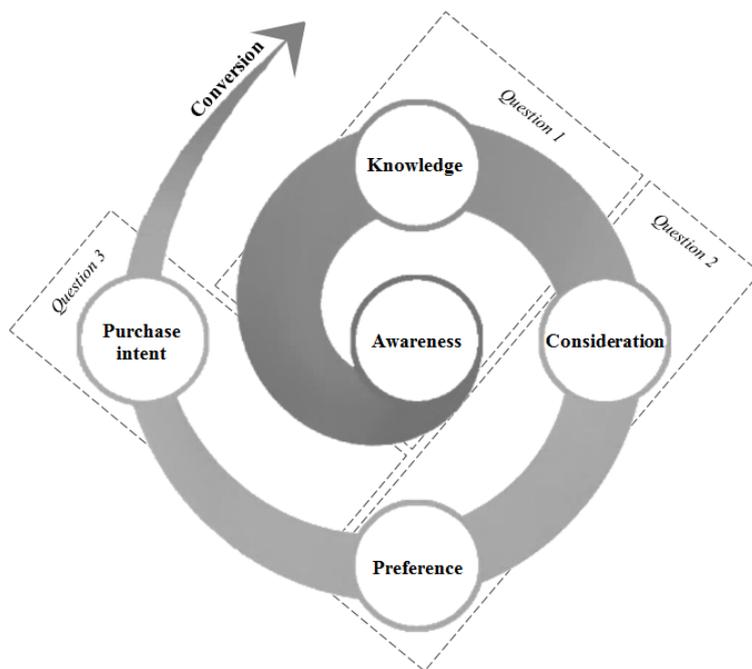
The scale goes from 'not likely at all' to 'very likely'. The time frame varies depending on whether the advertiser is promoting products/services that are purchased often (e.g. food) or more rarely (e.g. cars).

4. *How often do you visit this website?*

The scale goes from 'very seldom' to 'very often'

This question is primarily used for weighting the two sub samples.

Mediekompaniet, along with some but not all users of the system, also asks the respondents about their age and education. This is primarily to be able to break the identified effects across demographic segments. The additional questions also give further opportunities to understand and weight the samples.



These questions are not chosen at random. They are extracted from general marketing principles, firmly founded in theory and simplified by Inizio above. Before knowing what a company is about and what it offers, consumers need to know that it exists. And before considering buying its products or services they need to know what it offers. But considering buying is rarely enough. At some stage the advertiser need to become the preferred alternative among several available options. And only then can consumers say yes, I'm going to buy.

In the ambition of minimising the respondent burden, these stages have been squeezed into three questions. The first one spans from not even being aware of the advertiser's existence, via some knowledge, to the point where the respondent feels familiar with the company. The second one spans from not being on the menu at all, via brand consideration, to brand preference. And lastly the intent to take action (normally to purchase something) is a question of its own.

In all four survey questions a seven grade scale is used. This is for practical reasons. The ambition is to have as much scale granularity as possible but still make the survey answerable on all digital screens, including smart phones. Above is an example

(in English translation) of a survey carried out by Mediekompaniet on mobile sites. The questionnaire itself is responsive and will look good on any device.

7.2 The Sample

The survey is shown to visitors of the websites where the campaign has been running. The exposure of the survey is controlled by digital retargeting. That means it is shown to one group of visitors whose device has not been exposed to the campaign and to one group that has been exposed. For Mediekompaniet, as for most of the users of *Digital Admap*, retargeting based on previous exposures is already part of the infrastructure and as so it is a well-known part of the ad server system. Sometimes advertisers want to retarget visitors previously exposed to earlier acts in the same campaign. The survey simply uses the ad server system so that the JavaScript produced by Inizio is shown to every n:th visitor of each sub sample until quotas are filled. Generally 150-250 interviews are conducted among the non-exposed, and 200-350 are conducted among the exposed.

The survey is exposed to website visitor using the same targeting mechanisms as the campaign itself. If the campaign has been shown randomly on the website, so is the questionnaire to both sub samples. If the campaign has been targeted to specific geo-clusters or audience segments, or only on specific sub sites, so is the questionnaire, for both sub samples.

7.3 Participation Rate

The full questionnaire, with all its four questions, is shown straight on the website as a modal window, overlaid the website that is still visible (but slightly darkened) behind the questionnaire. That means it is easy to see that the effort required to complete it is very low. On average 7 to 10 percent of the questionnaires that are exposed are completed. The questionnaire is used on desktop, tablet and mobile and both on websites and within apps and the participation rate varies more between different hours of the day than between different platforms.

7.4 Fieldwork

The fieldwork typically starts the day after the campaign has ended. If the campaign is running from Monday to Friday, the measurement starts on the Saturday. The fieldwork period is normally short, but varies between a few hours to a few days, depending on (1) the traffic volumes on the site or segment thereof, (2) the share of it that has been exposed to the campaign, (3) the frequency of which the same visitor returns to the site to be retargeted and (4) the chance by which the questionnaires are randomly exposed.

7.5 Creating the Integrated Dataset

The questionnaires are 'tagged' with the same cookie solution that keeps track of which device that has been exposed to which ad. In the Mediekompaniet case this is the ad server system's tag. For some it is a separate web analytics system's tag and for some it is proprietary Inizio technology. Whichever way it means that the survey response data can be integrated with the exposure history for the measured campaign for each respondent (on the device used to complete the survey).

In effect, as soon as the data integration is complete, the dataset for each respondent contains the answers to the questionnaire along with the number of times that the particular device has been exposed to the campaign ads and the time difference between the last occurring exposure and the time stamp that tells when the survey was completed.

For the group that was targeted with the survey under the criteria of not being exposed, the frequency of exposure naturally is zero. For the exposed group, the frequency of exposure varies between one and upwards. Analyses show that the frequency distribution among those exposed that completes the questionnaire follows the same pattern as the frequency distribution in the technical log of actual browsers exposed in the ad server system.

7.6 The Analysis

The aim is to identify differences in brand perception between those exposed to ads from the brand and those that are not. Although categorical comparisons between the two groups often indicate such differences, the confidence interval is normally too big to allow for such conclusions without enlarging the sample sizes. In order to maintain maximum granularity of data, hence minimising the sample size demand, the analysis is therefore a regression between on the one side the brand parameters, measured on seven grade scale, and on the other the number of times the respondents have been exposed for the campaign ad.

Any effect identified using this regression is then standardised to the average campaign effect on the brand metric, by multiplying the effect for each step on the exposure frequency variable (beta coefficient) with the average exposure frequency per browser for the campaign.

By running these regressions and quantifying the output using data about the frequency distribution, Inizio can report the average effect on the brand metrics of being exposed to the campaign.

7.7 Weighting

Since this approach aims at identifying differences between two groups – exposed and non-exposed – there is no weighting in place to bring the sample more in line with any given population. However, when comparing the two groups, there is always the risk that the exposed group has been exposed because their usage of the website is more frequent than the non-exposed group. And following that, that any differences identified is explained by heavy website users being closer to the advertiser’s brand than more moderate users, rather than the exposed group being influenced by the campaign. Therefore the fourth question in the questionnaire (see above), about the usage of the website, is used to neutralize any such differences between the two target samples. In effect this is done with cell matrix weighting that brings the usage of the website among the exposed group in line with the corresponding usage in the non-exposed group.

8. Limitations

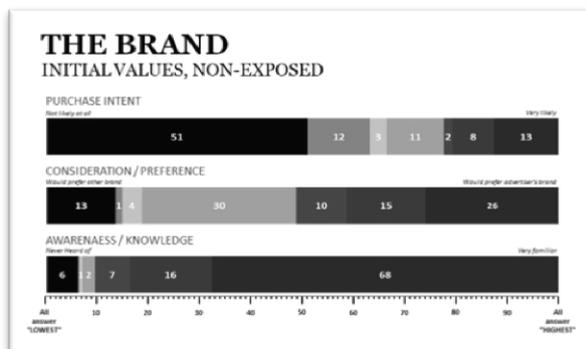
There are of course limitations as to what conclusions can be drawn from the measurement. For example, by comparing exposed and non-exposed the concept can only identify such differences within the audience of the websites that is part of the measurements. Whether or not the non-exposed group has been exposed for the campaign on other websites or even in other media channels is not known. The probability of exposure to the campaign material in other channels is however assumed to be randomly distributed among the two groups, especially since the weighting makes sure that the only difference between the two groups is the exposure to ads that are randomly published to some browsers and not to others, by the ad server system. Inizio also clearly in reports states that this measurement is of the brand lift contribution of the measured website, not the campaign in total.

Another limitation has to do with business circumstances that are unique to each advertiser. The measurement can identify if and how much a campaign affects for example brand preference. It also reveals how many persons (roughly defined as unique browsers) that are affected at all and how many that are affected per investment (see below). However the measurement does not know how big a lift it takes for it to actually make a difference in the advertiser’s profitability. The reason for this is of course that the correlation between brand preference and company performance vary from advertiser to advertiser. As is the case in all brand measurements it is up to the brand owner to understand the link between brand KPIs and financial KPIs. *Digital Admap* may well be one of the building blocks in such an understanding.

9. The Typical Insights

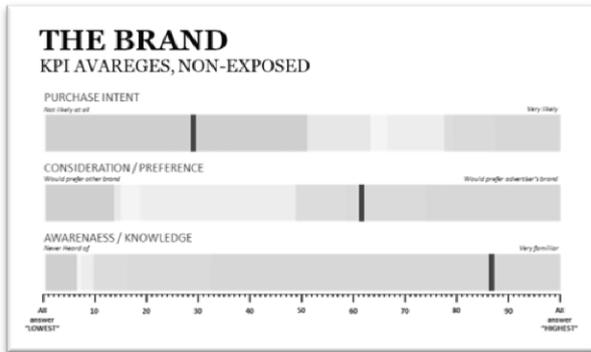
Digital Admap serves the double purpose of giving feedback to the individual advertisers about the effects of their campaigns while simultaneously ensuring there is constant learning about how the digital channels are working, when, under what circumstances, on which KPI for which advertiser.

The first mission rests on a standardised report that graphically illustrates the identified effects. That report contains of six core elements. On top of that there are breakdowns by demography and documentation around the campaign and the research method. The easiest way to demonstrate how *Digital Admap* works in the everyday context is to go through the standard reporting and its six elements one by one.



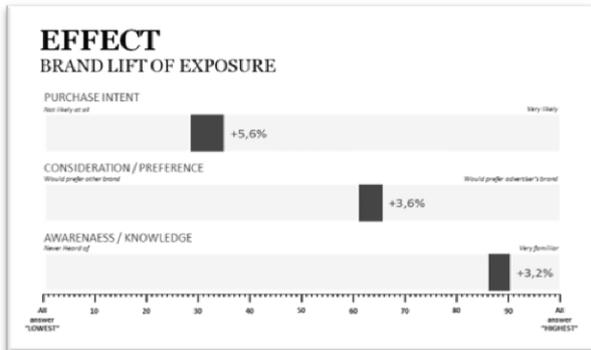
The first actual results in the report, after initial facts and imagery from the campaign, are the answers on the questionnaire as straightforward frequency distributions, among those that were *not exposed to the campaign*.

This graph reveals how familiar people are with the advertiser’s brand, to which extent they would consider or even prefer it if they were to purchase anything in the category and how likely they are to take action (normally purchase something) within the defined timeframe.



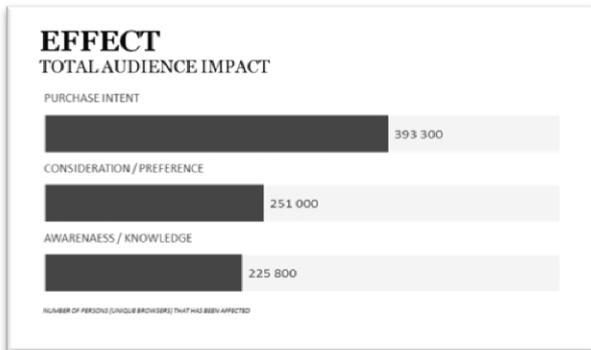
These initial values are then converted to averages. For comprehensibility reasons the seven-grade scale is recalculated to an index from 0 to 100.

This graph shows the average KPI values for the non-exposed. Normally, as in the example to the left, The awareness/knowledge score is higher than the consideration/preference score, which again is higher than the purchase intent.



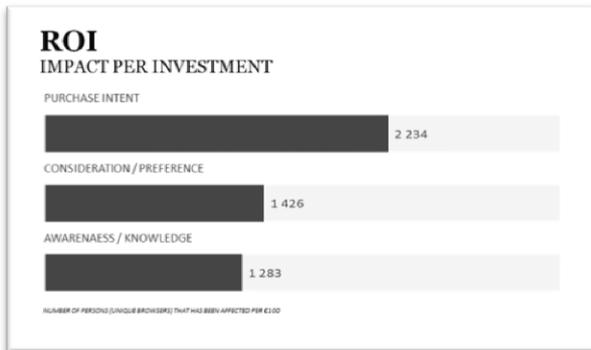
The third of the reporting infographics illustrates the brand lift of being exposed. For each KPI the difference from the average among the non-exposed is indicated by a bar graph, extended to the point identified for the exposed.

This is the effect of exposure. Note that the effects typically are much smaller than similar differences between people who have observed and people who have not. Then again the differences in this measurement are *caused* by the exposure, not just correlated with it.

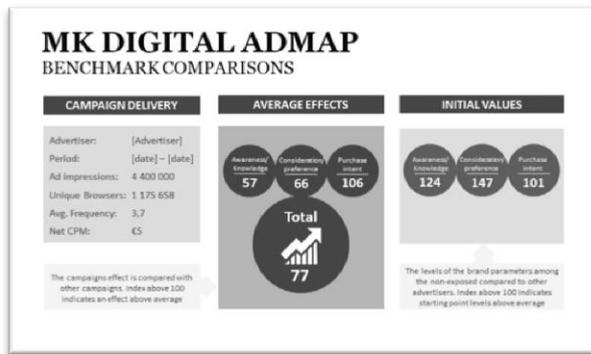


So far we have only compared the difference between exposed and non-exposed, regardless of the size of the audience exposed. Such comparisons may well identify stronger effects for a small campaign reaching very few than for one reaching many.

For that reason the effects identified for the exposed group is multiplied with the size of the campaign. This is presented as the number of persons (estimated by number of unique browsers) who has 'moved' at least on step on the seven-grade scale deployed to measure the brand KPIs.



Lastly the total audience impact in the previous graph is analysed in reference to the ad investment. This graph tells the advertiser how many persons (unique browsers) have been affected, on average, per invested €100.



The last substantial graph, before methodological appendixes, is a comparison with the benchmark data. Mediekompaniet has chosen to compare each campaign with the total average for all measured Mediekompaniet campaigns.

The comparison reveals if the effects are higher or lower than average, on each KPI and in total. It also compares the initial values for the non-exposed to the same KPIs for the average advertiser.

Comparisons with the total Inizio benchmark and with subsets thereof (e.g. within just one industry or similar campaign formats) is handled outside the standard reporting.

In the standard reporting Mediekompaniet also includes demographical breakdowns. Some users of the measurement system do, others do not. Inizio has made a point out of delivering ready-to-market reports. Generally the insight teams in Swedish media houses spend a lot of time ‘repainting’ reports from research vendors and placing the graphs in the media brand’s template. *Digital Admap* does not contribute to this waste of time. Instead the report is customized to each media brand’s own template. That explains why, despite the method being the same, the reports that circulate on the market may look very different from each other. The graphs above show the Mediekompaniet way of illustrating the results.

10. Some General Insights

The reports produced for each campaign demonstrates the average effect of the campaign and average number of unique users that are affected, in total and per investment size. The whole point of these reports is that they are easy enough to understand, so that any client facing personnel on the media company can sit down with the advertiser and agency and talk through the results without a professional market research analyst being present.

However, users of *Digital Admap* also get access to meta-analyses that give a more detailed picture. For example it demonstrates how campaign effects are built up during the accumulation of ad exposure frequency – hence showing the optimal frequency. Meta-analysis also demonstrates the life length of the effects, by taking the time difference between exposure and questionnaire completion into account. Regular users are also able to compare effects between different industry segments, different type of advertisers and different type of ads and ad formats.

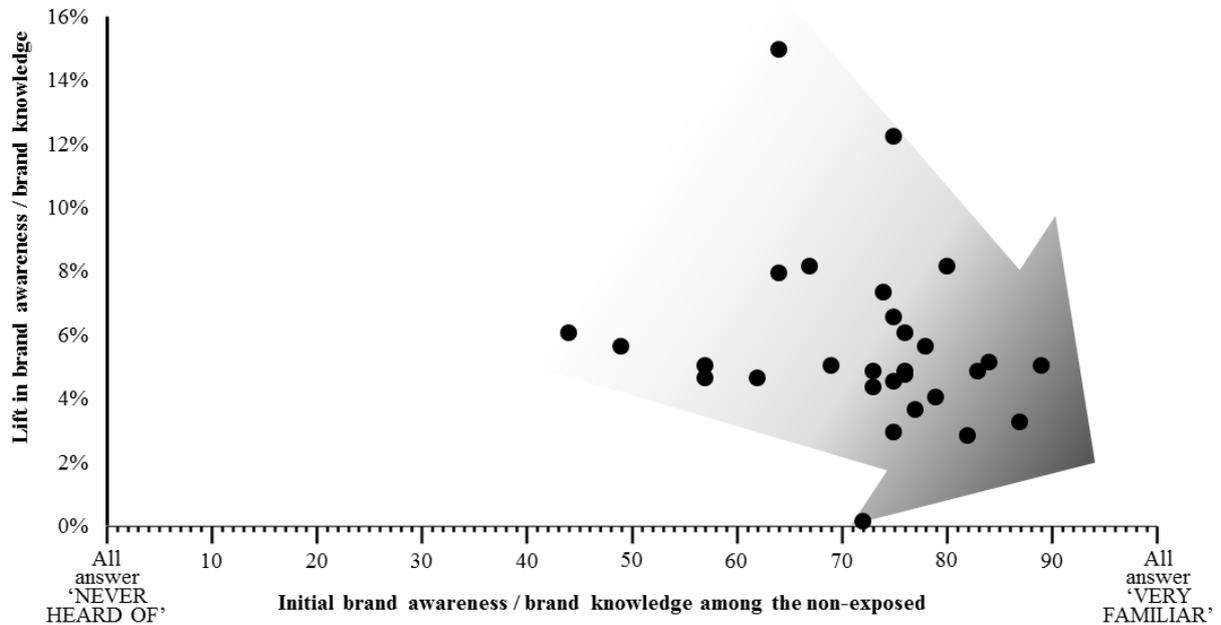
Shortness of space prevents us from digging too deep into such analysis. However three such findings are highlighted below. Moreover the Mediekompaniet reference database is growing steadily, but the mere number of measured campaigns still put limits on the granularity of any breakdown.

10.1 The Awareness Ceiling Effect

The seven-grade scales in *Digital Admap* are there for a reason. The preconception is that it takes too much to move somebody on a dichotomous scale for it to be capturable in a survey design. Being exposed to a campaign may affect somebody that used to rate the awareness/knowledge as a four on a seven-grade scale to now pick a five instead regarding the brand behind the campaign. But pushing somebody from, let’s say ‘don’t prefer’ to ‘prefer’ on a two-grade scale simply is too much to ask.

This seven-grade scale also means that there will be variance for all advertisers. We have measured advertisers who are known by 100 percent of the Swedish population. But on a seven-grade-scale there will never be 100 percent ticking the far right ‘very familiar’ radio button.

Even so, there are ceilings. Looking at the meta-data (below the most recent 30 campaigns measured by Mediekompaniet) we find that the most well-known brands have been scored with lower awareness-knowledge effects than brands less conclusively familiar.



There is nothing strange about this. Similar patterns can be found for the other variables too. It is just worth noting that in order to conclude whether a campaign is successful or not one has to hold such judgement up against the campaign goals. And if the brand is familiar to almost everybody, then maybe increasing familiarity is not a very good goal. Data suggests the opposite is true for unknown brands. There is no big point in trying to drive preference and purchase if the target audience do not yet know what the brand is about. Advertisers generally know what variables they can influence. With *Digital Admap* media groups such as Mediekompagniet are getting better at promising to make a difference where there is a difference to be made, hence commence to a more consultative role.

10.2 The Haphazard CTR

As mentioned in chapter two the internet market tends to rely heavily on the mechanical machine data that is registered by the ad server systems. As far as campaign volumes are concerned that is not so bad. The biggest problem with the calculations of ad impressions and number of unique browsers is that the measurement is carried out on the device level rather than counting real people. Nevertheless, as long as that is kept in mind, the ad server statistics gives quite accurate facts about the mere size of the campaign. When it comes to the effects of the campaigns however the situation is more troubling. The market pays close attention to the CTR – the percentage of ad impressions that resulted in a click on the ad.

On average a banner on a premium position on a news website has a CTR in the region of 0.2 percent. For every two clicks on a banner there are 998 exposures of the ad to persons that do not click. And yet the CTR is a widely used measure of campaign effect.

So, is CTR a good estimate of the kind of effects measured by *Digital Admap*? The answer is no. In fact, Olivensjö and Sundberg (2015) found a significant negative correlation between CTR and lift in brand awareness, preference in purchase intent, also building on data from Inizio's Digital Admap measurements for another media group.

In the Mediekompagniet data, building on some 20 000 interviews, there is no significant correlation at all, which really is just as bad. Different campaigns have different effects on different KPIs. In most instances the reasons for this can be understood when looking at the ads themselves, what they offer, who is behind it, where it is placed, in what platform it was consumed, with what frequency and in what format. But whether two or three out of every thousand ad exposures leads to a click is a very poor indicator of actual campaign effects.

To further impeach the validity of the Click Through Rate: analysing massive amount of data we have noticed it is not even correlated with viewability, as captured by in-screen measures. Some ads are displayed at the top of a website, which means most browsers that have visited the site have had the ad viewable on the screen. Some ads are published far down on the page, which means that visitors (browsers) that did not scroll all the way down triggered a technical request for that ad but never actually had it exposed on the screen. This is captured by viewability measurements and is presented as the percentage of ad impressions that was in fact exposed on somebody's screen (in-screen-rate). One would think that ads that were in fact only exposed on the screens on half of the requests would have lower CTR than ads that were in-screen in more than ninety percent of the requests. But no. The correlation between, on the one side, an ad actually being showed to somebody and not just technically requested but not ever shown, and on the other the clicking on the ad would be strongly correlated. It is not. Despite the fact that ads below

scroll cannot be clicked, the percentage clicking is not significantly correlated with viewability. Again: whether two or three out of a thousand served ads are clicked, seem to be more or less random.

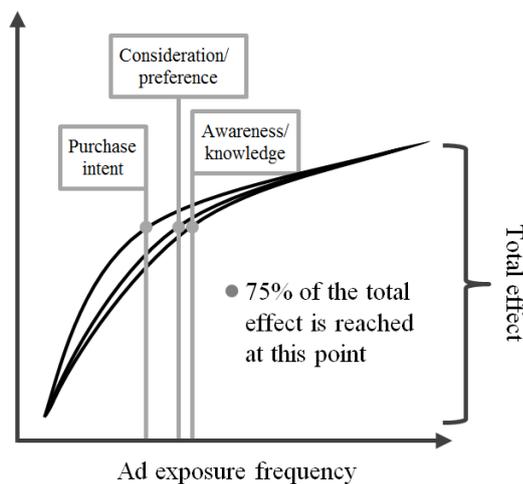
In our view turning away from clicks and towards more developed measures of effects is an important step in bringing reason to the internet market.

10.3 The Optimal Frequency

Since the survey data is integrated with the complete technical log from the ad server system, it is possible to determine exactly how many times each browser has been exposed to the campaign being asked about in the questionnaire. That means there are plenty of opportunities to look at the relationship between frequency of exposure and campaign effect.

On a general note it can be stated that there are no such thing as the optimal frequency for digital advertising. It depends on the advertiser, the campaign goals, the campaign extension in time, the target group and many other things. The potential for robust frequency analysis also grows with a growing reference database. Truly interesting findings emerge when the data is big enough to allow for breakdowns by for example industry.

However some very general rules seem to apply. As the graph below illustrates, on average it takes a little higher frequency to create a lift on the awareness/knowledge KPI than it does if the ambition is to create purchase intent. A well-known brand may run a call-to-action offering and since the advertiser is well-known, it takes fewer exposures for visitors to evaluate the offer and for some to have an increased intention to buy. To establish something that is not as well-known takes longer.



11. Reactions from the Market

Mediekompaniet started to approach the agencies and advertisers with *Digital Admap* in late summer 2014. During this last year many meetings regarding *Digital Admap* have taken place. Of course, each measured campaign has been presented to the customer, but also due to the rather new methodological approach several larger meeting have also taken place with a more general purpose of informing and explaining the new methodology in a broader perspective.

The measurability of digital channels (imps, unique browsers, CTR, viewability etc.) has been both helpful and unhelpful for the understanding and anchoring of *Digital Admap* on the market. Helpful in the aspect that customers are well familiar with the underlying data, but also – as these technical metrics has been the predominant source to campaign evaluation – standing in the way in the sense that the usage of technical data is so deeply rooted that different approaches almost automatically are put into question.

Digital Admap can, for people with no analytical background, be considered complicated especially when fully trying to understand the methodology and the analyses. Survey-based measurements of advertisement performance have previously predominantly been based on questionnaires with the take-off in questions about *observation* of the ad. This too is a methodology so established on the media market that introducing a different approach, as in this case exposed / not exposed, caused some confusion at the early stages of the launch. As *Digital Admap* also takes a rather sophisticated analytical approach with regression analysis rather than categorical comparisons, even the statistical processes involved in getting to the results are difficult to understand. The presenter needs a god understanding of the people and the occasion to choose the right depth in the methodology-discussion and it helps to be well prepared with a pedagogical ambition. As with all new measurements reaching

the market it has been very important to have benchmark values and to be able to show cases and as more and more publishers and sales organisations offers *Digital Admap*, these initial obstacles has become considerably fewer during the past year.

What has *Digital Admap* meant in the discussions between buyers and sellers? Firstly, it is often much appreciated by the buyer to be shown any kind of measurement report of a digital campaign since there has been a shortage. The rather different approach by *Digital Admap* to show measurements of the brand lift, the actual effect output of a campaign, is also appreciated. A product like *Digital Admap* also facilitate for the seller to initiate and lead a relevant discussion about purpose, expectations and results on a delivered campaign. The discussions around the next campaign often take a rather different direction than the focusing merely around pricing that it previously often took.

As mentioned in the introduction to this paper, publishers and sales organisations face a new situation with higher demands to be able to take on a consultative role around optimal setups for digital campaigns. *Digital Admap* functions as a tool for the organisation and the seller to fulfil these expectations. To be able to base recommendations on a standardised and substantial measurement method gives credibility to the recommendations.

Lastly, *Digital Admap* functions as a tool for buyers to make comparisons between different ad formats, commercial messages and different campaign setups. A proper way to post-evaluate a campaign can function as a trigger and minimise the aversion to test new campaign approaches.

To be able to have these two types of discussions with the buyers, both regarding campaign setup and campaign outcome, strengthens the trustworthiness for the sales organisation and hence the overall relationship to the buyer.

12. Promising Paths for the Future

Where do we go from here? Of course the number of measured campaigns with *Digital Admap* gives a growing benchmark database. That means the conclusion drawn to this point can be more firmly established. Many more interesting research results will also be uncovered as the reference data size permits further drilldowns.

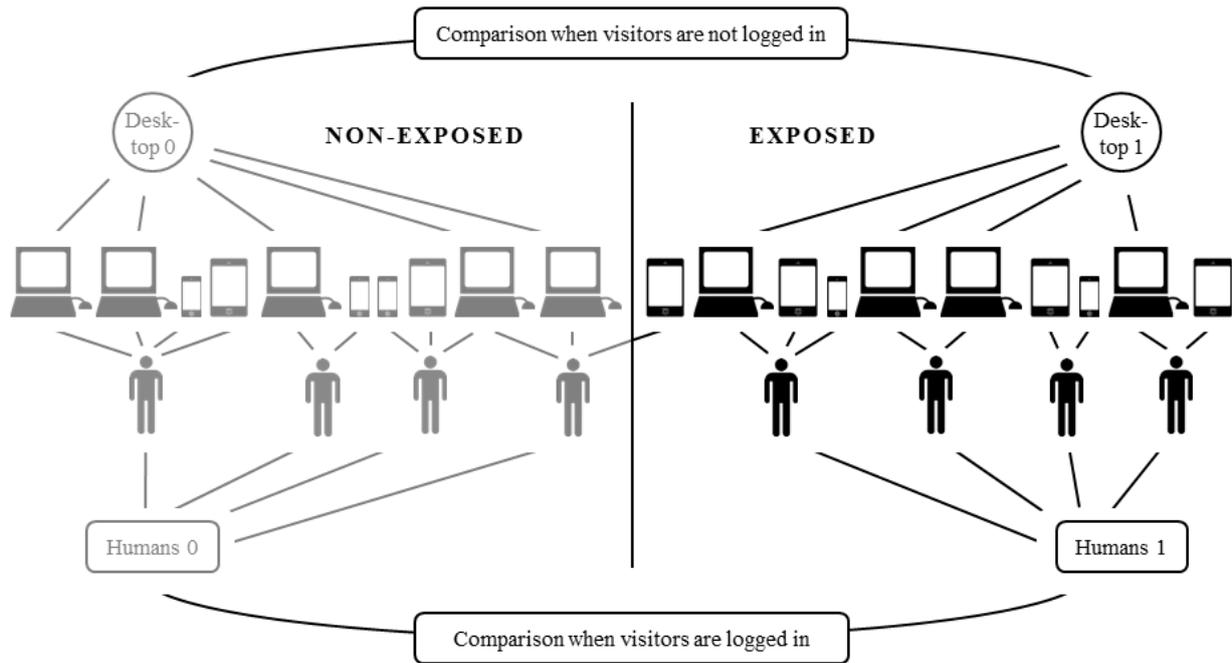
As the media agencies have a holistic approach and responsibility for advertisers' campaigns and the rule rather than the exception today is multi-platform campaigns, a possibility for single source measurements over multi-platforms is also high up at the agenda. There are already multi-platform measurements done in the context of *Digital Admap* and this is an area were a lot of developmental energy is invested. This is just as important for publishers and sales organisations as for agencies who all consider synergy effects of multi-platform campaigns important, promising and in great need for more robust measurement.

A truly interesting line of opportunities comes hand in hand with the publisher's success in getting the visitors to log in. Inizio is involved in a few such projects with great promise. As the model below illustrates, today the comparison between exposed and non-exposed is done on device level, but with logged in visitors to the website that comparison can be done between individuals.

A development towards logged in visitors – either created by the use of paywalls or by simply incentivising the audience to sign in – unlocks the multi-platform problem. Today *Digital Admap* reporting on multi-platform campaigns rest heavily on statistical modelling. With individual users signed in that will not be needed anymore.

And as if that was not enough: with website visitors logged in, the data can be analysed across segments. Today things like gender and age are asked by some publishers in the questionnaires used to collect the brand perception data. With data integration between today's data and a DMP (Data Management Platform) holding information about who is who, more breakdowns will be possible without even asking.

As pointed out in the introduction of this paper, publishers' situation today is in many aspects changing and challenging. Programmatic buying is just one but an important change. As computers starts doing some of the actual transactions there is an increased demand on the people doing regular business to add something more, in the form of consultative advise and creative campaign setup.



The growing usage of *Digital Admap* across various media groups is itself proof of the demand publishers have for data that identifies the full effect of digital advertising on their websites, mobile sites and apps. That demand has been growing in linear correlation with the growth of organic search, social media, online TV, programmatic, messenger apps and other such digital phenomena threatening the digital advertising revenues of more traditional publishers.

So some year ago, as the two authors of this paper were walking back from lunch, leaving the archaic quarters of 13th century Stockholm behind and stepping into space-age streets of glass facades and busy people crouched over touchscreen devices, they began sketching the map towards a future where Mediekompaniet's business of digital advertising keep growing, guided by a standard measurement of its brand effects. That future is now.

References

Facebook (2015) *Value of Video*, www.facebook.com/business/news/value-of-video

Google (2015) *Brand Lift*, www.thinkwithgoogle.com/products/brand-lift.html

Olivensjö, Anton & Gustaf Sundberg (2015) *Evaluating the Effect of Mobile Display Advertising – Guidelines on how to Advertise in the Mobile Channel*. Department of Business Administration, School of Economics and Management, Lund University.