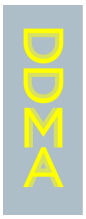
SEARCH AUTOMATION IN THE NETHERLANDS

and the impact on the role of a search marketer

This paper is the result of a collaboration between four search agencies in the Netherlands (iProspect, Searchresult, Storm Digital and Traffic4U), two trade associations (DDMA and IAB Netherlands) and Google.



In the early days of search engine advertising (SEA), the way people searched for information was different. Consumers were searching from desktop computers at set moments during the day. To set up an SEA campaign, search marketers chose keywords and ad texts and specified a bid based on the likelihood of that keyword to convert on a last-click, desktop, same session basis. Due to the emergence of mobile phones, changing consumer behaviour and the evolution of search engines, we are now inundated with different signals. This creates complexity in the management of SEA activities.

In order to help search marketers deal with this complexity, search engines and search management tools began to develop solutions aiming to automate the basics of SEA activities (e.g. feed-based advertising, rule-based bidding). This past decade has seen a rise in the usage of these automated solutions.

This rise is due to several reasons: an increased need for automation among users of SEA platforms, more vendors offering automated solutions[1] and a step change in the technology behind it: machine learning. The integration of machine learning into SEA management tools promises to make automated solutions more effective in the future.

As automation grows, the more the role of a search marketer shifts from setting up and optimising the fundamentals of an SEA campaign (e.g. identifying keywords, setting bids) to strategic activities that will ensure the future growth of the business (e.g. customer lifetime value management). In order to make the successful transition towards automation, it is therefore important to make sure to have the right skill mix in your marketing team.

This paper gives insights into which SEA activities can be automated, to what extent they can be automated and what the impact of automation is on the role of a search marketer.

[1] Scott Brinker, Marketing Technology Landscape Supergraphic: Martech 5000, 2011-2017

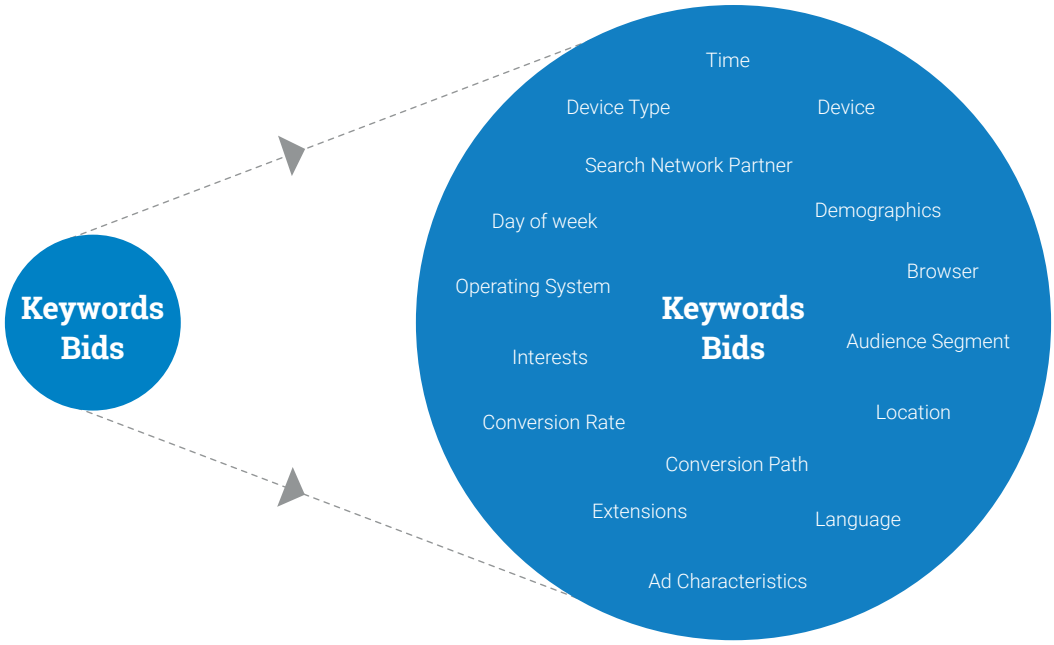
Search automation: Why now?

Increasing complexity

In order to set up the basics of an SEA campaign, three questions need to be answered:

- Which keywords do you want to advertise on?
- Which ad do you want to show for each keyword?
- What are you willing to pay for a click on each ad?

As search advertising has become more complex, finding an answer to these three questions has become more difficult. Mobile has revolutionised the search landscape. Consumers are now doing their online research through a multitude of connected devices with increased frequency, while the online and offline worlds have become increasingly intertwined. This has resulted in an explosion of data signals that can be linked to a search campaign.



To adapt to the changing consumer behaviour, search engines have developed a large amount of new features ranging from bid modifiers to new audience and measurement solutions. These new features provide the opportunity for search marketers to make their ads more relevant by tailoring them to their audience to a greater extent. However, with new features also comes increased complexity in managing SEA activities. In 2013, BCG released a study[2] that showed that only 20% of campaign processing time in digital advertising was spent on activities that directly improved performance, such as strategic targeting, data-driven innovation and performance optimisation. The remaining 80%—four days out of five—was devoted to heavily manual, low- or no-value tasks, such as formatting reports and data entry, as well as significant amounts of rework.

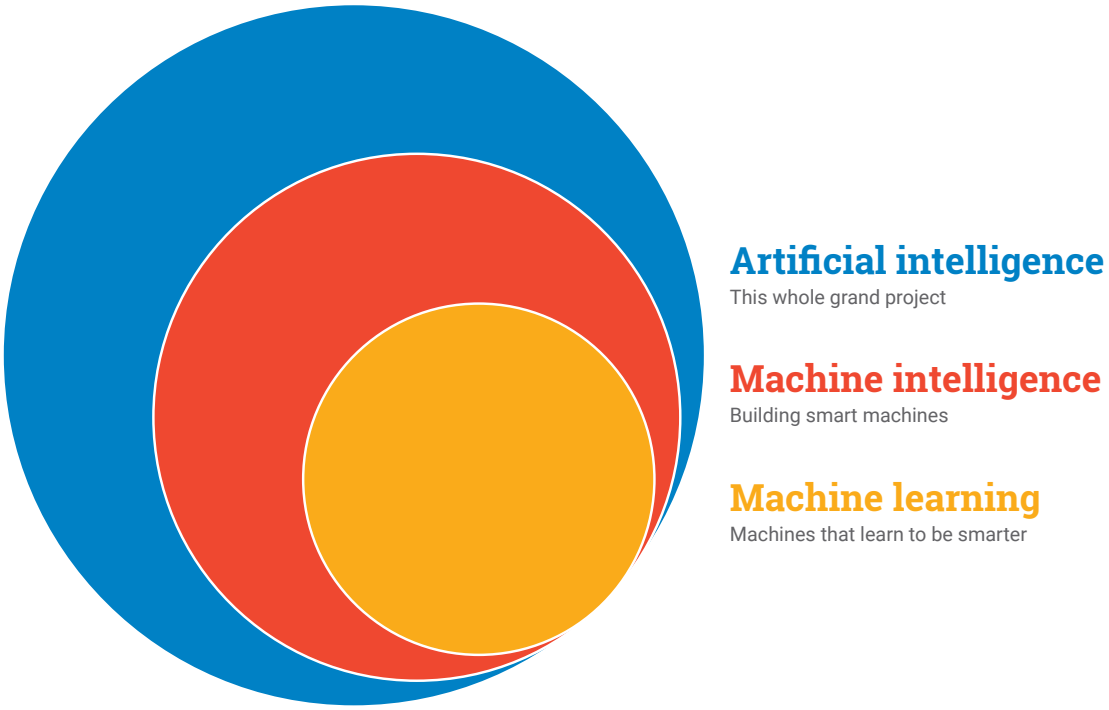
[2] The Boston Consulting Group, Efficiency and Effectiveness in Digital Advertising, 2013

This is why search platforms and SEA management tools have developed solutions aiming at automating the basics of search marketing. Marketers have started automating their SEA activities allowing them to spend more time on value adding projects.

New technology: Machine learning

The automation of SEA activities has been around for some time but has received increased focus over the past year due to a step change in the technology behind it, machine learning.

Machine learning is a form of artificial intelligence in which algorithms are used to learn from data and information rather than relying on explicit, rule-based programming.



Machine learning is increasingly being embedded in the tools that are available to manage search campaigns, which promises to make automated solutions work more effectively in the future. We therefore expect automation to grow further in importance.

Large companies like Google, Bing, Kenshoo, Adobe and DoubleClick for Search are investing in machine learning to ensure they are optimising off of what does and does not lead to a profitable conversion or click, in turn providing search marketers with extra insights they can use to optimise the performance of their SEA campaigns. There are four key areas in which they are embedding machine learning today: bidding, targeting, formats and attribution.

Areas in wich machine learning is being embedded today:

Bidding

Formats

Targeting

Attribution

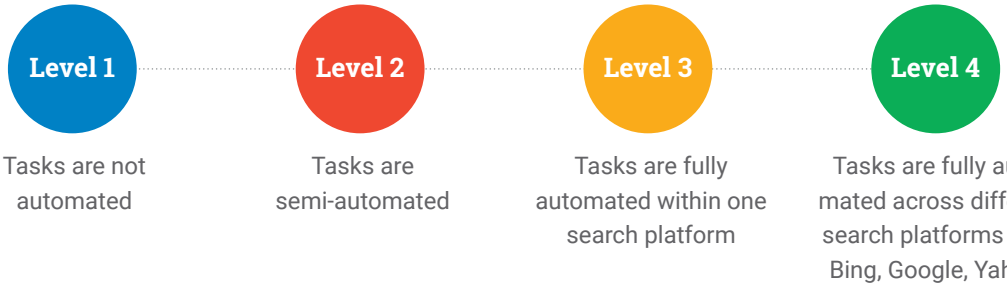
Considering the complexity of SEA activities, the recent technological evolutions mentioned above and the fact that only 20% of campaign processing time in digital advertising is spent on activities that directly improve performance, it is crucial for search marketers to automate as many tasks as possible in order to be able to focus on projects that ensure the future growth of their business.

Which tasks can be automated?

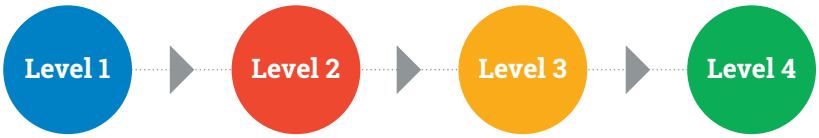
The daily activities of a search marketer can be divided into seven main categories: campaign creation, bid management, hygiene checks, reporting & dashboarding, data management, measurement & attribution, and marketing strategy (see definitions below).

ACTIVITY	DEFINITION
Campaign creation	Setting up the fundamentals of a search or shopping campaign: creating campaigns, ad groups, keywords, ad texts, setting bids, adding extensions
Bid management	Adjusting bids
Hygiene checks	Tasks related to optimising your basic search campaigns (e.g. fixing broken links, adding new extensions, modifying ad texts)
Reporting & dashboarding	Collection and visualisation of data to monitor the performance of your search campaigns
Data management	Data sharing between tools and platforms and the use of data to personalise advertising, content and services
Measurement & attribution	Setting up the measurement and attribution of your search marketing activities
Marketing strategy	Defining your overall search marketing strategy and testing out new strategies

The first six activities can be automated. The automation of these activities will allow you to spend more time on the seventh activity: marketing strategy. We distinguished four levels of automation paired with each of these activities. Although each search platform and search tool offers its distinct functionalities, on average, we distinguished the four different levels of automation as follows:



Today, machine learning is typically being embedded in the tools and product features used for campaign creation, bid management and measurement & attribution (levels 3 and 4 of the table below).



Campaign creation	Manual campaign creation in platform	Static campaign creation through Excel	Feed-based campaign creation combined with static campaigns	Feed-based fully automated campaigns
Bid management	Manual bidding	Rule-based bidding	Algorithmic bidding	Cross-engine algorithmic bidding
Hygiene checks	Using each platform "as is"	Making use of scripts and rules within platforms to automate campaign management tasks	Using technology to automate management tasks across multiple accounts	Using technology to automate management tasks across accounts and platforms, and proactively send alerts on tasks across accounts and platforms
Reporting & dashboarding	Manual reporting: - downloading (manual) - aggregation (manual) - visualising (manual)	Semi-automated reporting using templates: - downloading (scheduled) - aggregation (semi-macro) - visualising (auto / template)	Fully automated reporting using standard dashboards (not flexible)	Fully automated reporting using custom dashboards (flexible)
Data management	No integration of data between systems / platforms	Fragmented data management allowing some cross-platform data analysis	Data from the most important marketing and service platforms is integrated and used to personalise advertising, content and services	All necessary data is managed from one central location and can be accessed by all relevant parties / platforms that need this data to optimise decision making and marketing spend
Measurement & attribution	No conversions are measured	Conversions are measured Credit is attributed to the last ad click	Conversions are measured Credit is attributed over multiple ad clicks inside the search environment (rule-based or data-driven)	Conversions are measured Credit is attributed over multiple ad clicks over all marketing channels (rule-based or data-driven)

Level 4 is the most advanced form of automation, yet it is not suited for all businesses. Each level has its distinct advantages. The level of automation best suited for your business depends on your advertising profile and what you are seeking to accomplish. In the appendix of this document, we have tried to summarise the typical advertising profile best suited for each of these levels and the advantages paired with them. The tables in the appendix can help identify which level is best suited for your business.

Search automation in the Netherlands

The DDMA and IAB Netherlands launched the National Search Automation Survey aiming to understand to what extent SEA activities are automated in the Dutch market. Twenty-eight medium to large Dutch companies (>50 FTEs) rated their level of automation on each of these tasks based on the table above. The survey showed that companies in the Netherlands are already heavily automating their SEA activities. Overall, approximately half of all SEA activities are fully being automated (level 3 or 4).

	Levels 1, 2	Levels 3, 4
Average over all tasks	47%	53%
Campaign creation	56%	43%
Bid management	47%	52%
Hygiene checks	50%	50%
Reporting & dashboarding	41%	59%
Data management	50%	50%
Measurement & attribution	38%	62%

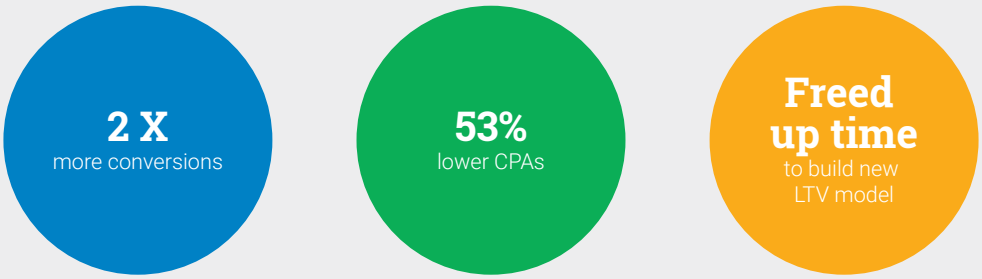
Reporting & dashboarding and measurement & attribution are the two areas that companies in the Netherlands are automating to the highest extent, while campaign creation is automated the least.

We expect the use of automated systems to grow even further in the coming years as SEA management tools incorporating machine learning will make automated systems even more effective, drastically improving the performance of SEA campaigns.

Example: Helloprint uses automation to take their marketing to the next level[3]

Implementing automated bidding, Helloprint doubled their conversions at a CPA 53% lower than before.

In addition to these improvements in commercial performance, the efficiency gains allowed Helloprint's PPC team to collaborate with the business intelligence group on a new lifetime value model that is expected to drive significant incremental growth in the future.



As the use of automated solutions grows, it allows for increased focus on activities that directly improve the performance of search marketing campaigns and enable the future growth of a business. The role of a search marketer shifts from spending time on recurring routine tasks to more complex strategic activities. In order to make the successful transition towards automation, it is therefore important to make sure to have the right skill mix in your marketing team.

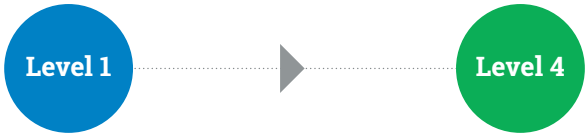
[3] Think with Google, Helloprint uses automation to take their online marketing to the next level, 2017

The changing role of a search marketer

A study by McKinsey showed that as the use of automation and artificial intelligence (AI) grows, there will be a skill mix shift towards more technical, social and problem solving skills[4]. According to the study, these skills will account for nearly half of work activities by 2030, compared with 37% in 2017.

We believe this is also true for search marketers. Moving from level 1 to level 4 in automation in each of the above areas has an impact on the kinds of questions you ask yourself and the nature of the tasks you are trying to accomplish. The tasks associated with level 4 are related to defining the marketing strategy of a business and require increased technical, social and problem solving skills.

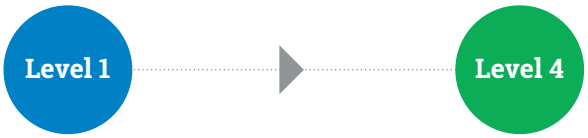
Types of questions you ask yourself:



Campaign creation	Which keywords do I advertise on?	How do I efficiently push my inventory through my SEA activities?
Bid management	Which CPC do I set?	How do I incorporate lifetime value in my bidding decisions?
Hygiene checks	How do I make sure to maintain PPC best practices across accounts and search engines?	How can I adapt my ad creatives to cater to my different audiences?
Reporting & dashboarding	How do I download data and manipulate it in Excel to create an accurate representation of the performance of my SEA activities?	How can I adapt my marketing spend to get more out of my current SEA activities?
Data management	How do I reconcile data across systems?	Which data points and audience segments can help me get more out of my marketing activities?
Measurement & attribution	Which campaigns provide the most clicks?	What is search worth to my business in the total marketing spend?

[4] McKinsey & Company, Shaping the future of work in Europe's 9 digital front-runner countries, 2017

Nature of the task you are trying to accomplish:



Campaign creation	Keyword management	Inventory management
Bid management	CPC management	Lifetime value management
Hygiene checks	Hygiene optimisation	Creative strategy
Reporting & dashboarding	Report creation	Data analysis and strategy
Data management	Data reconciliation	First-party data management (e.g. audience strategies)
Measurement & attribution	Optimisation of search within the silo of search	Optimisation of search within all marketing channels (online and offline)

Retail example:

Imagine you are fully automating your campaign creation and bid management activities (level 4 in the table above). In level 1, you were spending time on manually identifying which keywords you want to be active on and which CPC you want to set for each of these keywords. In level 4, you are spending time on how to efficiently push your product inventory through your SEA activities.

In order to do this, you first need to understand which KPIs are important to your business. You interview different members of your organisation, each coming back with different priorities:

- The customer acquisition department only wants to spend money on keywords that drive sales
- The category management department wants to spend money on driving visibility and traffic
- The finance department only wants to spend money on profitable clicks
- The buying department wants to spend money on pushing overstock items

You figure out a way to turn these different priorities into one overall score, which you use to create buckets of similar products. You create campaigns based on these buckets of products whose key objectives are aligned. You work with the business intelligence team to understand which ROAS target you need to provide the automated bidding systems for each of these product buckets.

However, to execute that strategy you need to get profit, stock, promotions and other data for each product in order to create these product buckets and get that information into the feed. In order to do so, you need the IT team. The IT team explains that what you are asking is not possible. You therefore collaborate with IT to try to find a creative solution to your problem based on the data that is available and that can be integrated in the feed.

This process required:

- Social skills, as you need to collaborate with teams you weren't used to collaborating with before (business intelligence, IT)
- Problem solving skills, as you need to understand how to consolidate the different objectives of your business into product buckets and work with IT to come up with a creative solution to get all the data you need in the feed
- Technical skills, as you need to understand how the feed-based and automated bidding systems work in order to feed them the right information and execute the right strategy

As the use of automated systems increases, a shift in mindset will also be needed. Search marketers will need to let the automated systems assist them in the daily management of repetitive, lower value tasks. While the capabilities of AI are growing, it has some limitations. For example, it is highly dependent on the data sets on which it is trained and can only take action based on data of past behaviour. A big role for search marketers will therefore also lie in understanding how the automated systems work, what they base their decisions on and what their limitations are. This will enable them to steer the systems towards taking the right decisions and give them the confidence to let the automated systems manage the basics of their SEA campaigns.

As the use of automation grows, the role of a marketer will evolve in two different directions. The search marketer will need to:

- **Broaden their scope: define the SEA strategy of the company, understand how SEA fits in the broader digital strategy of the company, collaborate with other departments to drive this strategy forward.**
- **Have a deeper understanding of the tools used to manage the SEA campaigns: understand which tool is best to execute on the chosen strategy, make sure the automated systems are set up in the correct way, monitor the performance of the automated systems.**

In conclusion

In order to take your online marketing activities to the next level, it is crucial to automate the basics of your SEA campaigns to free up time for projects that will ensure the future growth of your business.

We have identified four levels of automation across six different SEA activities, with levels 1 and 2 not being automated or only automated to a limited extent, and levels 3 and 4 being fully automated. The tables in the appendix help identify which level is best suited for your business.

Dutch companies are already automating their SEA activities to a large extent. Results from the National Search Automation Survey show that 53% of the SEA activities of the 28 medium to large companies questioned are done in a fully automated manner within one or across multiple search platforms.

However, in order for automation to truly add value to your business:

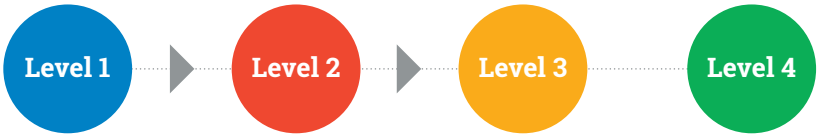
- A shift in mindset is needed. Embrace technology and let it assist you rather than trying to keep full control over your SEA activities.
- The right set of skills is needed in your marketing team. As daily activities will move from spending time on routine recurring tasks towards defining marketing strategy, more technical, social and problem solving skills will be needed.
- Collaboration between different departments will need to be facilitated (e.g. business intelligence, IT, marketing). The success of campaigns will stand or fall with the ability to feed the right data to the systems and provide them with the right targets to optimise towards.

APPENDIX:
Detailed Automation Tables

- **Campaign Creation**
- **Bid Management**
- **Hygiene Checks**
- **Reporting & Dashboarding**
- **Data Management**
- **Measurement & Attribution**

Disclaimer: The level of automation best suited for your business depends on your advertising profile and what you are seeking to accomplish. In the tables below, we have tried to summarise the typical advertising profile best suited for each of these levels and the advantages paired with them. Although the list is not exhaustive, these tables can help you identify which level is best suited for you.

Campaign creation

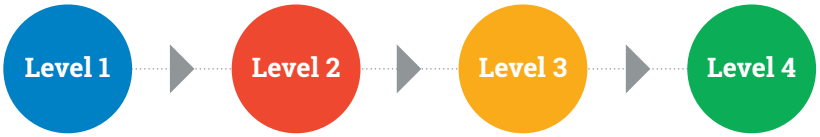


	Level 1	Level 2	Level 3	Level 4
Campaign creation	Manual campaign creation in platform	Static campaign creation through Excel and editors	Feed-based campaign creation combined with static campaigns	Feed-based fully automated campaigns
Typical advertising profile	Little inventory Low complexity Rare changes	Low to medium inventory Low to average complexity Occasional inventory / price changes	Medium to large inventory Average to high complexity Frequent inventory / price changes No specific needs for customising targeting	Large inventory High complexity Frequent inventory / price changes High feed adjustment needs High customising needs Active on multiple search engines
Advantages	No additional cost Easy to implement	No additional cost Possibility to make more bulk changes and faster than in level 1	Automated campaign building Inventory and prices updated in (near) real-time Basic automation rules	Custom solution More advanced automation rules Feed adjustments options Flexibility in feed) formats
Data taken into account	N/A	Engine data	Feed primary attributes Third-party data	Feed primary attributes Custom creation Business data

Example: Retail - Level 4

Retail advertiser X has an inventory of more than 20,000 products divided over 800 categories and brands across multiple markets and languages. In order to appear on all relevant search queries on different search engines, they use a feed-based campaign creation tool that creates new campaigns, ad groups, relevant keywords, ad text and extensions when new products or categories are added to their inventory. Products that are out of stock are automatically paused. Campaign creation is based on the product feed that contains all relevant information (e.g. product details, prices, stock and landing pages). The automated tool does the hard labor, giving the advertiser valuable time to optimise and create more business impact instead of creating and pausing campaigns manually.

Bid management



Bid management	Manual bidding	Rule-based bidding	Algorithmic bidding	Cross-engine algorithmic bidding
Advertising profile	Small accounts	Medium accounts	Large, complex accounts	Large, complex accounts across multiple platforms
Advantages	Full control over bids and budgets	Time saver Easy to adjust Control over rules you set	Time saver High frequency of bidding changes Accuracy and precision of bid changes Can take into account more signals within the search engine data in its bidding decision	Scale High frequency of bidding changes Accuracy and precision of bid changes Can take into account crossengine signals in its bidding decision Cross-account and cross-engine bidding
Data taken into account	Search engine data available in the interface	Search engine data available in the interface External data	Wider area of search engine data	Search engines' data available in the interface CRM data Third-party data

Example: Travel - Level 4

Travel advertiser X is managing hundreds of AdWords and Bing ad accounts. Their destination prices and inventory are constantly fluctuating with various ROIs per product. In order to maintain high efficiency at scale, they use a bidding algorithm across their accounts with specific ROAS targets. All their bids are automatically adjusted every day, driving high performance on top selling products while keeping the longtail profitable.

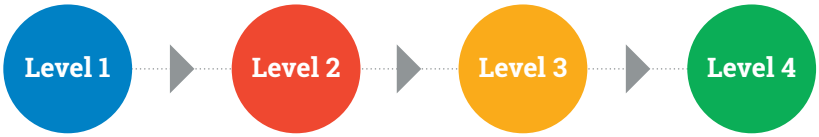
Hygiene checks

	Level 1	Level 2	Level 3	Level 4
Hygiene checks	Using the search engine's features	Making use of editors and scripts	Using technology to automate management tasks across multiple accounts	Using technology to automate management tasks across accounts and platforms and proactively alert on tasks over all accounts and platforms
Advertising profile	Small accounts	Medium accounts	Large, complex accounts	Large, complex accounts across multiple engines
Advantages	No additional cost	Time efficient due to bulk actions Scripts (automatically) indicate underperformance Automates health checks	Cross platform Proactive advisory component in order to optimise	Advanced insights across platforms and accounts

Example: Retail - Level 4

Retail advertiser X is a big retailer with over 20 accounts across multiple search engines and markets. Daily checks for such a large number of accounts are extremely time consuming, so the advertiser uses a platform that analyses all their accounts and proactively alerts the consultants about recommended optimisations (e.g. negative keyword conflicts, ad groups missing ad copies or dropping quality score for specific campaigns or even ad groups). Consultants do not have to check each account manually and are confident that all best practices are in place.

Reporting and dashboarding

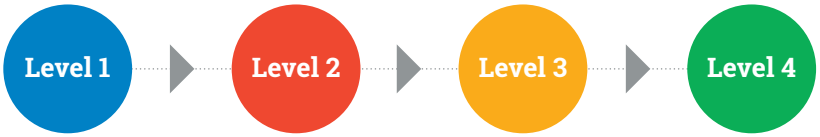


	Level 1	Level 2	Level 3	Level 4
Reporting & dashboarding	Manual reporting: - downloading (manual) - aggregation (manual) - visualising (manual)	Semi-automated reporting using templates: - downloading (scheduled) - aggregation (semi-macro) - visualising (auto / template)	Fully automated reporting using standard dashboards (not flexible)	Fully automated reporting using custom dashboards (flexible)
Advertising profile	Small accounts Monthly reporting needs Low level of detail needed in reporting Reporting showcased in tools is largely enough	Medium accounts Monthly reporting needs Medium level of detail needed in reporting In need of extra data not showcased in tools	Large, complex accounts Weekly / daily reporting needs High level of detail needed in reporting	Large, complex accounts across multiple platforms Weekly / daily reporting needs High level of detail needed in reporting Flexible reporting needs
Advantages	No additional cost No advanced technical skills required	Flexible setup Higher level of insights	Time saver More time to analyse results Ideal for daily optimisation	Time saver More time to analyse results Ideal for daily optimisation High level of customisation possible Possibility to integrate online and offline data sources
External data	Single engine data	Single engine data	Emphasis on online data (from multiple sources)	Emphasis on online and offline data (from multiple sources)

Example: Finance - Level 4

Finance advertiser X has a large marketing department with separate performance marketing and branding teams. However, since reporting is fully automated in (one or more) dashboards, time spent on gathering data is reduced to a minimum, which means they have more time to analyse results and take action based on these results. As all key metrics are monitored within one overview, the different teams can assess what the impact of their marketing activities was on the other team's results (e.g. extra branding efforts leading to more new customers and search volume on corporate terms). This enables them to more easily decide upon and execute a full-funnel marketing strategy. to check each account manually and are confident that all best practices are in place.

Data management



	Level 1	Level 2	Level 3	Level 4
Campaign creation	No integration of data between systems / platforms	Fragmented data management allowing some cross-platform data analysis	Data from the most important marketing and service platforms is integrated and used to personalise advertising, content and service	All necessary data is managed from one central location and can be accessed by all relevant parties / platforms that need this data to optimise decision making and marketing spend
Advertising profile	- Use one digital marketing platform - Do not focus on customer relationship	- Use multiple digital marketing platforms - Limited focus on customer relationship	- Use multiple digital marketing platforms - Average focus on customer relationship	- Use multiple digital and offline marketing platforms - High focus on customer relationship and lifetime value
Advantages	- No cost - Easy to implement - No advanced data management knowledge required	- Extra insights beyond pure transactions going towards analysing brands relationship with customers (e.g. website traffic, bounce rate)	- Defining audiences / segments based upon insights over platforms and website behaviour in past - Using those insights to adjust content and marketing strategy	- Combining all data points together for advanced insights - Using those insights to adjust content and marketing strategy
Data taken into account	Engine data	All online data	All online data	All online and offline data

Example: Telco - Level 4

Telco client X interacts with their (potential) customers via various marketing channels (e.g. online channels, offline stores, TV and out of home). In order to maintain a highly relevant and effective dialogue, they combine the data from all these channels (offline sales, visited website content and audience insights) to tailor their SEA activities and determine which bid, message and ad is best suited. Combining all these data points, the telco company can calculate customer lifetime value and adjust its bidding decisions based on that information.

Measurement & attribution

	Level 1	Level 2	Level 3	Level 4
Measurement & attribution	No conversions are measured	Conversions are measured Credit is attributed to the last ad click	Conversions are measured Credit is attributed over multiple ad clicks inside the search environment (rule-based or data-driven)	Conversions are measured Credit is attributed over multiple ad clicks over all marketing channels (rule-based or data-driven)
Advertising profile	Advertisers who do not have a clear idea of what they want to accomplish with their marketing activities	Short conversion paths: average of <1.5 clicks per conversion	Long conversion paths: average of >1.5 clicks per conversion	Long conversion paths: average of >1.5 clicks per conversion
Advantages	No need to implement conversion tracking	Ability to measure the effect of your SEA campaigns	Better distribution of credit for all search clicks along the purchase journey	Correct distribution of credit for all clicks along the purchase journey

Example: Travel

Travel client X uses both an ad server and a web analytics tool to track consumers' online activities. In order to assess the contribution of each channel they are employing a data-driven attribution model for both their reporting and optimisation. They try to evaluate the full picture and the effect that each channel has on the full funnel rather than optimise each channel on its own. By leveraging and uploading their own CRM data they are able to segment and report on high-value customers, new versus returning customers and other custom segments. This allows them not only to better evaluate the contribution of each channel, but also provides valuable input for budget decisions, monitoring and reporting and prioritisation.

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