

Module 3. Cohorts

Introduction

The performance indicators we will see in this module are essential for start-up development. Understanding the importance of grouping customers in cohorts for measuring the retention rate, the customer cancellation rate and the virality rate will make you focus on calculations you should constantly make to make decisions based on real indicators about growth.

It is true that, by learning cohorts, you will not sell more and you will not reduce costs. Cohorts will not increase the margin. **However, what is worth about working with cohorts is that it allows you to learn about your ideas accuracy degree:** What problems do you have now? Which are the challenges you are facing? Do your strategies for sales, customer retention and growth work?

The cohort study is very easy to understand the concept, but it is also very difficult to apply because it is associated with good habits and those are the metrics that matter.

Unit 3.1. Cohorts building

The cohort concept comes from biology and medicine and it means separating different types of families, molecules and others for applying different tests on them and seeing how they react (Vicente, 2013).

Applying the concept to a start-up, a cohort refers to a group of individuals that have a characteristic in common: age, nationality, entry date, etc. That way then, each cohort sets up their characteristics.

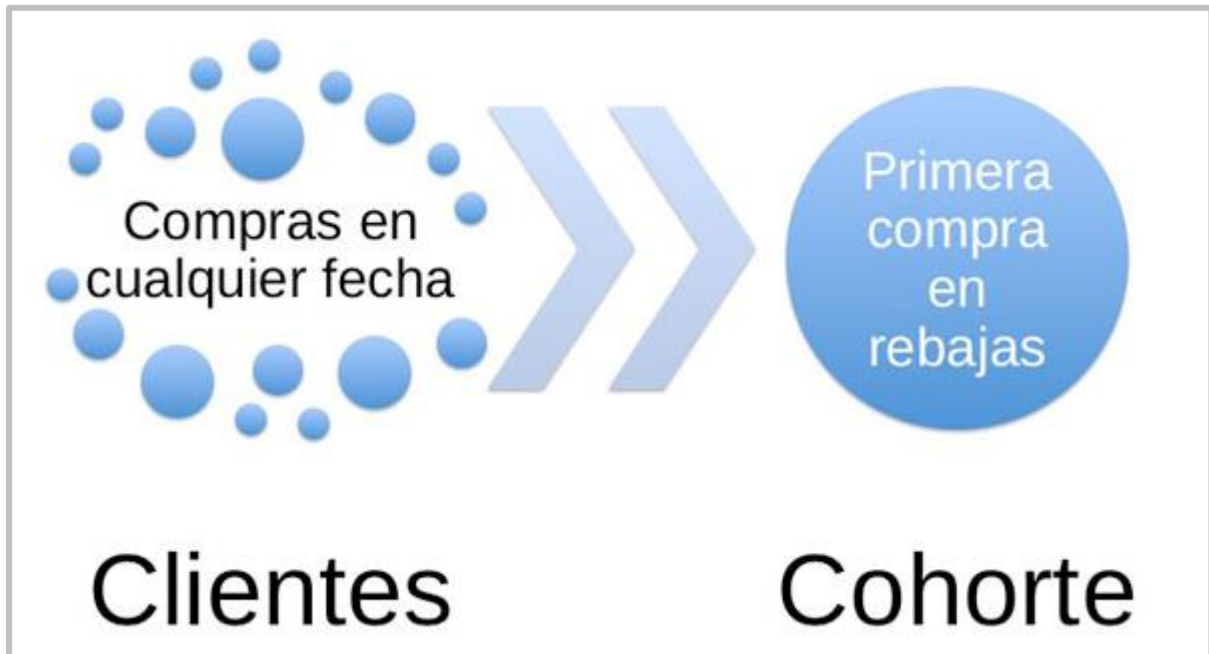
Any company has the possibility of grouping their customers in cohorts for making analyses and comparisons that would give useful data for measuring growth. The cohort analysis allows for learning if a group of customers, with specific behaviour in a concrete period of time, will provide you with long term value.

A common and useful example for analyzing customers is by defining cohorts according to the date on which they started using the service. In this sense, a question to ask is



about whether the last incomes you got last month come from new users or, on the contrary, from those customers you acquired one year ago (old users).

Figure 1: Cohort applied case at a sports store



Source: Vicente, 2013, <https://goo.gl/bsyUVb>

Compras en cualquier fecha	Purchases at any time
Primera compra en rebajas	First purchase with discount
Clientes	Customers
Cohortes	Cohorts

We will see two examples to clarify the cohort's concept.

1. Building age cohort

We call *age* to the period of time the customer has been part of the organization at the moment we are measuring. Methodically, we will take the following measurements at the end of every month, represented vertically like *measuring month*. At the end of every month, we will ask ourselves the following: from the number of customers, how many joined this month? How many joined the last month? And so on.

For example, in this case, the situation is the following.

- Business is initiated in January and a number of 1000 customers were acquired.



- In February 1000 more were acquired, but 100 customers got unsubscribed and they were activated in January; therefore, the final number of customers is 1900. From these 1900, 900 correspond to customers that were subscribed in January and 1000 correspond to February.
- In March another 1000 more were acquired, but 100 customers got unsubscribed and they were activated in February and 90 were activated in January. Therefore, the final total number is 2710. From these 2710, 810 correspond to customers that were activated in January, 900 correspond to customers that were incorporated in February and 1000 to March, and so on.

2. Building origin cohort

At the end of every month, we will analyze customers that were activated and we will study if they have a connection with a marketing action (column YES, Table 1). If we cannot find the customer's origin, we will consider him/her as unknown (column NO, Table 1) and we will assume he/she is brought by a referral process.

Methodically, we will take the following measurements at the end of every month, represented vertically like *measuring month*. At the end of every month, we will ask ourselves: from the customers we have, which of them can be associated with a marketing action and which cannot?

For example, in this case, the situation is the following.

- Business is initiated in January and 1000 customers are acquired after a direct marketing action.
- In February 1000 more are activated. From that group, we have evidence that 500 come from a marketing action and we do not know why 400 were activated.
- In March, another 1000 are obtained from which we have evidence that 400 come from a marketing action and we do not know why 600 were activated, and so on.



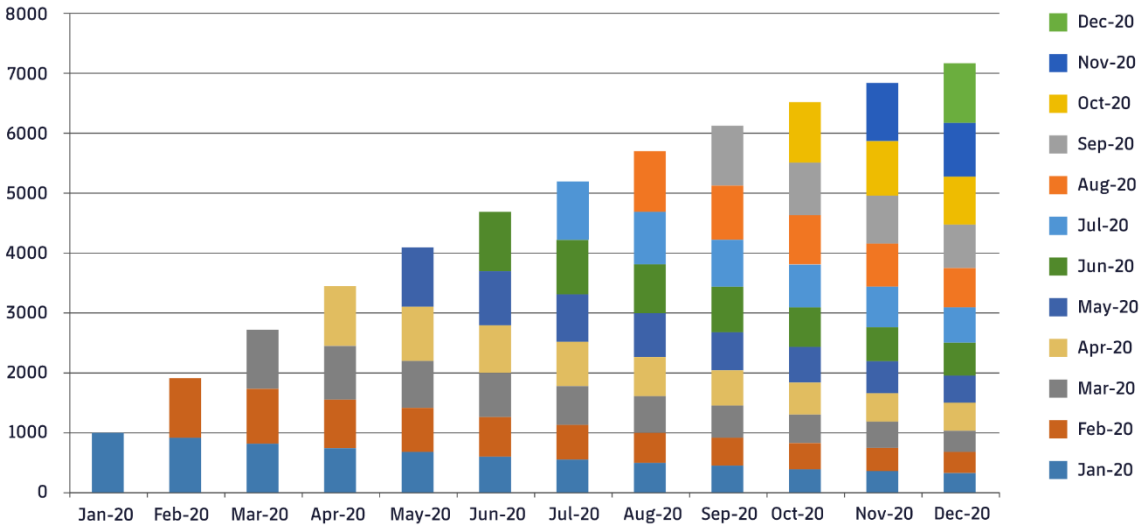
Table 1: Example for registrations of cohorts

Measuring Month	Total Amount of Registered Customers	Total Amount of Active Customers	Origin cohort: Association or not of a customer's activation to a proactive marketing action		Age cohort: month of activation of the customer acquired by a specific marketing action											
			YES	NO	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
Jan-20	1000	1000	1000	0	1000											
Feb-20	2000	1900	1500	400	900	1000										
Mar-20	3000	2710	2110	600	810	900	1000									
Apr-20	4000	3439	2639	800	729	810	900	1000								
May-20	5000	4095	2595	1500	656	729	810	900	1000							
Jun-20	6000	4686	2686	2000	590	656	729	810	900	1000						
Jul-20	7000	5217	2217	3000	531	590	656	729	810	900	1000					
Aug-20	8000	5695	1595	4100	478	531	590	656	729	810	900	1000				
Sep-20	9000	6126	1126	5000	430	478	531	590	656	729	810	900	1000			
Oct-20	10000	6513	613	5900	387	430	478	531	590	656	729	810	900	1000		
Nov-20	11000	6862	62	6800	349	387	430	478	531	590	656	729	810	900	1000	
Dec-20	12000	7176	0	7176	314	349	387	430	478	531	590	656	729	810	900	1000

Source: Own creation.

Below, we will see a graphic for the number of monthly customers, giving a different colour to each activation month. In the said graphic, we will be able to see the division of months that are the farthest in time (for example, let's see the blue colour which represents January).

Figure 2: Example for graphic for the evolution in the age cohort



Source: Own creation.



Unit 3.2 Cohort analysis: retention and virality coefficients

After the cohorts building and its systematic measuring, we can analyze them through the retention and virality coefficients.

Good retention and viral growth are the necessary steps to make the start-up to escalate if the purpose is to get a big amount of customers.

The retention coefficient is the ability to retain customers during a certain period of time and it is built with the data stated in Table 1.

This indicator shows that customers that you already have felt satisfied with your product since they keep on buying it. Therefore, we can confirm that a high retention rate means loyal customers who will return and who handle a positive relationship with the company, in which they would spend more if they were offered other options; this generates an increase in the customer lifecycle (a metric we saw in the previous module). In contrast, a low retention rate means that customers will go to the competitors or the company will simply lose them if it does nothing to avoid it.

Following Smith (2017), the first thing to define is regularity: week, month, six months, year. Once regularity is set, the formula for calculating the retention coefficient is the following:

$$\text{Retention Coefficient} = \frac{(E - A)}{S} \times 100$$

Where:

“**S**- The number of customers that exist at the beginning of the period

“**E**- The number of customers that exist at the end of the period

A- The number of customers that were acquired during that period” (Smith, 2017, <https://goo.gl/qeN71J>).

How can the retention rate be increased?

We will share some tactics for making the path easier, considering that the main idea is to keep the customer always happy and, in case it is not like that and you lose him/her,



to find out the reason for him/her leaving or changing, so you can learn and not repeating it. For that purpose, it is essential to listen and be alert to your customers' desires. Following Smith (2017), the following are some alternatives you can implement:

Listening to feedback: taking advantage of several media that exist nowadays to learn about the audience and to see their comments, suggestions and complaints. Conduction of surveys, appealing to social intelligence and paying special attention to the opinion of the staff that is in contact with the customer since it will be an orientation in the search of solutions to real problems. This information will help you to make better decisions for providing a better service, and even more personalized.

Improving the customer service: there is nothing more frustrating for your customer that finding bad customer service before, during and after his/her purchase. It is image damage the customer will have about the company. Therefore, you should invest in offering good quality and efficient service. A customer that is satisfied with the customer service, will not only bear you in mind for the next purchase but will also recommend the company.

Improvement in the incorporation process: the incorporation process, i.e., the process by which the customer gets registered, uses and pays for the first time; it is the key to get customers to use the product and take advantage of it until exploiting it the most. You should make your customers discover the benefits and the profits they will have by using it as soon as possible.

Continuation in selling to existing customers: loyal customers should not be neglected; in fact, you should know who they are and generate benefits for being consumers of the brand and you should also run campaigns to keep them informed about advances and last products.

Personalization: unmistakably, personalized attention improves the customer experience and the relationship with the company, since it generates a perception of care on the part of the company for helping him/her to solve their problems. On the contrary, nobody likes feeling part of a homogeneous mass, or as we generally say, being just a number; that is why developing customer profiles, detecting their needs, wishes and weaknesses and segmenting them could be a practical way of offering them an experience adapted to their needs.

Development of brand values: "A brand is something more than a product and a logo. There are also memories, stories and associations that build up our mental image about it" (Smith, 2017, <https://goo.gl/y6ZSVR>). Try to get associated with values that might be the same ones that your customers hold because they are linked to their interests, professions, locations, etc. This social intelligence will help you to coordinate your



customers’ preferences with the brand. It is important to keep coherence and to be faithful to those values so they do not turn against you.

Building a community: even though it is a difficult task, it is extremely useful and convenient to build a customers’ community that does not only generate an internal conversation about products, but that would also give room for giving opinions, making comments, defending or thanking comments that might be given, in your favour or against you. It is always convenient to know about what is being said about the brand, whether it is what supporters promote or what dissatisfied users question. The goal is to be part of the conversation and to work for improving customers’ comments and experiences, obviously (Smith, 2017).

It is important to identify clearly to which cohort each tactic is applied, in order to observe them in time, through the retention coefficient of each of them and it is important then to conclude determining which actions were more effective.

In the table below we can see:

- each age cohort retention coefficient and the accumulated one;
- the virality coefficients.

Table 2: Example for retention coefficient of each cohort and virality coefficient

Measuring Month	Retention Coefficient	Monthly Virality Coefficient	Retention Coefficient in each cohort												
			1	2	3	4	5	6	7	8	9	10	11	12	
Jan-20															
Feb-20	0,95	0,40	0,90												
Mar-20	0,90	0,32	0,90	0,90											
Apr-20	0,86	0,30	0,90	0,90	0,90										
May-20	0,82	0,44	0,90	0,90	0,90	0,90									
Jun-20	0,78	0,49	0,90	0,90	0,90	0,90	0,90								
Jul-20	0,75	0,64	0,90	0,90	0,90	0,90	0,90	0,90							
Aug-20	0,71	0,79	0,90	0,90	0,90	0,90	0,90	0,90	0,90						
Sep-20	0,68	0,88	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90					
Oct-20	0,65	0,96	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90				
Nov-20	0,62	1,04	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90			
Dec-20	0,60	1,05	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	
		Average Retention Coefficient for Age Cohort	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	

Source: Own creation.

All these recommendations are meant to guard and to improve the retention coefficient. Nevertheless, we should take into account that it is complemented with another index—less friendly—we saw before: the customers’ cancellation rate or the churn rate, since it completes the analysis by determining how many customers are lost in the analyzed period.



of this is when you can identify the moment in which a guest clicked on a sent invitation and the entry to the platform can be registered, having the possibility of allotting it to a specific user by their URL. When this happens and you want to elaborate on the virality coefficient, two effective metrics can be applied.

- **Invitation ratio:** it calculates the average number of invitations sent by users of the platform in a certain period of time. If the purpose of having customers fascinated by the product is achieved and they recommend it to friends, then the way of improving it was found.

We will use the example proposed by Megías for making a clear explanation:

During the summer period on one of my customers' platform (a project that operates with the habitual concept of invitation) 112,000 invitations were sent, which is approximately 2,07 invitations per user (there were 54,000 at the beginning of the period; it is then 112,000/54,000). (2012, <https://goo.gl/ehgCdg>).

$$\textit{Invitation ratio} = \frac{\textit{Sent invitations}}{\textit{Users}}$$

- **Acceptance ratio:** it calculates the percentage of accepted invitations or, what is the same, the conversion ratio of invitations that have been accepted over the sent invitations. The ratio will be higher if the invitation is attractive and powerful, and the same will be for subscriptions and acceptance stimuli.

Following with Megías (2012) example: "For the first customer, the acceptance ratio during summer was 27%, which means that approximately more than 1 out of 4 invitations ended up as a new user subscription" (<https://goo.gl/ehgCdg>).

$$\textit{Acceptance ratio} = \frac{\textit{Accepted invitations}}{\textit{Sent invitations}} \times 100$$

Then, by understanding these differences on ratios, the viral coefficient will be calculated with the following formula (taking into account that U represents users):



Viral U= initial U x invitation ratio x acceptance ratio

$$\text{Viral coefficient} = \frac{\text{Viral U}}{\text{Initial U}}$$

Megías goes on with the example as follows:

In the case of my customer, whose initial amount was 54,000 users before summer, and if we apply the previous formula, we will see that a total of 30,240 new users were obtained virally ($54,000 \times 2,07 \times 27\%$, a significant number, but linear), which implies a viral coefficient of 0,56 ($30,240/54,000$).

For the viral coefficient to be 1, their users should have sent 200,000 invitations or have reached an acceptance ratio bigger than the 48%. (2012, <https://goo.gl/ehgCdg>).

Another formula option for calculating the viral coefficient is the following one:

Viral coefficient = average # of invitations x acceptance ratio

Projects where traceability is not simple: few actions are as effective as a personalized invitation. However, in some companies, this task is practically unfeasible, as well as is word of mouth or the building of reputation through virtual media. Because of this, methods for applying virality are not so exact, but they are more based on experience. Megías gives the following example:

We will split users into two big groups, one in which we will include all those we have proactively attracted (e.g. via campaigns, SEO, SEM, members) and the other one the rest of the users, who we will consider they have got “alone” (viral users). (2012, <https://goo.gl/ehgCdg>).

With this split, the viral coefficient is calculated using the following formula:



Viral coefficient=	Viral users
	Attracted users

Nevertheless, it is necessary to pay attention to a topic brought up by Megías in relation to this method: “Given that there is an average 20% of events (campaigns, SEO, SEM) that are not taken into account, we should increase the number of ‘attracted’ users in 20%” (2012, <https://goo.gl/ehgCdg>).

Finally, we can say that if we do not have the automatic tools that could allow determining if a customer is the result of a referral and not the result of commercial activity, we should do it manually, no matter what.

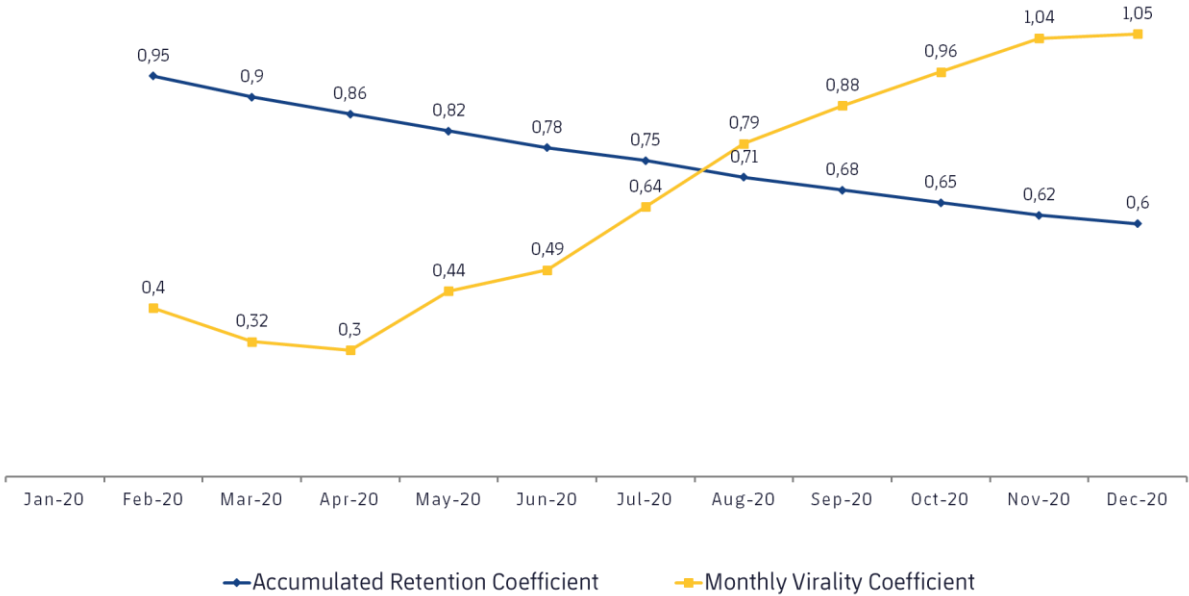
The learning process this involves is a very valuable resource that you will capitalize on before any decision you take.

Our example simply considers analyzing each one of our new customers, doing research and finding the causes of why they got to our business. If the answer is “somebody told me about it”, it means that it should be considered viral. Other answers, like “I received an e-mail”, “I saw an ad on Facebook” and others can be considered as not viral.

The goal is to achieve virality coefficients of > 1 and a monthly retention coefficient of > 92%, or, what is the same, cancellation coefficients of < 8% by month.



Figure 3: Example for accumulated retention coefficient and monthly virality coefficient



Source: Own creation.

Besides virality, it is convenient to measure the viral speed, understanding it as the average period of time since the invitation is sent until the customer finally accepts it, no matter the way: by registering, answering or determining a parameter to define what his/her acceptance will be. This is important since, the faster his speed, you will not only have an exponential growth strategy, but it will also be fast.

The viral coefficient is key and convenient in several new business models; you should bear in mind that it can influence the start-up and, therefore, you should not only be able to measure it, but also to react and consequently act with its results. With this, we want to express that **you should be ready to take care of what you are trying to attract.**

And finally, do not forget that virality varies with time and with environment conditions: likely, the viral coefficient you obtained at a moment might not be the same before and after that moment. So, as long as you need to stimulate your growth, you should not lower your guard.

Some examples of how to virally increase growth could be by increasing the marketing budget, optimizing conversions and creating referral programs.



Table 4: Actions performed for increasing virality

Performed actions	Jan-20	Feb-20	Mar-20	Abr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
Increase in the marketing budget		X	X			X		X		X		
Conversions optimization: Action A		X	X	X				X				
Conversions optimization: Action B			X	X	X	X		X				
Conversions optimization: Action B1				X	X	X		X				
Conversions optimization: Action C									X			
Creation of the Referral Program										X	X	X

Source: Own creation.

Now then, if you are wondering about how to use virality in your business for obtaining benefits, you should learn to create content with this purpose. Below, we will see some recommendations by Romero (2017) that will be very useful.

Choose the format you will use for promoting your content. They could be articles, images, videos, etc., although you should take into account that videos are the ones that present the best results, due to their easiness to attractively communicate crucial ideas. Besides, there are currently a big number of applications for making good, economic and garish videos that would be at hand for everybody.

After deciding about the format, it is time to imagine how **the product will be introduced in that content**. It is not advisable to put the product as the main character in the scene. Customers can be informed about the situations the product will solve or we can show the production conditions or their attributes, by giving it only the right importance for calling the customer attention and suggesting to him/her how important the product will be for them, but not directly. The selling should be subtle, barely perceptible. In other words, the content (not the product) should be perceived as high quality and interesting for customers, besides the goal is to educate them and prepare them for the purchase (Romero 2017).

Knowing that a well-achieved virality power is great, because of its ability to pull big amounts of customers and introduce them in the company conversion funnel and build their customer loyalty. It is necessary to learn about the requirements for the content to become viral. Here we share some of the most recommended ones.

- The main requirement is to work on the content topic. Romero (2017) recommends “to visualize recent viral content” (<https://goo.gl/vcqfmj>) to know which are the topics that are attractive for people and which are being virtualized. In this sense, it is necessary to pay attention to the emotions they generate and transmit, who are the main characters, to whom is addressed and to take notes of all the aspects that are of interest for being used in the content, without neglecting competitors’ messages.



- In order to offer the product or service, the content must include ordinary emotions, behaviours and actions that would appeal to most of the public.
- If it is worth for the message, humour as a resource is an interesting component that has a positive impact on the public, mainly if the content is presented creatively.
- Its presentation should consider cultural aspects (gender, non-discriminatory, inclusive, etc.) to widen the spectrum for the visualization public and not to hurt the sensibility of groups that might not be the final recipients of the message or the product.
- Content must be prepared and designed for being included on social networks, for guaranteeing virality by its spreading and easiness to share it among users (Romero, 2017).

Finally, it is important to explain that the whole concepts developed applies to the B2C channel, as well as the B2B channel.

According to David Skok (n.d.), in his article Customer Acquisition: Maximizing your Funnel, acquiring customers in the B2B world involves using a variety of marketing and sales steps to convert potential customers into real ones. Normally, this process is represented as a funnel in which potential customers are poured in by the wider part and, as the process advances, a percentage of them continue to the following step and the funnel gets narrower as the process evolves.

No matter the size or the success of your business. There will be at least one point in the customer's acquisition funnel in which there will be a blockage. It is the point (or points) in which the conversion of one stage to the next one is not enough or the point in which there is a growing problem (i.e. it seems it is not possible to profitably increase the number of people coming out of that part of the funnel because you got to the maximum in the capability of your marketing or sales strategy).

In that article, Skok (n.d.) refers to a method he developed for removing blockage points, which results in the increase of conversion rates in the funnel.

The author states that

The easiest way of identifying a blockage point is by asking the following questions: "What is stopping you from increasing sales x 5?" The habitual answers, in this case, might be:

- We do not have enough leads in the widest part of the funnel.



- We have a lot of visitors to our site, but not enough become registered users.
- We have a lot of users registering for our freemium product (or for the free trial version), but there are not enough users that pay.
- We cannot arrange meetings with the decision-makers.
- We get enough customers, but counts do not grow enough after the first sale. (Skok, n.d. , <https://bit.ly/2NfSRxS>).

And then he develops the reasons, in his opinion, that is more habitual for blockage points:

The product-market fit

If a new start-up will be created, one of the main causes of problems in the customer acquisition funnel is that that business has not still found the product-market fit. It is important to identify if that is the case since a wrong diagnosis will probably lead to wasting a lot of money in trying to sell and promote a product that is not right. If that is the case, the correct course of action is to focus all your energy and attention on solving the product-market fit. While on that action, you should limit your expenses on sales and marketing to the minimum level to continue developing a product that fits with a market need.

Beyond the product-market fit

For example, you might be expecting your potential customers will come to your web site in droves but is possible that you may not have solved the problem of how to make them learn about the site and, in the second place of how to create motivation or reason for them to want to visit it.

This happens because most of the companies design their customer acquisition processes according to their vision of the world, instead of devoting time, in the beginning, to understand their customer's buying process and their concern at every stage. (Skok, n.d., <https://bit.ly/2NfSRxS>).

The author recommends designing sales processes from the outside in, i.e., from the customer's point of view. This implies creating a map of the customer's buying cycle first



and then designing a process adapted to it. However, as a most business already have an ongoing buying process, that suggestion is not so helpful for them.

Following Skok, once blockage points have been identified, the best way to start removing them is to get inside the customer's head and study their concerns at that particular stage in the sales process.

These concerns represent the friction in the sales process. Creating a map of them in a written form will be the base for the next step, which consists of learning about the possible things that could be used to motivate those customers to take the step or action you want them to take.

You can think that concerns are the friction in the process and the motivations as being the forward pulling forces that can be used to overcome that friction.

The art is finding the right motivation that is enough to overcome those concerns and have them move forward in the sales process. This is where you need to gather the brightest and most creative thinkers for the generation of ideas about the issue. Since customers have a huge aversion to being sold out and now have real control over the buying process, the traditional ways of moving them through a sales funnel generally have very poor results. In order to get excellent results, there is a need to think out-of-the-box and to be imaginative. (Skok (n.d.) <https://bit.ly/2NfSRxS>).

Finally, he presents the following summary:

- All of the sales and marketing funnels have blockage points and, as soon as you remove one, the blockage will move to another place.
 - Blockages are produced habitually because it is expected that customers accept taking a step where they are not adequately motivated to take it.
 - By analyzing their **concerns** and generating ideas with the most creative executives, it is possible to imagine customers' **motivations** that can be used to overcome those concerns and get them to willingly take that step.
 - The best solutions often require thinking of creative alternatives.



- Free products, educational content and knowledge based on data that you may possess or collect are examples of things to use as motivations for potential customers.
- Removing blockage points increase conversion rates in the funnel, which is one of the most important strategies that can be done to increase revenues and profitability (A small improvement in the conversion rates can dramatically lower the cost of customer acquisition).
- I recommend setting up quarter meetings for generating ideas that would allow you to solve blockage points, which could also be referred to as sessions to increase conversion rates.
- I also recommend choosing one executive to become the voice of the customer, and giving them the task of getting inside the customer's heads to understand how they react to all stages of the sales and marketing processes. (Skok, s/f, <https://bit.ly/2NfSRxS>).



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