



Strategic Playbook For Data-driven Agencies

Part One: How modern advertising agencies
can benefit from solving the big data puzzle

Index

Click to view:

1

[Introduction >](#)

2

[Data will help you to stay ahead of the curve >](#)

3

[Why you need a data strategy >](#)

4

[Data quality is key to achieving your goals >](#)

5

[How to manage the automated end-to-end process >](#)

6

[Data provisioning destinations: data warehouses & Bi tools](#)



Introduction

Data is key for marketing agencies. Embrace it to the fullest

Welcome to part one of Adverity's Strategic Playbook for Data-Driven Advertising Agencies. This will be a three-part guide for advertising agencies looking to modernise their business model and by leveraging data to the fullest.

In this first instalment, we'll be covering the end-to-end data integration process. In layman's terms, this describes the process by which agencies acquire all kinds of data from different marketing tools, harmonise these datasets into a consistent format and then use advanced analytics tools to uncover unique and compelling insights into campaigns and wider marketing performance.

In part two, we'll cover the reasons why we believe agencies should embrace the power of modern marketing intelligence and have provided some practical advice for doing so. This will ultimately serve as a catalyst for making quicker and better-informed decisions to maximise your return on ad spend - helping to foster strong and successful relationships between your agency and its clients.

The third and final part of this e-book will make a series of future predictions that data-driven marketers can expect from the industry. By anticipating these changes, agencies will be better placed to rise to these new challenges if and when they occur.

We know your pains by heart

A big part of our team has been working in the agency business for years and we know the pains by heart. A few years ago, one of our main tasks was to lead the process of media strategy, planning and buying. The execution of these processes has always been well-documented, and while this has continued to change over the years, it has remained relatively straightforward. The real struggle lies in building trust with the client: being able to fulfil the promise of reaching their goals, document the process, report and optimise campaigns. There was a systemic flaw in the whole process: most of these tasks were manual, tedious work. We concluded back then that this was not the way to go for us. Or for agencies in general. It was at this time that we founded Adverity; we believe that you need to be able to automate 95% of this process in order to be efficient. And for this, you really need to understand the implications of this undertaking.

End-to-end automation requires a seamlessly integrated technology suite to acquire your data, transform it according to your clients' needs and send it to other destinations for analysis and visualisation. Setting up a system where "some data is connected" and then create some graphs is already a process of the past.

In a late-night discussion, a top executive client said to me: "It's still unbelievable how processes work. Even today, experienced marketers extract data from a reporting interface, copy, paste and modify the numbers in Excel in order to create a PowerPoint presentation. Translated into a real-life example that would mean somebody walking to



the subway to go to the next stop, then take a cab to get their bicycle, just to push it home".

Data is strong when all data is coming together. The times, when visualising a single, isolated channel was enough, are over. Connecting to all data sources sounds easy - but the devil lies in the detail. Data aggregation becomes challenging due to constant changes in APIs and it is the job of experts to get every relevant detail from the source you need - and most of them don't even have an API.

It's important to understand that mastering your marketing data is a process, not a destination, so brace yourself to learn a lot for a very long time. I was often asked why we spend so much time educating our clients on these issues, which is a perfectly legitimate question to ask.

Most agencies receive requests for easy-to-use dashboarding solutions and not for a mind-bending data experience - and still, we believe in our mission to tackle these challenges full frontal. We help agencies and advertisers to get the most out of their data, and data visualisation is just the tip of the iceberg.

Creating stunning information by visualising data is great - but the price many companies pay to do this is way too high. Going one step forward and two steps back does not get your data-driven business anywhere near your goals.

So, to conclude: data is complex and sometimes painful. Once you decide to master your data, you will be rewarded with deep, meaningful insights and happy long-term clients that get the most out of their data. We know it's worth it.

I hope you enjoy our e-book. If you want to learn more about advanced marketing analytics software, our team is always on-hand to answer any questions you may have.

Alexander Igelsbock,
Co-Founder & CEO,
Adverity GmbH



01

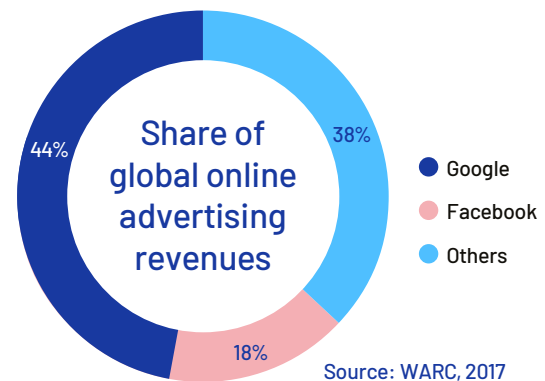
Data
will help you
to stay ahead
of the curve



Let's face it: Agencies are going through a painful transformation, similar to many other businesses around the world. New companies and technologies are disrupting business models left, right and centre: from the classic examples of Uber and AirBnB that turned their industries upside down, to Facebook, Amazon and Tesla that created new markets, and dominate those as they wish.

In parallel, the landscape for agencies has also changed a lot: Digital advertising has witnessed an explosive growth, and by historical measures, agencies managing multiple media channels would benefit the most from this development. Yet, from the sheer volume of budgets and number of clients, their buying power does not scale the same way - the main reason being Facebook and Google. Those two giants suck up over [60% of all digital ad spending](#), and their influence is mostly based on their large user base and the data they get from these users. To put it differently, platforms like Facebook and Google are both a blessing and curse for agency executives: while they benefit a lot from the first-party data and convenient features, the risk of becoming just another middleman in a fast-paced industry is more than real.

We don't want to talk about existential threats yet, but with new players on the market, tech-savvy brands investing in in-house knowhow and platforms, advertising agencies need to rethink their business model.



The world has changed quickly. Some time ago, marketing was about spending big budgets and getting the creatives right.

New approaches to communication and engagement are implemented and new ways to measure the effectiveness of these activities are necessary, too.

It seems like an arms race that agencies cannot afford to lose. In times of shrinking profit margins, agencies need to build lasting client relationships that go beyond the management of ad formats and decreasing pricing advantage. A relationship that is forged by strong leadership expertise, and the ability to analyse markets, consumers and buying processes in an end-to-end approach. This new partnership is based on data, advanced analytics and the ability to deliver true value to clients and their businesses.



In today's multi-channel reality, consumers interact, search, buy and consume differently, and many brands are stepping up their efforts accordingly.



"Automating the full data integration workflow and having a central hub to interact and work with our data is key to making sound decisions in the fast-paced marketing industry."

**Rudolf Sieger, CIO,
GroupM Austria & Switzerland**



Scaling your business with marketing intelligence

There is this simple approach to advertising in the critically-acclaimed TV series *Mad Men*: talk to your client and realise they are doing something fundamentally wrong; craft an idea based on your gut feeling; convince your client of this idea by playing to their emotions; gain praise, awards, and success.

These good old times are gone. A great idea is only worth little in today's world, given that you need to constantly support your marketing activities with data. And that's a shift for everyone. Marketers are in the same boat as their colleagues from other departments, they all have the pressure to prove the ROI from all campaigns and make fact-based decisions. It's only logical that agencies, too, would need to follow the same pattern and be held accountable for delivering quantifiable results, providing meaningful insights and contributing to the overall company success.

In order to make this happen, agency executives need to take the high road and implement an integrated approach of using data from the very beginning of any process - from creative campaign ideas, to understanding their clients' audience, and working on guiding consumers through the entire buying process. Each stage of the buyer's journey needs to be tracked; every piece of content needs to prove its effectiveness.

While traditional advertising used to focus on raising awareness through creative campaigns, today, agencies need to help marketing teams to develop deep, meaningful insights from their data, and deliver great customer experiences.

There will be growing pains for sure: If your business model was built solely on selling ads, you will be outpaced soon. Self-serving publisher tools as well as programmatic buying options reduce your relevancy in a highly competitive [600 billion dollar global market](#). Becoming a strategic partner will not happen overnight.



Embrace technology, get the right talents on board, and position yourself as a fundamental part of the data-driven approach to marketing!



But there's lots of light at the end of the tunnel: According to the [Gartner CMO spend survey 2017-18](#) spendings for marketing analytics are expected to grow, while overall budgets -especially for media - decline. So, if you can't beat them, join them. Become part of your client's technology suite and provide deep knowledge of their consumers. Implement the findings in your campaigns, use personalisation and granular data to create highly-relevant experiences for consumers, and optimise as much as possible. Only with this approach can you become an essential part of today's marketing machine.

If you are not sure yet what the future holds for you and your agency, try to answer a few of the following questions:

1. Do you have the possibility to aggregate and access your clients' data?

2. Do you know how to connect different datasets and get insights from them?

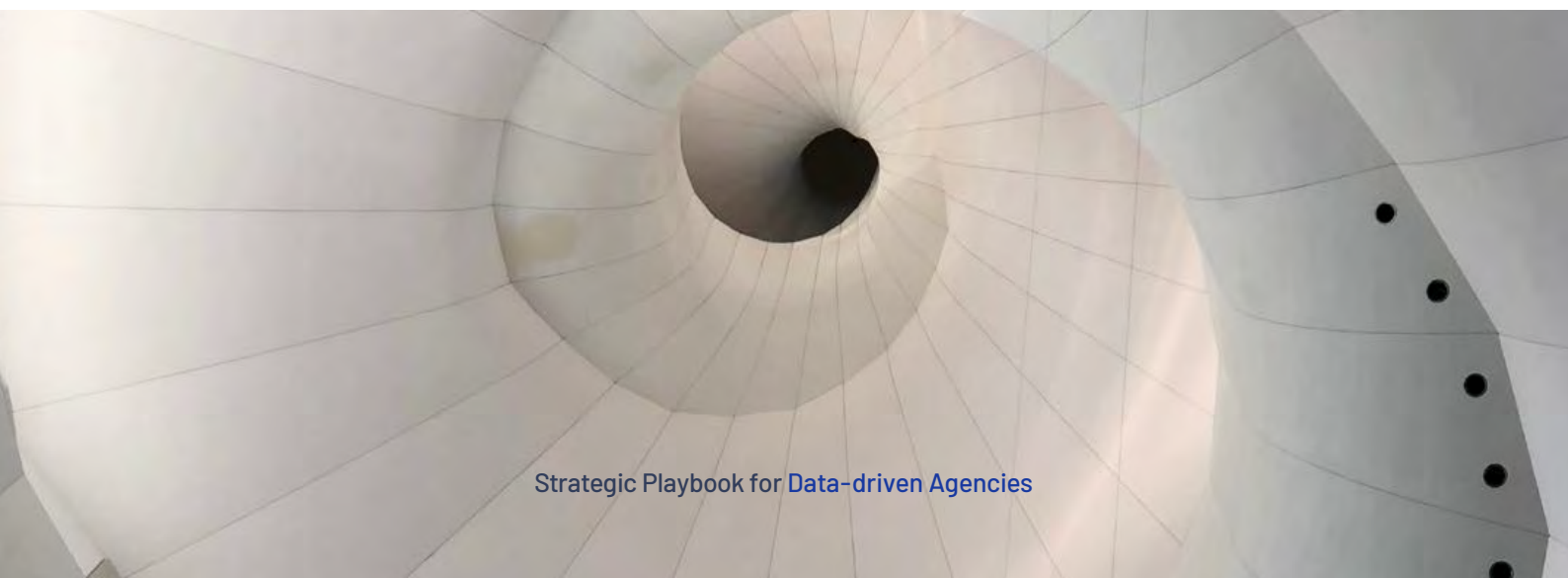
3. Where do you store and process data? Do you have the right software?

4. Do you know how to effectively analyse the data and act upon it?

5. What is your strategy in automating manual tasks, such as reportings?

2. Are you using the full potential of your clients data to optimise campaigns?

The answers to those questions will give you a feeling whether you are up-to-date with your data strategy, or if you have to work on it to make your business future-proof.



02

Why you
need a data
strategy



A data strategy is not just collecting data. It starts with a definition of your goals and continues with asking the right questions - to yourself and to your client:

1. What data do you need?

2. What software do you need to analyse it?

3. Where is the best place to store it?

4. Who'll take care of all this?

As an online user, we all produce large amounts of data. If you are on Facebook, Amazon or any other online network, your behaviour is saved as data - and this data generates value for those platforms: they know what you like, what you do, what you click. They even know if you're pregnant *before you do*.

There is this well-known saying: if you are using a product for free, then you are the product. In this context this just means: the owners of the products sell your behavioural data to advertisers who in turn try to sell stuff to you: because you clicked, liked, interacted with similar products.

In short, data creates value because it consists of information about users. The tricky thing here is: the biggest chunk of the data is not really helping. Our experience shows: data is good. More data is not. We know from our daily work with marketers and agencies that it is easy to drown in data if you don't know what you are looking for. Remember the needle in the haystack that you are desperately looking for? Well, in this case, you don't even know if it's a needle or any other pointy object. At the end of the day, data is a product like any other: either it delivers value or it doesn't. One of the biggest challenges marketers as well as agencies are facing is having a data strategy - a plan what to do with your data and how to create value from it. Of course, many decisions on this topic will be made on the client's side as this involves many departments with long-term impact. Such decisions should always involve input from agencies in order to fully grasp their organisation's goals.

70%

Nearly **three-out-of-four** CEOs consider analytics to play a key role in their success

25%

Yet, only **one-in-four** CEOs believe they're in a good position to extract insights from their data.



To create actionable insights from your clients' marketing data, you'll need to keep your eyes on these seven points:

1.

When building your data strategy think of the right questions you and your client want to be answered. Aim for questions that not only confirm your hypothesis. Re-evaluating old assumptions can help you generate great insights.

2.

Know your clients' business goals inside out and connect them to your insights. This will help you drive actions quickly because you know why you're doing it.

3.

Take your time and find the right software for your client - and for your business as well. It's critical to have right tools at hand that translate your needs into actions. What's the point in having a magic wand without knowing how to cast a spell?

4.

Don't settle with beloved KPIs your clients want to focus on. Explore new ways to evaluate the success of your marketing campaigns.

5.

Always look for references. Your insights are only valuable if you compare them with other time frames or put them in context. This will quickly give you confidence when assessing your campaigns.

6.

As with any other discipline in the business world, leadership trumps everything. Be an example when it comes to thorough analysis, set realistic goals and give your team confidence to experiment, learn and optimise their analytics routine. Your team will thank you with new methods of data exploration and fresh results. We are sure your client will appreciate this route as well.

7.

Last but not least: not all your insights are actionable. This might seem like a trivial counter-argument, but it's actually a highly relevant reminder that there will be findings in your data that you will not be able to tackle. Stop wasting time on things you cannot change.

There is one thing you need the most: patience. Getting the data you need and creating value from it is an inherently difficult process. In our countless pitches, we keep hearing possible clients say that they want actionable insights quickly, extensively and in real-time, without ever thinking of the implications. Many agencies experience the same pressure. We see it as our and your job to manage their expectations, too. Without realistic goals, the right tools, proper strategies and skillsets, data is just a clunky mess. But it really does not need to stay that way.

A large, bold, dark blue number '03' is positioned in the upper right quadrant of the page. The '0' is a thick, rounded shape, and the '3' is also thick and stylized, with a curved bottom. The background is a solid light blue.

Data quality
is key to
achieving
your goals



You can't do business if you don't know your customers well enough. It's no secret, we all know it. So learning about what your customers really want, need and are willing to spend their money on should be considered a main priority.

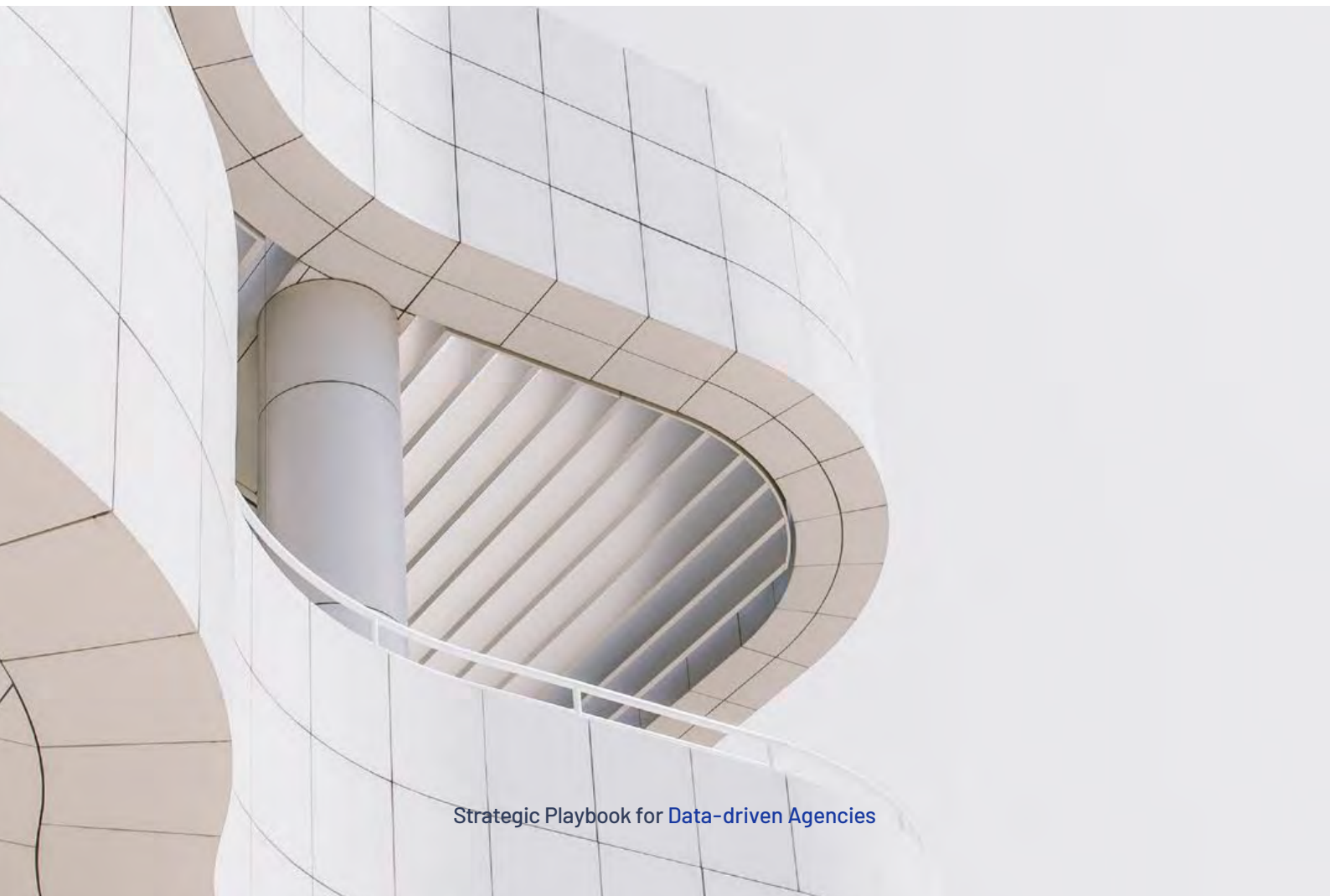
To get the best insights, you need to invest time and resources, especially when it comes to collecting and analyzing the right bits of information. As a marketer, you are likely swamped with tons of data already that, to the best of your knowledge, may be accurate, relevant and insightful. But what if it isn't - at least not entirely?

Can you really trust all those numbers? How can you be sure that there is no missing or incoherent data? Or what if there are blind spots and you don't even know where to start looking for them? To be able to fully rely on your data, you need to make sure that you don't compromise on its quality. After all, you generate and collect data to have a fact-based decision-making process, so you better make sure you have one!

Characteristics of high quality marketing data

The thing with marketing data is that while two pieces of information may look similar or almost identical to the human eye, to a data analytics tool, they may be completely different. Even when they signify one and the same thing.

The most common confusion stems from having various time and date formats, as well as inconsistencies in the spelling of users' names and addresses.





High-quality data makes sure there are no such inconsistencies - and that the insights are accurate, timely and as complete as possible.

Adverity's five-point checklist for high quality marketing data:

Data is consistent.

This means that data is stripped of its various formats, cleaned, harmonized and made ready for analysis in a unified form. Agencies must ensure that data metrics are formatted and measured according to the same consistent units e.g. campaign naming conventions, currencies, timezones and other terminology.

Data is accurate.

Marketing data needs to be collected as close to its original source as possible to avoid it being processed multiple times along the way. The more detailed and specific the data, the more accurate it ends up being.

Data is up-to-date.

Timeliness is one of the most important characteristics of marketing data nowadays, mainly because of the speed information moves with. Collecting and analyzing data in near-real time is what helps companies respond to their customers' wants and needs quickly, and what eventually sets them apart from their competition.

Data is complete.

Or at least as complete as possible. Collecting and analyzing data in its entirety is key to the success of your marketing activities. Any missing information, in turn, would only get you to make decisions based on educated guesses instead of facts.

No missing or incoherent data.

When you have the numbers, they need to be correct - or at least you should be notified if there was an error in the loading or transformation process. Making important decisions based on the wrong numbers can hurt, so you should also make sure to not only get but also pay close attention to the error reports.



While two pieces of information may look similar or almost identical to the human eye, to a data analytics tool, they may be completely different.



How to manage
the automated
end-to-end
process



Acquiring and transforming data through specialist integration software

Attempting to manually acquire and transform raw data represents an arduous task that is fraught with an array of potential pitfalls.

Thankfully, the emergence of ETL (extract, transform, load) platforms has proved crucial in reducing much of the laborious manual work required from agencies - resulting in vast improvements to data quality.

That said, ETL software is not a newcomer to the world of big data marketing. As a matter of fact, ETL has been something of a mainstay for the past couple of decades or so. Though, increasingly advanced ETL software and the subsequent rise of marketing iPaaS platforms (more on that shortly) have firmly established such data analysis software as enduring cornerstones of modern data-driven marketing.

For optimal data quality, it is paramount that data is processed directly from its source and in its rawest form. This then gives way to the harmonisation capabilities of data integration software to transform data from multiple data streams into a consistent format.



Integrated Platform as a Service (IPaaS)

iPaaS is a new brand of data integration software designed to support agencies and marketers in their efforts to integrate data from multiple platforms across various clouds and legacy platforms.

Akin to its more renowned counterpart, the core principle underlying iPaaS is that it has been developed to provide agile integration solutions for other software and online tools. This is achieved primarily through APIs, which permit easy interaction between platforms to give users access to real-time data and application functionality.



API-powered data acquisition has a number of advantages. Ultimately, APIs and other file-based connectors are here to save your agency time, money and resources. In the case of data integration, they make it possible for one platform to communicate with another: sharing data behind-the-scenes to provide you with a continual stream of real-time data.

Characteristics of high quality marketing data

A simple case in point to illustrate the need for data harmonisation: something as simple as a date can still be formatted in a number of different ways, such as:

- 11-Aug-2017,
- 11-08-2017,
- 08/11/2017 (DD/MM/YYYY),
- 11/8/2017 (MM/D/YYYY),
- 2017-08-11,
- August 11, 2017

Indeed, data formatting between datasets is rarely uniform. By appreciating how something as pedestrian as a date or timestamp can still have a multitude of formatting options, only then we can begin to appreciate just how fragmented and messy working with multiple data sources can be.

Sure, the majority of performance metrics are quantitative so surely that should permit easy assimilation of all your data? Alas, take a moment to consider that your clients' cost per click (CPC) data could be given in a number of different currencies or naming conventions, such as 'CPC', 'click cost', 'cost', 'cost per click' and so on.

Depending on the platform you're using, there may be a lot of traps that you can easily fall into when working with unaligned column naming - that's before we begin to consider that they may be given in multiple languages!

More still, there are many examples where you'll need to harmonise your data before being able to combine different data streams. For instance, ensuring consistency between the UTM codes used in your social media campaigns. This will ensure greater clarity of your paid social activities when analysing data that's been pulled from Google Analytics.

Similarly, by standardising naming conventions for your campaigns you'll ensure that you're able to differentiate between different media types in your BI tools. By introducing a detailed and highly specific naming



It is paramount that data is processed directly from its source and in its rawest form.

convention like 2017_Apple_Telco1_iphoneX_Xmas_AllTargets, you'll be able to easily distinguish between campaigns, as well as being able to group them when appropriate.

Without the automatic creation and attribution of those columns your reporting and analytics becomes a painful, manual work. Inconsistencies present major barriers to obtaining an accurate and coherent overview of your marketing performance. Yet with the power of data transformation tools, marketers can easily overcome challenges that would be highly burdensome to anyone who'd dare to tackle them by hand.

By transforming your data, you're able to create what we like to call a clean data stack. This allows for easy analyses that incorporate data from different platforms.

In the absence of clean data, datasets acquired from different sources cannot be analysed simultaneously within a single platform. Attempting to produce a complete analysis of your marketing performance with side-by-side reporting represents a restricted and reductionist approach to modern data analytics.



In order to truly empower data-driven marketers to fully understand their marketing performance and identify the drivers of their business success, it is imperative that they have easy access to all their data. Moreover, this data should be updated in near real-time speeds and presented in a consistent structure that allows for efficient cross-channel analysis. Whether you're looking to integrate data from your social media channels, ad server platforms or analytics tools, data integration software can provide you with a complete picture of your marketing performance.

By investing in a next-generation data integration platform, you stand to benefit from efficient and enriched campaign reporting and marketing analytics.

"But how can I use my clean data stack?", you ask ...

Many data integration platforms - Adverity included - support data provisioning to any destination. This allows you to use your clean data stack with cloud services, databases and business intelligence platforms.

With data provisioning, not only can you provide other teams and departments with access to your clean data, you can make the data available to use with third-party analytics tools.

After sending your cleaned data to a data warehouse (such as Amazon Redshift or Snowflake), you'll be able to use popular data visualisation and analytics platforms to explore your data.

By natively integrating your clean datasets in Power BI, Tableau and other business intelligence platforms, you'll have an automated and continuous feed of real-time clean data for your analysis.

A common problem facing advertisers today is not that they're in need of more data. They have plenty already. What they do need, however, is more time to analyse their data in support of making smarter marketing decisions. According to a recent study conducted by the [Digital Analytics Association](#) (DAA), 44% of business leaders say their analytics teams spend more than half their time accessing and preparing data rather than performing actual analysis. Without an automated data harmonisation and provisioning solution, you can expect to have a huge abundance of unclean data that requires an awful lot of needless manual attention before it'll be ready to be shared with stakeholders.

In short, there's a clear solution to avoid all this unnecessary work: delegate the tedious work to a cutting-edge data aggregation solution. Not only this will allow you to shift your focus towards data analysis and deriving actionable insights from your data, it will also free up a lot of resources, improve transparency and internal communications within your company.

"How do I create added value from my clients' freshly cleaned datasets?"

Unfortunately, having large volumes of clean data at your disposal does not immediately translate into valuable and actionable insights. Similarly, effective data utilisation encompasses far more than simply transferring your newly harmonised data to a central warehouse.

Luckily, there is a whole host of opportunities to generate added value from big data. By augmenting individual-level customer data alongside contextual information - such as geospatial data, economic trends and weather statistics - it's possible to generate a far more comprehensive overview of how a marketing campaign has been received by its audience.



Nearly one-in-two business leaders say their analytics teams spend more than half their time accessing and preparing data rather than analysing it.

Source: DAA, 2017



In the case of weather data analytics, this can be a hugely valuable asset to marketers. Yet, it's often underused and undervalued. When employed effectively, it can help marketers to gauge demand and allow them to adjust their campaign strategies accordingly.

For instance, did you know that barbeque sales [have been found to triple in Scotland](#) when temperatures rise above 20° C? However, the same cannot be said for Londoners. Residents of Britain's capital typically hold out for temperatures in excess of 24° C before retailers see an increase in demand equivalent to that seen in their Scottish counterparts.

We can conclude from this that not only it is crucial for manufacturers and retailers of seasonal goods to acknowledge the influence weather has on consumption behaviour, agencies must also recognise that consumer preferences are not uniform. In fact, there are a multitude of factors that shape a consumer's purchasing behaviour and failing to acquire a deep enough understanding of these determinants will result in shortcomings in delivering the added value that is now expected from data analysis.

In short, technological innovations continue to open new doors for agencies and marketers, though this isn't without its challenges. Keeping pace in the fast-moving world of big data marketing is no easy feat. While agencies are able to acquire deeper analyses than ever before, it's fair to say that a simple report detailing click-through rates (CTRs), impressions and cost per click (CPC) will no longer cut the mustard.

To truly create added value from marketing data, advertisers must look beyond a list of basic metrics and instead tell stories from marketing data. By understanding your target audience on a granular level, you'll be far better placed to deliver campaigns that speak to those who receive them - the likely outcome being that your client will benefit from higher conversion rates, an improved ROI and continue to show faith in your agency.



05

Data
provisioning
destinations:
data warehouses
& BI tools



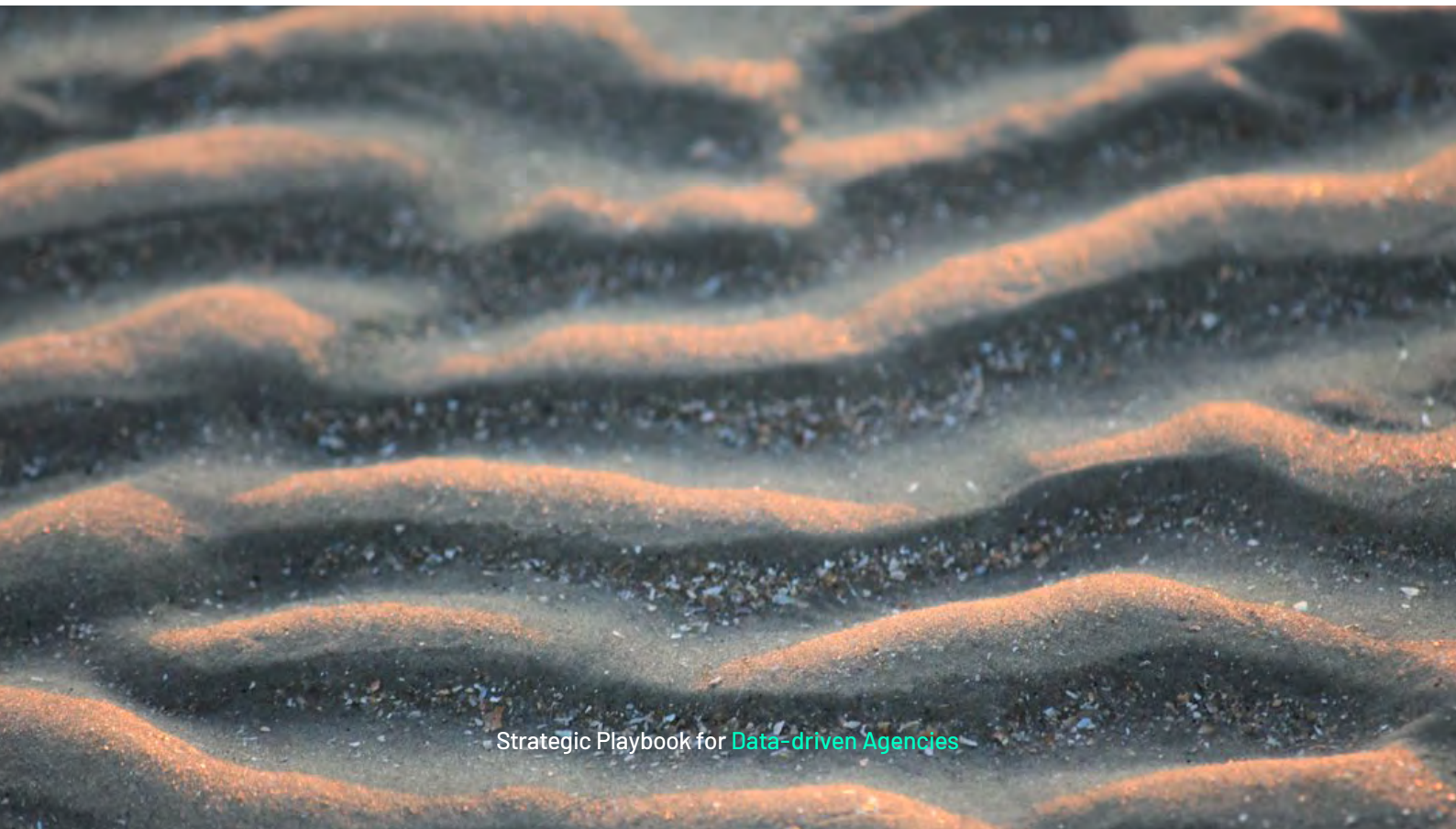
Surely, harmonised data is a must-have if you are to get the best out of your marketing efforts. Yet, not everything begins and ends with it. In order to make sure that your clean data is being analysed in its entirety, you also need to have all relevant stakeholders involved. With data provisioning, you can not only extend the access to data across teams and departments but also make it available to use with various analytics tools.

In the majority of cases, advertisers do not need any more data. What they do need, however, is more time to analyse data and make smart marketing decisions based on it. Without the help of automated data harmonisation and provisioning processes, you'd have your hands full going through piles and piles of data, cleaning it, and sharing it with stakeholders. Can you imagine doing all that manually and on a daily basis? No, neither can we.

Put simply, data provisioning makes it possible for data to flow across an organisation in a structured and secure manner. With increasing amounts of data, (often) geographically dispersed teams, and concerns about data privacy, data provisioning is becoming more and more of a necessity. It's the key to having your data when and where you need it the most.

Think of it this way: If harmonisation helps break down the silos within your data streams, provisioning allows you to do the same across teams and departments.

By using the right tools, you can natively integrate your clean datasets in just about any business intelligence (BI) platform to provide all relevant stakeholders with access to the data they need. You can also protect sensitive information by deciding just how much to share, and with whom. Essentially, what's important is that you have your data securely stored, ready to be analysed within the right context and by the right people.





Data warehousing solutions: the main contenders

You may also wish to leverage your data to a data warehouse - this is a central repository that's able to store all types of data, including e-commerce data, analytics data, social media data, you name it! By putting all that information at your fingertips - accessible through a single database - you'll be able to generate deeper analyses and uncover compelling new insights into your marketing performance that may just prove crucial to improving your sales performance.

We'll be taking a closer look at three cloud-based relational database management systems (RDBMS), which are commonly regarded as three of the biggest players in the data warehouse market **Snowflake**, **Google BigQuery** and **Amazon Redshift**. All three of these data warehouses deliver fast query performance thanks to advanced columnar storage technology, cost-based query plans, just-in-time (JIT) compilation and data pipelining.



First up, allow us to introduce you to the new kid on the block. **Snowflake** is a cloud-based relational SQL data warehouse that supports flexible data sharing. With a far more attractive pricing model than many of its more traditional competitors, Snowflake is expected to make further inroads in its quest for data warehousing supremacy.

One of the upsides of Snowflake is its powerful processing capabilities for semi-structured data - this makes it far easier to query data that contains flexible schemas, particularly from JSON or Avro.

Snowflake supports granular access privileges, whereby user roles can be set and additional pluggable authentication set up.



Google
Big Query

BigQuery is a fully-managed SQL data warehouse built to handle the complexity of modern data-driven marketing. Like Snowflake, BigQuery is a cloud-based, serverless solution that requires no additional infrastructure.

Queries are performed against append-only tables, which means that when new rows are created or existing ones are updated, they will be appended at the end of the table. Therefore, this must be accounted for when writing new queries. Users are able to interact with tables using the web-based UI and command line tools.

Regarding access roles, users privileges can be set e.g. owner, writer and reader. However, this can only be set for whole datasets and not for individual tables.



amazon
REDSHIFT

Amazon Redshift is an equally robust and scalable data storage solution capable of querying large amounts of data with ease. Redshift seamlessly integrates with a whole host of BI and analytics tools.

Amazon itself claims that Redshift 'one tenth of the cost of traditional warehouse systems' and as a highly scalable solution, users can easily need new nodes as your business (and data warehousing needs) grow.

Boasting finely-tuned access rights according to SQL standards, powerful metrics, reliable uptime, it's clear to see why Redshift has emerged as a key player in the industry.



By putting all your data at your fingertips - accessible through a single database - you'll be able to generate deeper analyses and uncover compelling new insights.



Data warehouses: fundamental principles

Store data from all branches of a company's operations

The data must be integrated before it can be processed

Allow for easy analysis of the data stored by the data warehouse

Which data warehouse would be best for my needs?

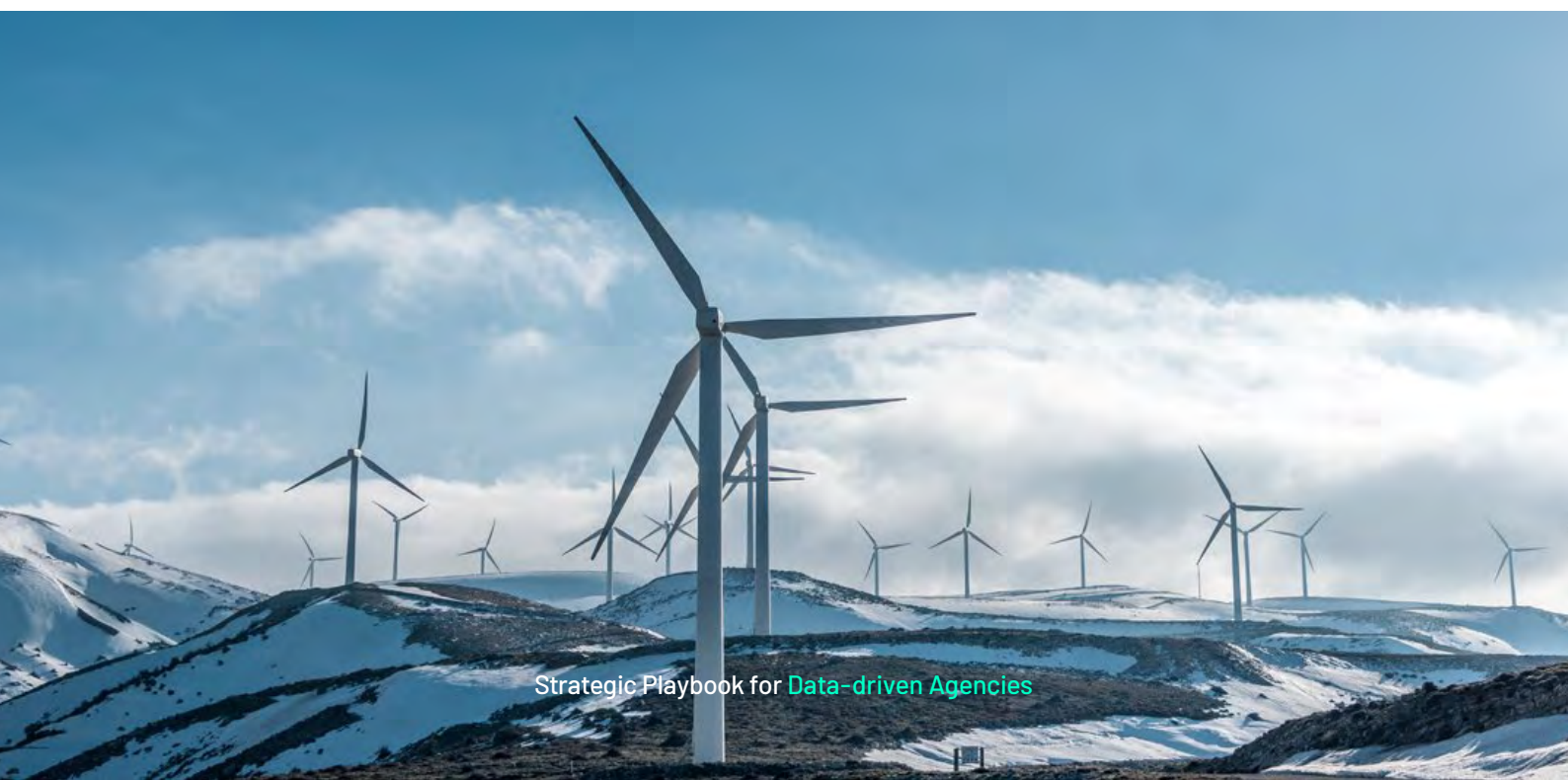
With a marketplace saturated with a plethora of powerful data provisioning solutions, big data marketers would be well-placed to leverage their data to a data warehouse. This will be crucial to shifting your long-term focus away from tedious data aggregation and instead help to realign your focus to analyse the right data and deriving actionable insights for yourself or your client.

It is not possible to draw definitive conclusions regarding which of these giants comes out on top. Some provisioning solutions will be better suited to some people's needs more than others.

When deciding which solution to go for, you should be mindful of how the platforms are likely to respond to the type of data you wish to use; how much data needs to be processed and the kind of queries you plan to run.

While all three of the solutions we've highlighted are renowned for their lightning-quick processing speeds, it's not guaranteed that they will be able to maintain such speeds if your data and queries are structured in a way the platform finds problematic. In such cases, even the fastest data warehouses available on the market can quickly become lethargic.

Choose wisely: it just may prove crucial in your pursuit of more compelling insights and improved efficiency in client reporting.





When assessing available options, ensure you consider the following:

1.

Get yourself a resourceful partner. If your organisation lacks personnel who have an in-depth understanding about data structure, we suggest consulting an independent expert who'll help you avoid the potential traps you might otherwise encounter from attempting to arrive at a decision internally or together with your client.

2.

What about other infrastructure in your or your clients' companies? The best cloud-based solution for your data operations might be one you already have. Similar to the previous point, we advise you to consult a data expert. Perhaps this person works in another department and has already a ton of experience with a certain vendor.

3.

What are your use cases? Do you want to analyse data from previous campaigns? Are you planning to work with other data scientists? Or perform econometric analyses to predict future trends and outcomes? The data architecture you ultimately decide to go for should be there to support you in achieving your goals.

3.

Load and query performance: ask yourself how much data you are expected to use and whether you could justify paying a premium for additional computing power. In doing so, you'll need to consider the timeframes you'll need to keep data from: the past twelve or 120 months? The more data you want to store and analyse, the more data you have to constantly load. Some services restrict users to a maximum amount of queries that can be performed - by a single user or by account. Take time to consider such limitations to avoid paying extra at a later date.

5.

Costs! If you want to enhance your performance and make effective use of your budget, it might make sense to add a data storage solution to your tech infrastructure. For instance, you could create a subset from your data in Redshift or Snowflake for daily analysis and move the rest to a data lake. This can do wonders for reducing your storage costs and improving performance. Note that some vendors charge a flat query fee, while others charge by volume.

6.

Maintenance: plan ahead to ensure that you won't be short of resources in your team. Operational maintenance can soon mount into a huge pile of work if no one takes responsibility. Some vendors claim to be fully managed, while partially managed solutions will need some love and attention from skilled IT specialists to guarantee stability, monitoring, provisioning or scaling. Be sure to consider your future vendors support offers: self-service tools tend to charge for your extra wishes.

7.

Features: there are certain commodities you'll need and expect from your cloud vendor. Do you need an elaborate ecosystem or can you work in a siloed environment? How many extra tools do you require and does your preferred partner natively support these?



Perform deeper analyses with BI tools

Business intelligence platforms are not here to advise marketers and business executives what they should do, nor can they forecast what will happen. Moreover, there is a lot more to BI than simply generating reports on current performance. BI provides an extremely useful outlet to closely examine big data to uncover trends and derive actionable insights.

BI tools are must-have for modern-day marketers: streamlining the effort required to perform searches, merge and query data in order to obtain the data needed to sanction and support business decisions



As a leading BI and data visualisation software provider, **Tableau** offers a powerful array of data analytics tools. Tableau is a highly interactive platform to explore your data and uncover trends by employing a range of statistical and methodological analyses.

As a cloud-based platform, sharing data, visualisations and reports is effortlessly simple - allowing for easy collaboration between teams and departments.



Google Data Studio is a web analytics dashboarding service that turns your analytics data into branded reports and data visualisations, which can be effortlessly shared with your clients and colleagues.

As part of Google Data Studio 360, the platform's UI feels very 'Google'. Therefore, users that are already familiar with the different analytics platforms offered by Google - such as Google Analytics or BigQuery - should find that Data Studio will fit neatly in their current marketing and analytics setup and that they'll need little time to become accustomed to the tool.



Power BI

Equipped with a range of self-service business intelligence capabilities, **Microsoft Power BI** users can create interactive visualisations, reports and dashboards without any specialist IT staff or database administrators.

With 16 chart types available, users have plenty of options for visualising real-time and historical data. With a sleek and highly intuitive interface, Power BI's position as one of the market leading BI tools is well-founded. There's even a free version available too!



Adverity was specifically built for marketers and agencies to help them stay ahead of their business. Users can build highly customised dashboards that provide a real-time overview of their marketing performance. Datasets and dashboards can be easily shared with stakeholders, according to level of access they have been granted.

After integrating a harmonised data stack provided, users can click - not code - their way to generating compelling marketing insights within seconds. Insights is able to support an unlimited number of metrics, KPIs and dimensions.

No data processing job is too big for Insights. No matter where it might have originated from, users will have instant access to all their data without any further cleansing required.



BI tools: fundamental principles

Integrate data from any source, including file uploads, database querying and API/data connectors

Provide the means to harmonise data into a consistent and workable model

Support data modelling and blending

Allow for the creation and deployment of internal analytics applications

Permit users to generate reports and visualisations with business benefit





Your next steps to becoming a smart data analyst

Hopefully, you're now convinced of the benefits of harmonising your marketing data and leveraging it to next-generation data warehousing and BI tools.

Assuming that you're now firmly onboard and eager to break free from the shackles of data silos, you have a three-step checklist to complete:

Sourcing a powerful data integration tool

complete with an extensive selection of pre-built data connectors covering all your marketing tools and data sources.

Finding the perfect data warehousing solution

to store your clean datasets

Leveraging a BI tool

to generate deep analyses from your data to uncover the primary drivers and potential pitfalls that will shape the future success of your business.

Glossary

Databases are systematically organised or structured file and/or data repositories that allow for easy retrieval and analysis of the records it stores.

Data warehouses organise data upon entry, enabling consistent and predictable analyses in categorised structures that store both semi-structured and unstructured data. Data is usually organised in multi-dimensional schemas to support running queries, generating reports and employing advanced analytical models.

Data lakes store a mix of structured, semi-structured or unstructured data. This means that they're capable of storing all kinds of data and file types, including customer transaction data, spreadsheets, images, and social media data. Data lakes may be updated in traditional-style batch jobs or through connections to real-time data feeds.

SQL is short for Structured Query Language. It is a programming language that is used to communicate with and manipulate databases. SQL allows users to retrieve specific data and make modifications to a database's structure by creating, modifying and deleting tables and other database objects.

Further reading

- [How to select the best self-service BI tool for your business from CIO \(2017\)](#)
- [Best Business Intelligence Platforms from G2 Crowd](#)
- [Best Data Warehouse Software from G2 Crowd](#)



Here's what you can expect from part two:

- Automating reporting processes with custom dashboards
- Optimising ongoing campaigns with visual analytics
- Guiding your client through the KPI jungle

Looking further ahead, here's what you can expect from part three:

- Advanced analytics opportunities for data exploration
- Generating even deeper analyses from your data
- How data-driven advertising agencies can benefit from digital transformation

Strategic Playbook For Data-driven Agencies, pt.1



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