

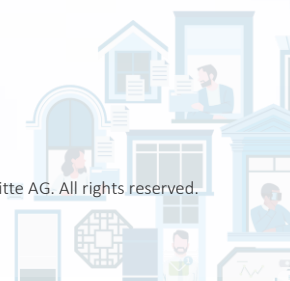


Advanced digital HCP segmentation
Elevating customer understanding leveraging AI
October 2022



Contents

The case for data-driven customer segmentation	3
Life Sciences & Health Care Industry challenges accentuated by COVID	3
Data-driven HCP segmentation as a solution	4
Strategic business objectives pursued	4
Advanced Segmentation approach and impact	5
Database creation and HCP segmentation	5
Channel impact and saturation analysis	6
Actionable recommendations	7
Outlook	8
Frequently Asked Questions (FAQs)	9
Endnotes	10
About the authors	11
About Deloitte	13







The case for data-driven customer segmentation

Life Sciences & Health Care Industry challenges accentuated by COVID

For the past few years, the traditional one-size-fits-all go-to-market strategy, based predominantly on physical channels, has failed to support drug launches and meet business objectives. A Deloitte study from 2019 found that out of 149 US drug launches between 2012 and 2017, a third did not meet forecast sales at launch and continued to underperform in the following years. Inadequate or incomplete understanding of customer needs has been identified as one of the top-three root causes of this problem¹.

In addition, biopharma companies are operating in a rapidly changing and increasingly challenging macro-environment driven by four major trends:



Limited availability of resources

Increased competition and shorter time in market led to an overall decline in the profitability of assets since 2010, despite a recent improvement from 2019 levels in average cost to bring an asset to market and peak sales².



Availability of more channels

Traditional channels have been complemented increasingly with digital ones, resulting in new opportunities but also a higher degree of complexity for pharma companies³.



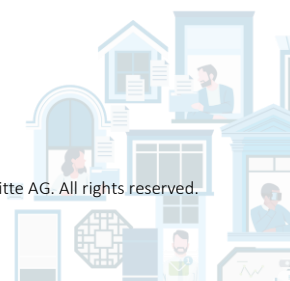
Diverse customer behaviours

Healthcare professionals (HCPs) display a wide range of channel-, content- and interaction frequency preferences, which has been accentuated further by digitalisation³.



Post-Covid ways of working

The COVID-19 pandemic has reinforced the previous trends and prompted HCPs to adopt innovative ways of delivering care. The resulting change in behaviour is also shifting their expectations of pharma companies³.



These trends are likely to have a long-lasting impact on biopharma companies. They will need to embrace the changes and improve their commercial organisation by focusing on four success factors:

- effective and efficient use of resources
- adoption of new digitally-enabled engagement models
- integrated omni-channel orchestration
- a personalised / tailored interaction model.

To address these success factors, companies should first improve their understanding of customers’ characteristics, behaviours and journeys. This will form the basis for delivering additional value through marketing and sales operations. Effective customer segmentation is the first step towards personalised engagement and actionable marketing tactics.

Data-driven HCP segmentation as a solution

Traditionally, customer segmentation tended to follow a qualitative and hypothesis-driven approach. The definitions of HCP segments were based primarily on subjective evaluation by the field force, and therefore, potentially biased reasoning. In today’s fast-paced and competitive environment, companies need to make the segmentation process more objective and robust by leveraging the growing amount of available information on HCPs⁴.

Our advanced digital segmentation approach enables to define data-driven HCP segments by means of AI and machine learning algorithms. This approach relies on the identification of hidden patterns from historical data to group customers into segments based on homogenous behaviours.

Such behaviours can be detected along different dimensions depending on the primary segmentation focus. Broadly, three different categories can be distinguished⁴:



Sales-driven HCP segmentation, leveraging variables that identify the sales potential or sphere of influence of HCPs, such as annual number of prescriptions or level of decision making



Behavioural HCP segmentation, which differentiates between HCPs on the basis of specific behaviour or beliefs, such as scientific appetite or prescription habits



Channel and content preference HCP segmentation, grouping HCPs according to their level of engagement, as measured by variables such as click-through rate (CTR)

All three of these approaches to segmentation offer valuable insights that will help build personalised interactions, but the rest of this paper focuses on **channel preference HCP segmentation**. In particular, we display a detailed use case that describes how we have helped biopharma companies leverage data and AI to build differentiated and actionable HCP segments displaying homogenous channel affinity.

Strategic business objectives pursued

In a rapidly changing and competitive business environment, understanding customers is an increasingly critical factor in the success of biopharma companies, and it should therefore be a strategic priority. The Deloitte Strategic Choice Cascade provides a powerful approach to decomposing complex strategic issues into a set of interrelated choices⁵. Biopharma companies can use this model to define the choices to be made in relation to customer segmentation. In order to provide more personalised interactions by optimising the channel mix and level of marketing effort, marketing executives need to ask four fundamental questions:



Who

Who to engage? – Segmenting HCPs according to their channel and content preferences



Where

Where to invest? – Assessing the potential and impact of different channels for each HCP segment



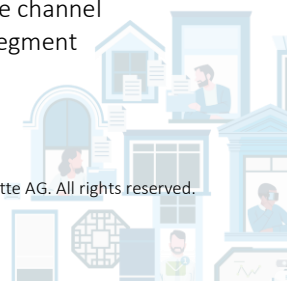
How

How to optimise the investment? – Identifying the optimal level of interaction by channel per HCP segment



What

What to do next? – Developing a plan of action to optimise the channel mix per HCP segment





Advanced Segmentation approach and impact

Historical data and AI can be used to identify distinct HCP segments and optimise the channel mix

Database creation and HCP segmentation

Comprehensive data collection and database creation forms the basis for advanced analytics HCP segmentation. In the case of channel and content preference segmentation, we leverage the following sources of data from both digital as well as non-digital channels:



Direct email marketing (DEM)



Rep-triggered email (RTE)



Web navigation



Webinars/Events



Face-to-face visits (F2F)

For each of these channels, the aim is to measure the company's push marketing efforts/actions and the resulting HCP engagement. Taking DEM as an example, the number of DEM emails sent per year per HCP gives an indication of the push marketing effort, while performance metrics such as click-through rate (CTR) determine the level of HCP engagement.

Next, we apply a machine learning algorithm to identify homogenous behaviours and group HCPs together with similar patterns based on their channel preferences. The number of these clusters identified by the algorithm is based on a mathematical approach which aims to maximise the uniqueness of each cluster. This data-driven approach can result in a large number of clusters/ HCP segments and human judgement should be applied to decide what is actionable in the market.

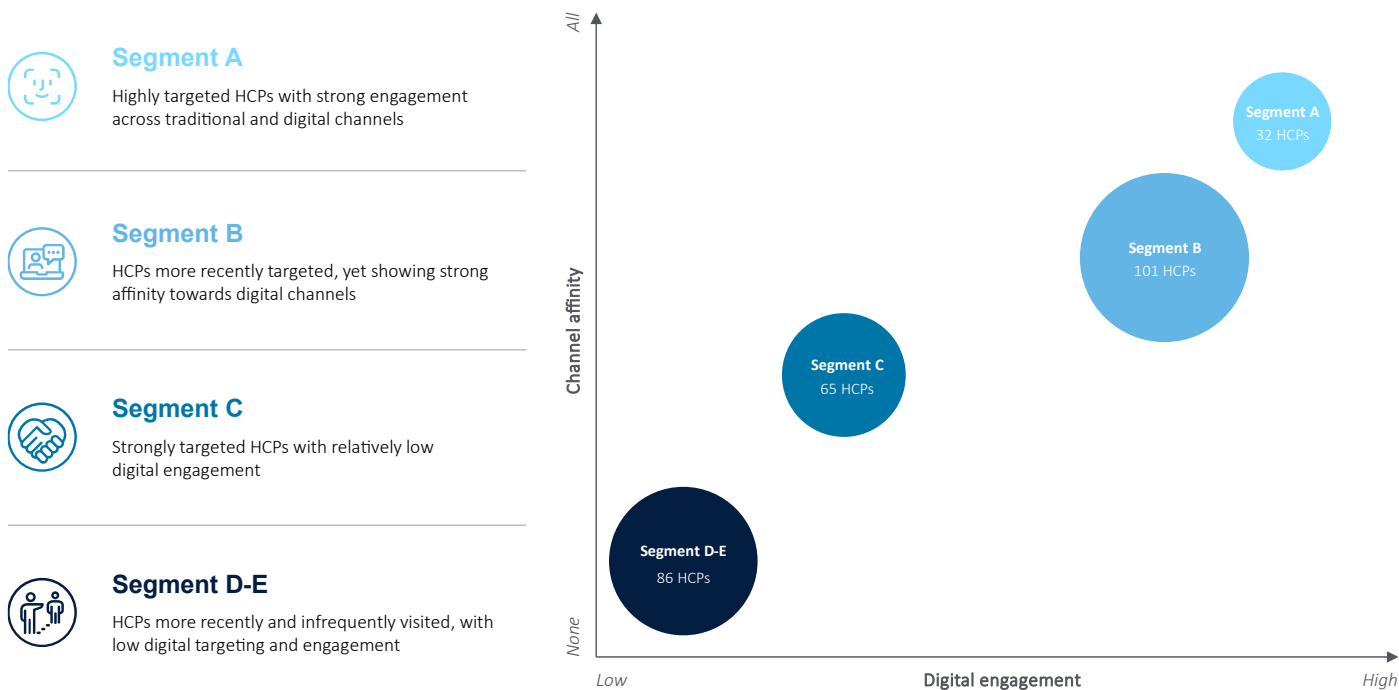
For example the mathematical optimum level might suggest seven HCP segments, but the marketing team might only have capacity to execute tailored action plans for four segments.

The optimal number of clusters or segments from a business perspective is one that results in reasonably sized but differentiated segments. Therefore, taking into account the results from the AI-based clustering, the ultimate decision about the desired number of HCP segments should ensure consistency with company strategy, current commercial operating model, and available resources.



The final data-driven but actionable HCP segments (see Figure 1) will display homogenous channel preferences and can be profiled (i.e., described) in more detail by leveraging a combination of input, socio-demographic and other variables (such as speciality or sales potential). This profiling drives powerful insights with respect to the key characteristics of each segment, channel affinity (which channels HCPs prefer and interact with) and level of engagement (the degree or extent to which HCPs interact).

Figure 1. Illustrative output from data-driven segmentation analysis



Source: Deloitte analysis

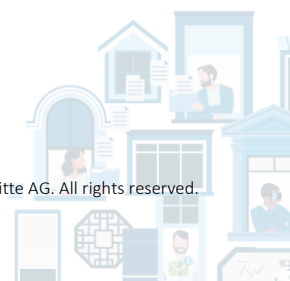
Channel impact and saturation analysis

Once AI-driven HCP segmentation has established an understanding of who to engage and what their channel preferences are, companies need to revisit their segment-specific channel mix and frequency of interactions from push marketing. In other words, marketing executives should leverage data to identify where (i.e., in which channel) to invest effort and decide how to optimise this investment.

AI is again used to measure the contribution of each channel to the overall digital engagement and its effectiveness. For instance, in the case of email campaigns, the channel impact can be measured by analysing the average number of clicks generated per email sent, taking into account the overall numbers of emails sent.

In addition, our algorithm evaluates the possible correlation between channels. For example, we have observed a strong correlation between rep-triggered emails (RTEs) and face-to-face (F2F visits). Since RTEs are often sent in relation to a face-to-face visit, it is interesting to examine the relationship between the two channels and the potential effects on the HCPs engagement. Specifically, analysing how CTRs change based on different RTE timing in relation to a F2F visit offers powerful insights to optimise channel orchestration (e.g., we can compare the CTR of an RTE sent on the same day as the F2F visit with the CTR of an RTE sent one week after the visit).

While it is crucial to identify the most powerful channels for each HCP segment, it is equally important to understand the relationship between the volume of push marketing actions and the level of engagement by HCPs. Marketing teams need to understand the incremental value of their HCP interactions (i.e., by how much HCP engagement changes for every additional interaction).



For biopharma companies, there is a fine line between delivering added value and overwhelming HCPs. Sending too many communications is likely to result in diminishing benefits and can even be counterproductive, in which case we talk about channel saturation. Saturation occurs at a point after which investing more time, effort and budget to generate an additional interaction, will result in a zero or negative impact on HCP engagement. Understanding for which segments and channels this occurs is crucial for marketers and has further gained relevance with the global Covid-19 pandemic. Decreased HCP accessibility and capacity constraints as well as the increased digitalization can quickly lead to digital fatigue.

The effects of saturation can be identified by looking at the changes in HCP engagement as the number of push marketing actions increases. We can distinguish two instances of saturation:

1. Early signs of saturation occur when increasing the number of HCP interactions results in decreasing but constantly positive incremental HCP engagement (i.e., number of clicks per HCP).
2. Strong signs of saturation occur when increasing the number of HCP interactions results in negative incremental HCP engagement.

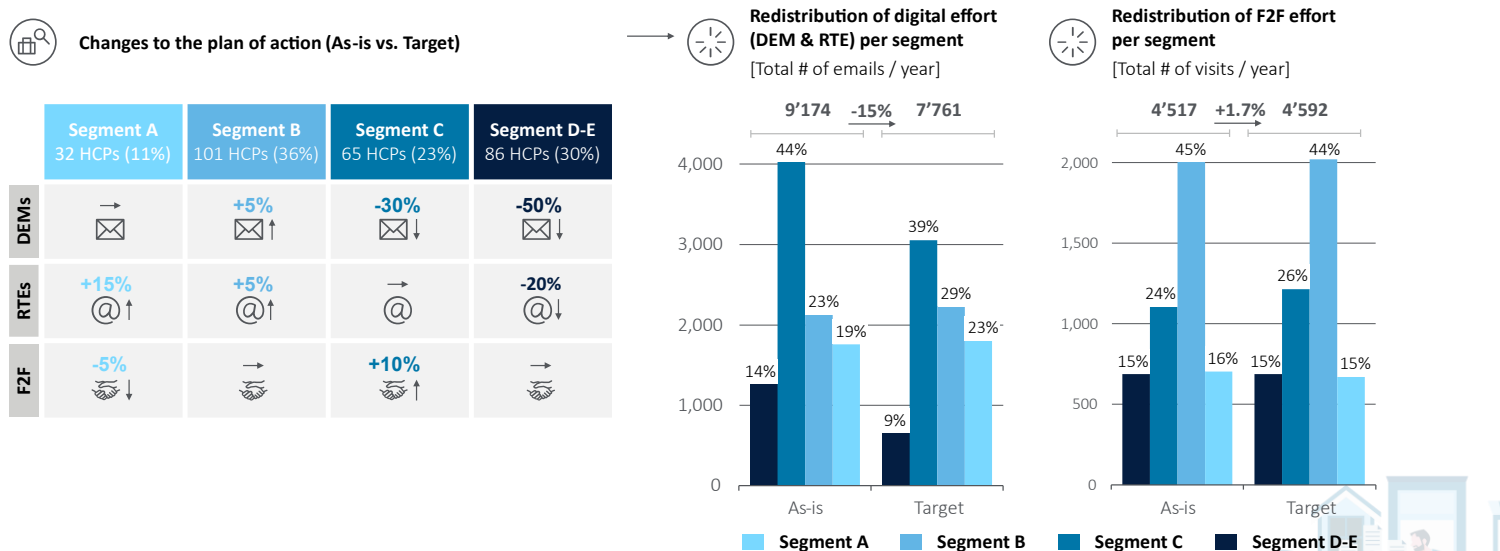
When there are strong signs of saturation, it is possible to identify a precise saturation point, i.e., the point after which sending more communications becomes detrimental to HCP engagement. Understanding the signs of saturation and their magnitude with regard to the frequency of interactions allows us to identify the optimal level of interaction per HCP segment.

Actionable recommendations

All the measures described above are significant steps towards more personalised interactions with HCPs. More specifically, the database creation and HCP segmentation phase has provided information about each segment’s channel preferences and general characteristics, therefore enabling us to know who to engage. The channel impact phase has helped to identify the most powerful channels per HCP segment and consequently indicated where is best to invest. Next, the channel saturation phase has provided information about how to optimise marketing investment by analysing the most resource-efficient level of HCP interaction per segment.

The final question to address is what to do next with this enhanced understanding of customers. In order to answer this question, we are able to develop tangible recommendations per HCP segment by synthesizing and leveraging our distinctive segment-specific insights. These recommendations detail the best actions (see Figure 2) for optimising the engagement of each HCP segment. For example, a recommendation may be to increase the level of RTE for Segment A by 15% in order to capitalise on the above-average CTR observed. In a further step, we assess the implications of a company’s overall level of push marketing actions and overall HCP engagement (e.g., what is the new total digital effort required and how it is distributed among segments). Putting these recommendations into action will enable companies to optimise their channel mix and result in improved digital engagement across all segments (e.g., increased CTR). Essentially, it will enable companies to reach the right customers, through the right channel, and with the right frequency.

Figure 2. Exemplary actionable recommendations



Source: Deloitte analysis



Outlook

Customer preferences change over time, requiring an effective mechanism of continuous learning and improvement. Automation can help with that

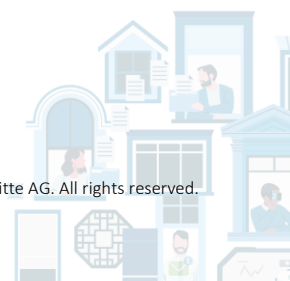
Since biopharma companies operate in a rapidly changing and increasingly challenging macro-environment, customer segments will remain inherently dynamic. Preferences change over time and companies need to revisit their customer segmentation frequently. This calls for a review framework that allows for continuous improvement and learning in a repetitive loop.

The loop starts with the planning of a marketing campaign, including messaging design and content creation. When the campaign is executed, the responses of HCPs are observed. The captured data will include both digital interactions (e.g., opens, clicks, web article reads) and physical interactions (e.g., F2F visits, phone calls, attendance at events). The collected data is analysed and used for insight generation (i.e., feedback), which then forms the basis for defining and optimising the marketing strategy for the next marketing campaign.

Since this loop will be repeated continually, the process of collecting and analysing data can be automated by leveraging AI. As a result, HCPs may be reclassified into different segments, to ensure that interactions remain personalised and in line with their preferences.

Generated insights can be displayed in Business Intelligence dashboards that show, for each HCP cluster, the main characteristics, channel/content preference, performance in previous campaigns and the optimal frequency and saturation points for each channel. These dashboards will enable marketing executives to better understand the needs of each segment and consequently improve campaign design.

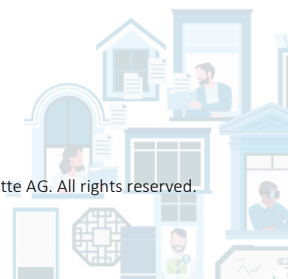
Finally, in case of fundamental changes to the market or in product offerings, the previously defined segmentation may become outdated, and it will need to be redefined in order to continue generating meaningful insights into HCP behaviour. For instance, data-driven segmentation allows to capture HCPs that were not previously engaged but, as a result of the different points of contact, gained interest in other channels.





Frequently Asked Questions (FAQs)

Question	Answer
How is data shared?	To ensure data privacy, only anonymized data is needed, provided that customers are each assigned a unique ID.
What volume of data is used?	Meaningful insights are dependent on a minimum sample size, i.e., historical number of data points. The exact level required will depend on the specific type of data, but in general data going back a minimum of two years is desirable.
How many segments are created?	This can depend on the country, therapeutic area or brand – it will be a decision based on both quantitative analysis and business input from the local country’s management team.
Can the segmentation results be fed to the CRM?	Segment allocation and relevant insights will be aggregated per unique customer ID and stored in Excel format for easy uploading to the CRM.
How often should the segmentation be re-run?	Again, this will depend on the country and brand specifics, but annual refreshment is advised.
Can the AI-driven segmentation be automated?	<p>The segmentation model can be used in a completely automated way. This means that the segments to which the HCPs belong can be updated automatically depending on their recent behaviour.</p> <p>Eventually, if there are important changes in the market or the product offering of the company, the segmentation could require a redefinition of the clusters. This activity would require the participation of data science specialists.</p>





Endnotes

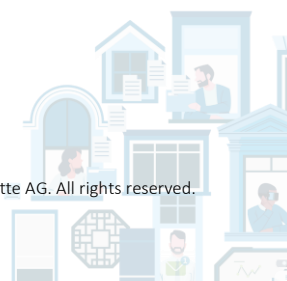
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² May, E. et al., 'Nurturing growth: Measuring the return from pharmaceutical innovation 2021', 2022, Deloitte Centre for Health Solutions

³ Corvino, B., Lurken, C., The pandemic didn't hinder drug launches, but it has altered sales tactics, March 30, 2021, Deloitte

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⁵ Clark, E., Chew, B., Lurie, B., Strategic Capabilities: Bridging Strategy and Impact, 2015, Deloitte



About the authors



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Gabriele is a Partner in Monitor Deloitte's Life Sciences Strategy practice with focus on Commercial Transformation. Gabriele brings 20 years of management consulting experience in Life Sciences across mature and emerging countries, including more than 10 years at BCG and 4 years at EY where he was leading the life science commercial practice. He has served most of the top global pharmaceutical companies and a range of mid-size, specialty and biotech clients.



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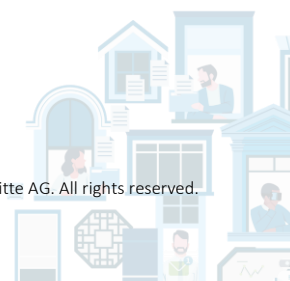


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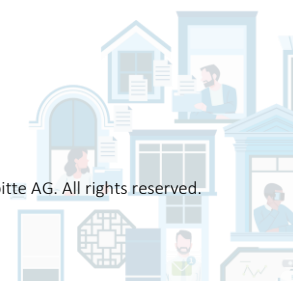
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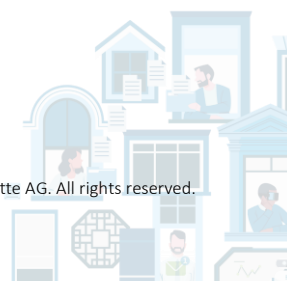
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