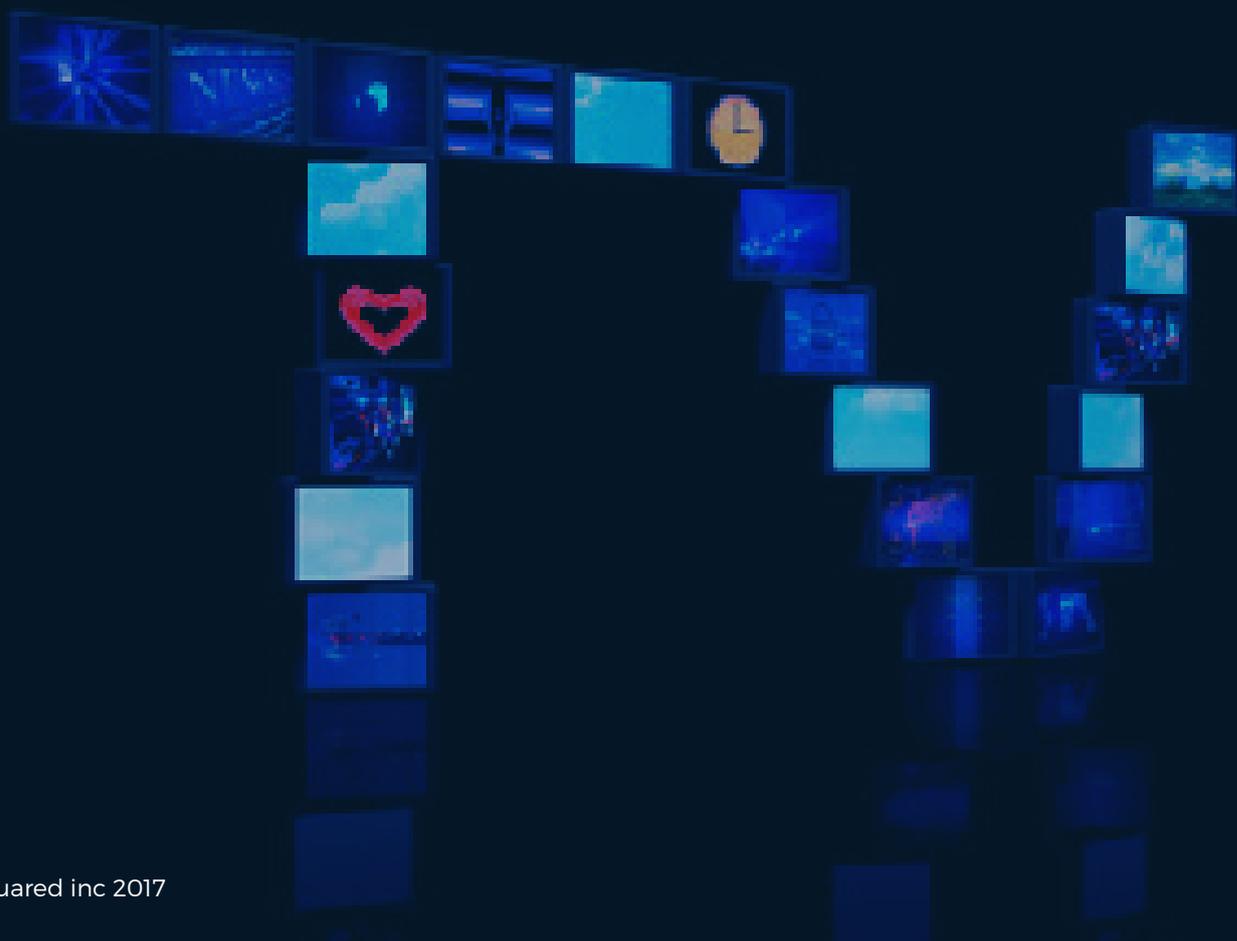


tvSquared

A Bottom-Up Approach

Merging the Best Offline and Online Techniques
- A Bottom-Up Approach to Offline Attribution





Summary

With the rise in offline advertising driving through to online channels, it has never been more critical to effectively measure the impact of marketing channels and understand how to optimize them.

This is most evident between TV and online, driven by second-screening consumers - those that watch TV with devices in hand or nearby.

However, neither traditional brand measurement techniques commonly used in the offline world nor direct-attribution methodologies applied to online marketing channels can deliver the insights CMOs need. Why? Brand measurement is not fine-grain enough and the user-level attribution data does not exist for the response to offline media.

This paper outlines a methodology for using a bottom-up approach for attribution that solves this conundrum and allows optimization for response TV to both offline and online channels.



ATTRIBUTE • RESPONSE • ROI • OPTIMIZE • INSIGHT • CPA



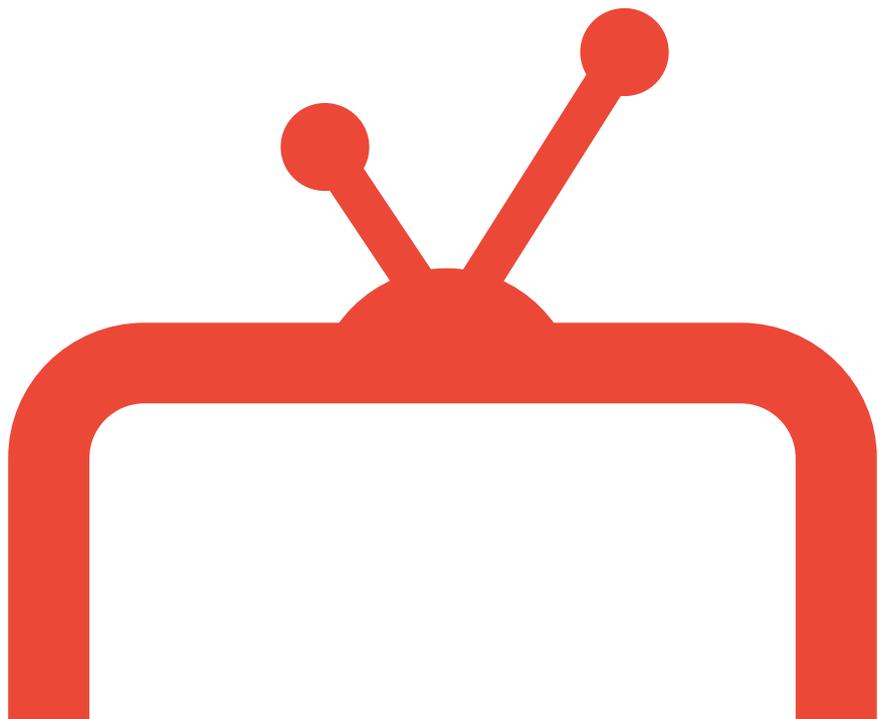
Introduction

Leaders of e-commerce organizations face an interesting challenge as the marketing mix moves to include offline channels and TV, in particular.

Their existing tool sets, deployed to great effect for targeting online media, lack the core referrer tagging on responses that underpin their operations.

Meanwhile, analysis of phone data - the historic mainstay of direct response TV measurement - becomes less relevant as responses move inexorably online.

Conversely, while traditional methods of econometric modeling can be extremely powerful in unpicking differing returns across the marketing mix, this approach has both shortcomings and limitations when used to replace online techniques of direct attribution.

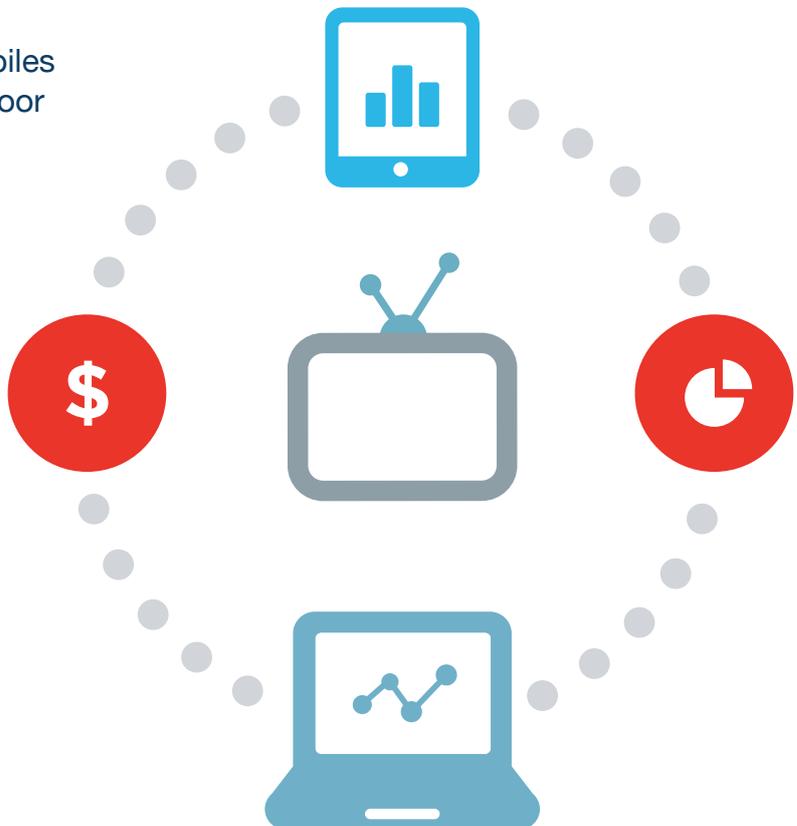




An Alternative Approach

The solution is to turn the approach upside down: to attribute as much as possible at the finest possible level of detail – which gives useful, tradable insight in the short term and, only then, to review the longer term brand impact across the mix once you have accounted for everything else.

This has been made possible by the ubiquity of the internet and connected devices – laptops, mobiles or tablets – that has opened the door to a rich source of real-time data about consumer behavior.



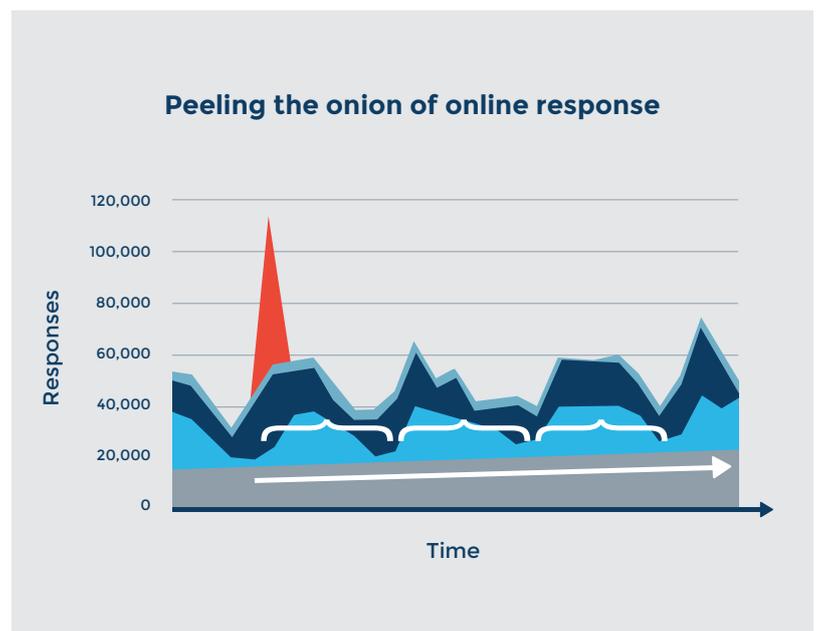


Peeling the Onion

Rather than starting from the top and moving down, an alternative approach is to start by looking at what makes up the traffic to your website. There is no shortage of external impacts that drive traffic to your site, for example:

1. Bots and other non-human traffic
2. Direct, immediate response to marketing activity
3. Response to shorter term direct marketing efforts, such as email campaigns
4. Highly active users that are not primarily driven by marketing, since they are already loyal
5. Pay-per-click (PPC) search
6. Long-delay tokens
7. External events outside the paid-for marketing calendar (radio interviews, programs covering the topic/brand, other time-bound events, etc.)
8. Seasonality

Once you have stripped away all of these effects (and you need quite a substantial data set to remove the effect of seasonality), you will be closer to seeing the changes in the longer-term trends in the true baseline traffic.





1.

BOTS AND OTHER NON-HUMAN TRAFFIC

Many sites use automated, external response-time monitoring to track performance and to alert administrators if the site fails to respond. These services perform a defined series of actions at regular intervals, usually from a consistent IP address. It is this coherent pattern that is the key to identifying these services so that they can be excluded.

2.

DIRECT ATTRIBUTION

If you can directly attribute activity to a particular source, get this done first. In many cases, particularly with very transient and time-bound activity, such as broadcast advertising (radio/TV), the response is similarly transient and time bound. Isolate this first and attribute directly. More importantly, this activity gives results at a much finer grain, allowing for more directly tradable insight – down to differences between individual programs within a genre.

3.

EMAIL AND OTHER DIRECT-MARKETING CAMPAIGNS

Direct-mail campaigns can have a more persistent and long response profile compared with broadcast advertising. However, while the response may take longer to appear, it can often be isolated easily by tracking the referrer to the site. As it is also triggered by a specific outbound campaign, this traffic can – and should – be removed from the analysis both of short-term direct response and longer-term brand effects.



4.

HIGHLY ACTIVE USERS

Within your customer base, there will be a number of loyal users - those whose use of your service is so part of their daily lives that they are no longer subject to marketing activity. While it is important to identify and understand who these users are and how they became customers, their use of the site should be removed since they are no longer truly responding to marketing activity.

6.

LONG-DELAY TOKENS

While the analysis of coupons is becoming more complex as voucher codes “leak” onto the internet, these transactions can be traced to sources and their effectiveness measured directly.

5.

PPC SEARCH

PPC as a result of unbranded, generic search terms is a vital source of traffic for many sites but, in the absence of any other evidence, it is less likely to be a result of prior marketing activity. Where this traffic can be split out, it allows for subsequent analysis of brand activity to be tested with and without this component.



Highly active users should be removed - they no longer truly respond to marketing.



7.

OTHER EXTERNAL EVENTS

Significant news coverage on a closely related topic can have a dramatic short-term effect on visitor numbers, particularly if there are specific mentions of your brand. While it may be almost impossible to react quickly enough to media activity to capitalize within the news cycle, heightened awareness could drive more response to a pre-existing campaign. Correcting for such external events allows the underlying effect of the campaign to be assessed more accurately.

8.

SEASONALITY

Finally, it is essential to adjust for the effect of seasonality. In many cases, and for good reason, marketing spend can be concentrated at the point of greatest underlying demand. This adjustment requires significant professional judgment.



Correcting for externalities allow for a campaign to be assessed more accurately.



Extend the Timescale as You Learn

There are different approaches that operate at different timescales. As you zoom in from true econometrics – at the scale of months or years – right down the real-time level of micro-level attribution to individual spots (for example), finer-grain learnings can appear that inform higher-level analysis.

MONTHS & YEARS	WEEKS & DAYS	HOURS	MINUTES
PROGRESSIVELY FINER-GRAIN ANALYSIS 			
Marketing mix	Brand effect attribution	Deferred response attribution	Spot-level attribution
Policy and overall investment levels	Brand awareness impact on baseline and direct response effectiveness	Impact of repeated exposure within a single program	Picks out details between genres, creatives, etc.
	Campaign planning		
	LEARNINGS FROM ONE LAYER INFORM THE LEVEL ABOVE		

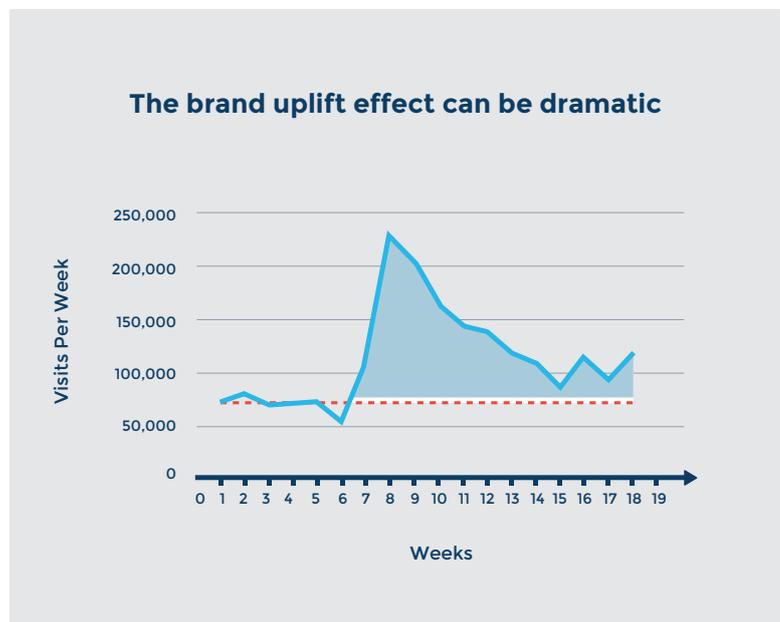


Brand Uplift

Even beyond the timescale of hours, advertisers often see a marked increase in traffic as a result of a campaign, with awareness turning to concrete action. This effect cannot normally be tied to specific spots or even stations, but is dramatic in the extreme.

This image shows an example of the number of visits per week following the launch of a TV campaign. As the resolution is only at the weekly level, it is not possible to tie this effect back to specific activity, even at the day-part level.

All of these effects should to be understood and accounted for before engaging in the wider analysis of the marketing mix. Clearly, this requires a firm grip of all elements of this “bottom-up” approach, something to which TVSquared has given a great deal of thought.





An Approach to Micro-Attribution

Naturally, performing micro-attribution is a relatively complicated business as there are a number of challenges to deal with when you are measuring response to meticulous infinitesimal granularity.

CHALLENGES

1. Busy schedules (cloud the ability to determine the short-term baseline)
2. Differing response behavior by type (web, text and phone all behave differently)
3. Time zone mismatches between spot schedules and server response timing
4. Local response to local media
5. Overlapping effects in crowded schedules

BUSY SCHEDULES

As outlined, web responses can be driven by a number of factors. Isolating the baseline – the traffic you would have seen even if there had been no advertising activity – is key. The busier the schedule, the more difficult it becomes to determine this baseline at a given time of day as the number of quiet periods reduces.

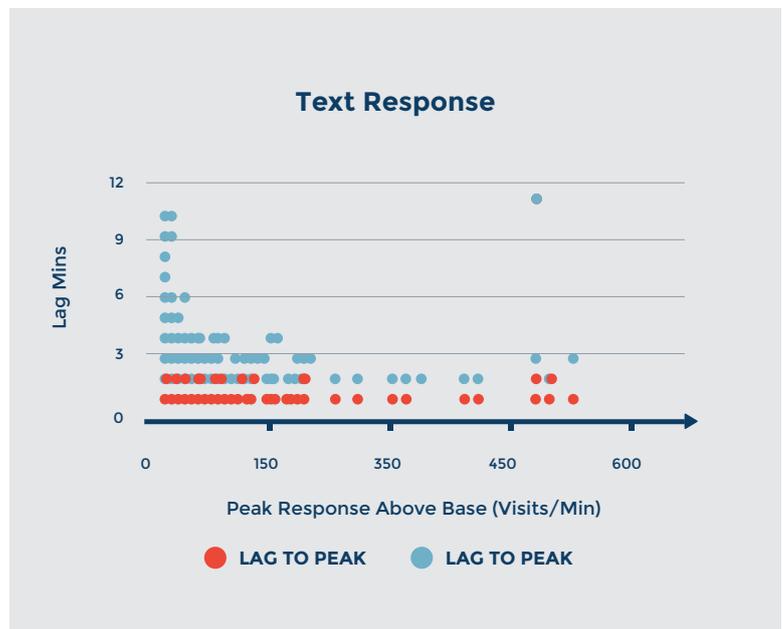
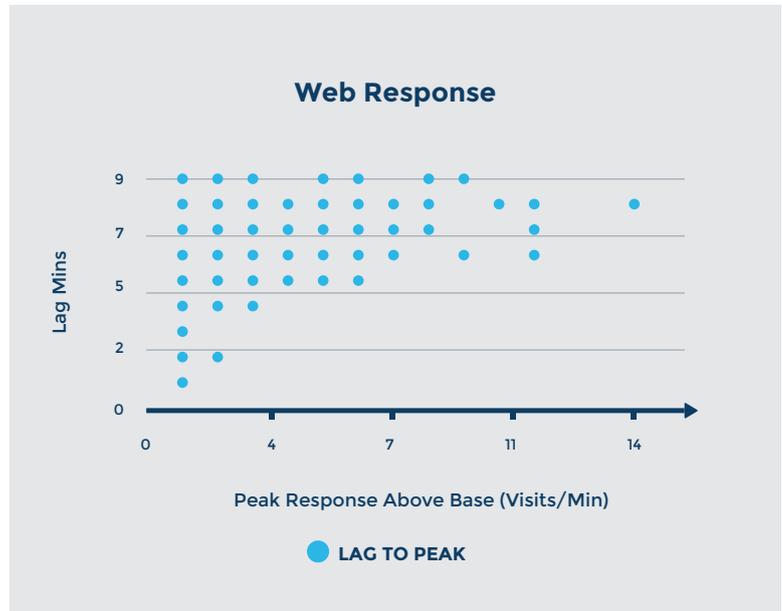




DIFFERING RESPONSE BEHAVIOR BY RESPONSE TYPE

Where the call-to-action provides for different methods of response – for example, by sending a text message or making a call vs. visiting online – the speed with which users respond can vary dramatically. As a result, these response mechanisms need to be treated separately.

The images show the delay difference between the user-response methods. SMS text responses are typically very short lived, whereas web visits take noticeably longer to appear.





TIMING MISMATCHES

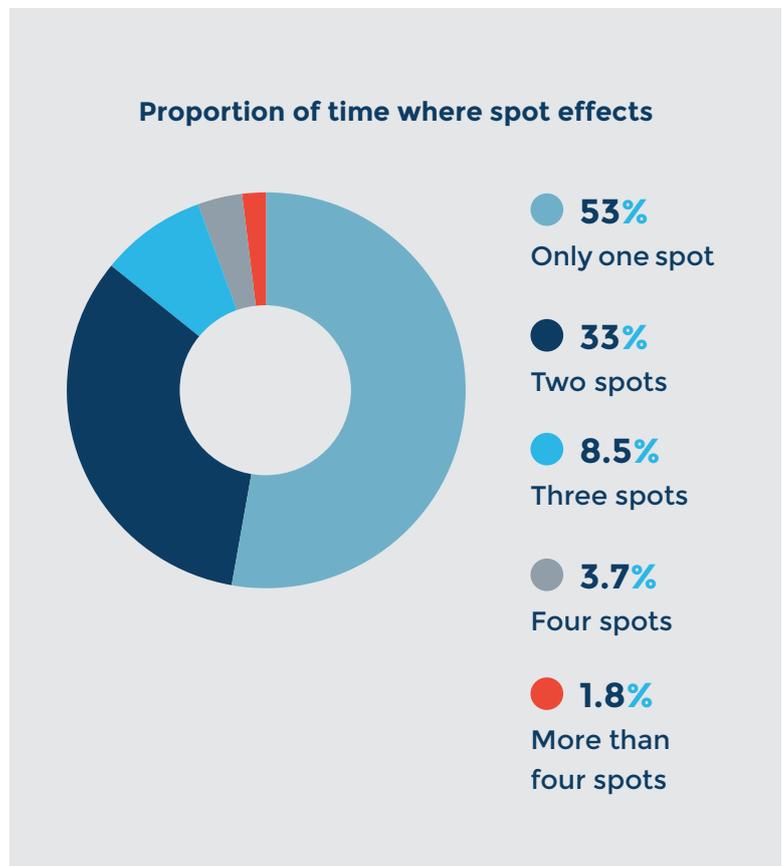
When merging together multiple data sources, and when accuracy is required down to minute-level granularity, it is important to ensure that the time clocks are synched. Whether it is simple discrepancies between GMT and BST, or broader time zone issues, it is key that synchronization problems are spotted and corrected.

LOCAL RESPONSE TO LOCAL MEDIA

As well as the broad timing mismatches, in many cases, media can be targeted to a particular area or, in the U.S. and Australia, to a particular time zone. In this event, it is necessary to identify and run separate attributions for responses per geography.

OVERLAPPING SPOTS

Finally, any micro-level attribution methodology must unravel the relative importance of spots whose effects overlap. Typically, almost half of TV spots have effects in the response that overlap. The image shows an example of a two-month campaign using a five-minute overlap window for spots. Unraveling these effects is crucial for determining which station, program or genre is driving response.



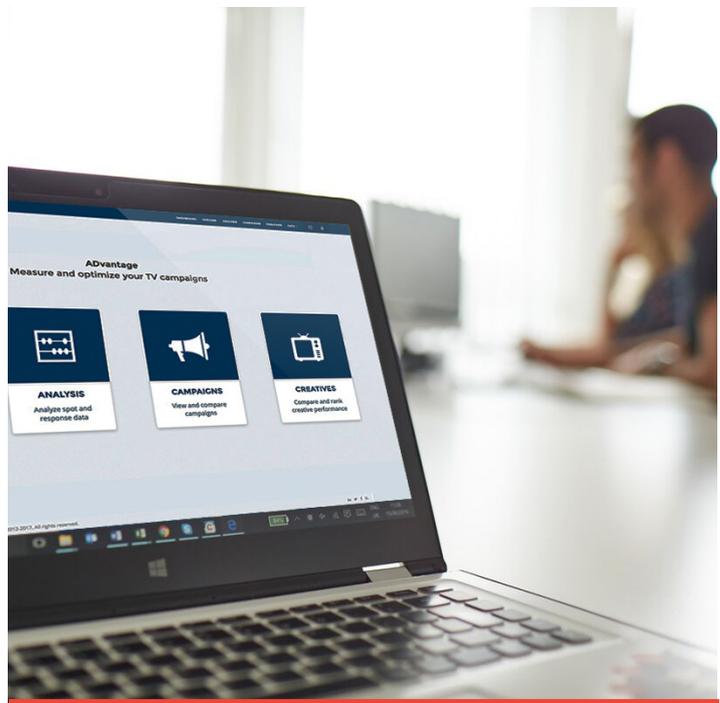


Conclusion

There is no one perfect system approach. The tendency to attempt to deal with and hide uncertainty is detrimental. “Vague-itis” and “guestimations” are dangerous algorithms. Identify, but do not attempt to guess, a cause for the “un-attributable.”

The goal is to strip out what is ascertainable or known, so that longer-term econometric modeling is only required for those areas that are not known. Although this is a weakness in that it cannot simply deliver answers, it can also be turned into a strength in terms of the quality of results and subsequent buy in.

It is a short-term focus with a long-term view that we believe TVSquared delivers the best results overall.



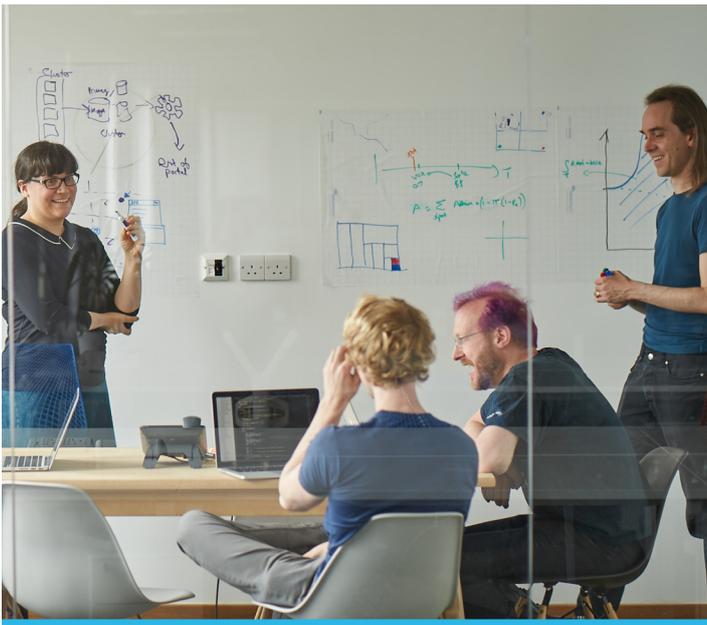


About

THE AUTHOR

A recognized thought leader in data analytics and modeling, TVSquared's co-founder, **Hew Bruce-Gardyne**, leads the company's technology development.

Hew has spent the majority of his career finding new and innovative ways of making data analytics transformative for businesses that span industries.



TVSQUARED

TVSquared is the gold-standard for TV measurement and optimization. Brands and agencies in 50+ countries use TVSquared to improve TV efficiency between 20-80% by determining the effectiveness of a single spot, improving the performance of on-air campaigns, optimizing media spend, informing planning and buying and understanding the total impact of TV.

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