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KPI DASHBOARD FOR CUSTOMER INTELLIGENCE TASKS: APPLICATION AND SIGNIFICANCE FOR BUSINESS

Abstract

The contribution of business is very significant in the economic development of countries, the creation of new jobs, the development of education, the improvement of the environment, and the improvement of the population's living standards. For enterprises themselves, stable and competitive development and efficient marketing activity are vital, where the significant role is played by customer intelligence (CI). It is determined by the fact that in modern world customer focus and centrality give companies the ability to be more successful and stable on the market. The global digital transformation has provided companies with many opportunities for customizing products and services, which generally increases competitiveness on the one hand, and on the other hand, opens up new opportunities for working with consumers. Based on consumer databases in marketing activities, it is possible to start applying CA. Today, many methods and technologies allow to start using KA to collect and process consumer databases. This article aim is to present the practical approach to Customer Intelligence tasks through the Key Performance Indicators (KPI) dashboard, where the dashboard is the set of KPIs chosen based on CI tasks realizations. Using this panel will allow companies to follow the path of implementing CA with an understanding and evaluation of the effectiveness of using this technique. The systematic use and tracking of results will ultimately affect the stability and viability of companies.

Key words: customer analytics, customer analytics tasks, customer centrality, database, performance indicators, customer identification, customer engagement.

Introduction

Small and Medium Enterprises (SME) are economic drivers, but they often lack marketing resources and knowledge, and are more flexible competing with large companies as less bureaucratic. Nowadays, leading companies use CI for improving business. In Kazakhstan, there are examples of customer-centricity approaches and CI in large businesses such as mobile operators and banks. Some use and publish Net Promoter Score (NPS) and loyalty index. This research introduces a methodology for implementing CI tasks KPI dashboards for Kazakhstan companies through working and measurable indicators. This dashboard could help companies be more stable, viable, and effective. Based on the study, SME marketing professionals will be able to create a customer focus approach using recommended tools and methods and make companies more viable and steady.

Literature review

Customer Intelligence and Customer-Focus. In today's reality, enterprises for success competitive apply customer focus and centrality approach, products and service development based on customer needs, tasks and pains, keep customer relationship increasing customer lifetime value, encouraging buying through positive customer experience [1]. For achieving a company's strategic goals is applying and maintaining customer relationships based on customer focus strategy [2]. Database. Nowadays, customer interactions on varied digital platforms generate eminence customer data. Companies create a customer database by gathering, investigating, and using it to develop a customer-focused and data-driven approach [2]. SMEs can design customer profiles and determine profitable segments with similar database metrics and profitability [3]. Key performance indicators (KPI) are a vital component of measuring achievement. Its assists companies in reaching targets through determining and measuring the way of their application [4]. KPIs usually be shared into functions divisions or groups applied for the data gathering, processing, analysis, and examination to assist the company's decision-making processes [5]. Indicators could be financial or non-financial indicators used for objective measures for the companys' performance demonstration. It displays the progress steps of the targets, either directly or indirectly. Summarizing KPI is the critical data instrument for companys' control, evaluation, and management [5]. In the aim of this research, the authors concentrate on marketing metrics.

Methods

For the Customer Intelligence measurable indicators dashboard research purpose, the literature review was done based on top variant scientific and business sources: books, Google Scholars, Harvard Business Review, and EBSCOhost [6]. Divergent keywords such as “customer intelligence”, “customer focus”, “marketing indicators”, “customer identification”, “customer acquisition”, “customer retention”, and “customer value development” were applied to research for papers from these decent databases. During the investigation, different scientific methods were addressed, such as analysis, synthesis, and generalization of information. As a result, a customer focus approach with CI metric dashboard is presented, based on valid research data.

Results

The research results are based on a literature review of articles from scientific and business practice editions about SMEs, customer-centricity, CI, and marketing metrics. SMEs have been determined as propulsive energy of economic progress worldwide. SMEs are vital givers to job creation and global economic development, and they present about 90% of businesses and more than 50% of recruitment worldwide [7].

Corresponding to the SMEs data monitoring in the Kazakhstan Republic by the National Statistics Bureau of the Agency for Strategic Planning of the Republic of Kazakhstan [8], as of July 1, 2021, in the RK, a total of 469,927 enterprises are registered in Kazakhstan, including 461,279 small businesses and 5,251 – medium-sized ones, which is 98.2% and 1.3% of the total number of registered enterprises in Kazakhstan, respectively. In Kazakhstan, a large number of legal entities are liquidated annually. 2021 was the last year for 23.2 thousand of them. In 2020, compared to 2019, there was a decrease in the number of liquidated companies to 19.2 thousand. In 2019, compared to 2018, 23.4 thousand were liquidated, which showed an increase of 17.8% [9] compared to the previous period. The liquidated enterprises were engaged in trade, repair of cars and motorcycles, transport, construction, scientific, technical activities, agricultural, financial, manufacturing industries. The dynamics of the liquidation of Kazakhstani companies for 2019–2021 is shown in Figure 1 (p. 221)

All these data indicate Kazakh companies' low level of viability and the need to improve Kazakh companies' vitality and sustainable development. SMEs' vital ability based on adequate, competitive, and stable development is necessary and critical for economic progress and country development. In the current reality, one of the most efficient evolution ways for SMEs is the customer focus approach with the CI system. Customer database gives companies excellent opportunities for building transparency, effective, and measurable customer intelligence systems. Contemporary, when marketing questions

can be solved in the consumers' favor, there is much affluent space to convene and analyze customer data to improve existing products and create new products and services. CI task were created and presented by authors [10] for this research aim CI tasks presented with KPI metrics dashboard, which separate according to every of four CI tasks. Figure 2 illustrates four CI tasks and sets of KPI metrics for every task.

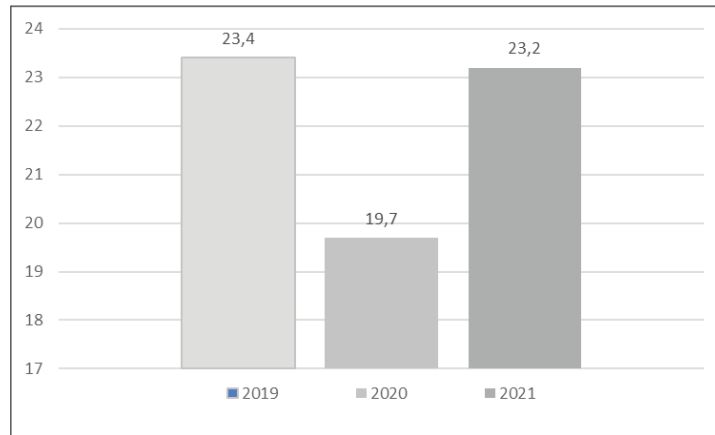


Figure 1 – Dynamics of liquidation of Kazakhstani companies for 2019–2021, thousand units

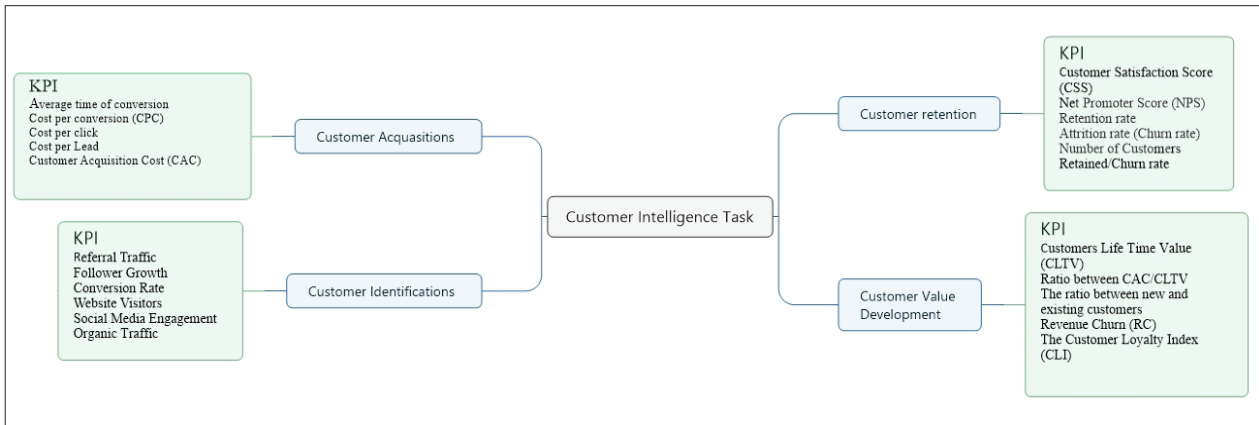


Figure 2 – Customer Intelligence Tasks KPI dashboard

Here, consider all four tasks in more detail and determine their role and the applied KPI.

Customer identification. The role of customer identification is essential because its results will form the groundwork for the other three CI tasks. Customer Identification served to ascertain customer segments with identical interests, lifestyles, and profitability. Customer segmentation, such as clustering and classification, applies to sharing customers into homogenous/cognate segments and creating customer profiles. Target customer analysis lets select and ranks the most favorable and profitable segments, an excellent base for further effective marketing activity. In table 1, there is the set of dashboard indicators for the first CI task – Customer identifications.

Customer Acquisitions actions are grounded on outcomes of customer identification task. At this stage, database resources, structured and unstructured, are vital. Customer acquisitions based on customer identification data determine the most appropriate communicational channels and design suitable content for a forceful customer attraction operation. For this stage, customers' product preferences and purchasing decisions are frequently dependent on recommendations available for them, as online and offline. That is why pertinent content and channels/networks are critical aspects of competitive strategy in the current information surrounding. Customer reviews, recommendations, practical product/service user cases, and successful customer stories help increase customer acquisitions indicators. Table 2 (p. 222) presents the indicators for the second CI task – Customer acquisitions.

Table 1– Customer identifications indicators

KPI	Description	Formula or Calculation	Source
Website Visitors	Each unique user on website is treated as a visitor.	A visit specifies the period between the moment a user starts his browser and visits the website and leaves it.	[11]
Referral Traffic	Referral traffic is the section of traffic that comes on the website through any resource.	$(\text{Traffic enter from other sites} / \text{Total traffic}) \times 100 = \text{Referral Traffic}$.	[11]
Follower Growth	The Followers Growth KPI measures the number of new followers gained on a specific social media platform over a set time period and compares that to a predetermined target.	The follower growth rate is estimated as the number of followers were collected divided by the number of followers started, times 100% (over a determined time period).	[11]
Conversion Rate	A conversion rate reflects the percentage of users who have done a required action.	Conversion rates are estimated by taking the number of conversions and dividing that by the number of total ad reactions	[11]
Social Media Engagement	Social media engagement summarizes diversity of actions: a “share” on Facebook or a “like” on Instagram.	The main elements of social engagement introduce an activity, interaction, social exchange, and absence of obligation.	[12]
Organic Traffic		Organic traffic = search engine non-paid traffic (none) = direct and unobserved	[11]
Paid Traffic		Paid traffic from a Search engine or paid Social Media Resources	[11]

Table 2 – Customer acquisitions indicators

KPI	Description	Formula or Calculation	Source
Average time of conversion	Average time to conversion assists in understanding how well conversion information is being communicated. The lower this metric, the fewer days it takes to convert.	Average time to conversion is estimated as the total number of days between the first touchpoint in a conversion way and the conversion that happened divided by the total conversions.	[13]
Cost per conversion (CPC)	Cost per conversion shows a cost for each conversion.	CPC is determined by dividing total cost by the number in Conversions. This counting only applies to acceptable interactions, so any clicks that cannot be followed for conversions should be removed from the estimation.	[14]
Cost per click (CPC)	CPC – the cost which the advertiser compensates for a click on an ad after the transition to the site.	$\text{CPC} = \text{ads cost} \div \text{clicks number}$	[15]
Cost per Lead (CPL)	CPL is applied to estimate and control the effectiveness of the marketing program.	$\text{CPL} = \text{Total cost of the campaign} / \text{The number of leads generated}$	[15]
Customer Acquisition Cost (CAC)	CAC includes all sales and marketing costs company spends to acquire a new customer.	$\text{CPA} = \text{total cost of marketing campaign} / \text{by the total number of new customers}$	[16]

Customer Retention operations maintain customized marketing strategies that consolidate customer needs, preferences, behaviors, and performance. Customer profiling creating, campaign management analysis, credit scoring, recommender, feedback systems, and loyalty programs elaborate customer satisfaction and extension a long-term relationship. Companies could be more sustainable and profitable applying long-term relationships approach. Retention rate is the indicator that assists companies in measuring customer retention. NPS is positively related to word-of-mouth behavior also increases customer expenses and customer retention, all of which are essential links in the NPS–sales growth chain [17]. Table 3 presents the indicators for the third CI task – Customer retention.

Table 3 – Customer retentions indicators

KPI	Description	Formula or Calculation	Source
Customer Satisfaction Score (CSS)	Satisfaction is a forceful indicator of whether a customer will use a service or buy a product accordingly.	CSC is estimated over customer feedback. For answers, apply the Likert scale 1 to 5.	[18]
Net Promoter Score (NPS)	The NPS is an index that indicates customers' readiness to recommend a company's products or services.	$NPS = (\sum \text{Promoters} - \sum \text{Detractors}) / \text{Sample Size}$	[17]
Customer Retention Rate (CRR or RR)	CRR has a critical significance in everyday business activities because CRR presents a chance to boost customers' value and reduce costs if needed.	$CRR = [(E-N)/S] \times 100$ S – the number of existing customers at the beginning of the time period E – the number of total customers at the end of the time period N – the number of new customers accumulation within the time period	[19]
Customer Churn Rate (CCR) or Customer Attrition Rate (CAR)	CCR or CAR is the rate at which customers end buying or doing business with a company within a determined time period.	$CCR = S/T$ S – the number of customers who stop buying the number of total customers at the end of the time period T – the number of the total number of customers	[20]

Customer Value Development. Customer value development cover three key elements – market basket and bill analysis, customer lifetime value, and up/cross-selling, which provide peak customer value. Companies may perceive and determine long-term relationships or customer loyalty with Customers Life Time Value (CLTV), which helps identify company sustainability through the CLTV. Customer loyalty is determined as the customer's goal or willingness to continue buying from the same company and influences a company's financial performance through three metrics: increasing customer numbers, getting a price premium, and increasing market share [21]. Customers' purchase preferences and behavior which serve as the base for up/cross-selling activity companies could measure apply basket and bill analysis. In table 4, there is the group of indicators for the fourth CI task – Customer value development.

Table 4 – Customer value development

KPI	Description	Formula or Calculation	Source
Customers Life Time Value (CLTV)	CLTV provides an understanding of the significance of this metric for the business	$CLTV = \text{ARPU} * \text{Gross Margin} * \text{Lifetime}$. Where is the ARPU is the Average Revenue Per User. The Gross Margin is the ratio of the total revenue to the Cost of Goods Sold (COGS)-the cost of providing services, $\text{Gross Margin (\%)} = (\text{Revenue} - \text{COGS}) / \text{Revenue}$. Lifetime is the period during which customers buy company products	[22]

Table 4 continued

Ratio between CAC/CLTV	This ratio demonstrates how an acquisition campaign is successful in comparison with CLV.	CLTV should be more significant than CAC. CAC could exceed CLTV but for a brief period.	[23]
The ratio between new and existing customers	Following and comprehending the ratio, in numbers of customers and in revenue numbers, between new and existing customers is an essential part of long-term strategic management.	The ratio is measured by the number of new and existing customers and the same groups' income. The ratio should strive for balance.	[24]
Revenue Churn	That is essential for estimating a company's financial performance following and understanding revenue churn.	RC is determined by taking the monthly recurring revenue (MRR), which was lost that month minus any upgrades or additional revenue (AR) from existing customers, and dividing it by total MMR at the beginning of the month. $RC = (LostMRR - AR) / MMR$	[25]
The Customer Loyalty Index (CLI)	The Customer Loyalty Index (CLI) is the indicator that is applied to follow customer loyalty over time.	CLI is measured through customer feedback. Likert scale 1 to 5 is used for answer analysis.	[21]

Discussion and conclusion

Kazakhstani companies' activities analysis showed that CI system is not used. According to the study results, it is proposed that Kazakhstani companies use the CI tasks KPI dashboards method. During this study, the authors demonstrate the effectiveness of CI and customer focus business approach, determining essential ground for CI – database, and introduced KPI dashboard for CI tasks managing. According to this research, marketing professionals may understand customer intelligence tasks and manage them using the presented KPI dashboard.

The theoretical input of this research is compiled as a literature review of the scientific and business literature on the CI, customer focus, database, and KPI topics and recognition of points for future study to develop CI system and marketing performance. Another value input is the CI tasks KPI dashboard the scientific base for practical implementation.

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ПАНЕЛЬ КРІ ДЛЯ ЗАДАЧ CUSTOMER INTELLIGENCE: ПРИМЕНЕНИЕ И ЗНАЧЕНИЕ ДЛЯ БИЗНЕСА

Аннотация

Вклад бизнеса в экономическое развитие стран, создание новых рабочих мест, развитие образования, улучшение окружающей среды и повышение уровня жизни населения очень значим. Для самих предприятий жизненно важно стабильное и конкурентоспособное развитие, основанное на эффективной маркетинговой деятельности, где важную роль играет клиентская аналитика (КА). Это обосновано тем, что в современных реалиях клиентоориентированность дает компаниям возможность быть более успешными и стабильными на рынке. Мировая цифровая трансформация предоставила компаниям множество возможностей для кастомизации продуктов и услуг, что в целом повышает конкурентоспособность, с одной стороны, с другой сто-

роны, открывает новые возможности по работе с потребителями. Опираясь на базы данных потребителей в маркетинговой активности, можно начать применять КА. Для сбора и обработки баз данных потребителей сегодня существует множество методов и технологий, позволяющих начать применение КА. Цель данного исследования – представить практический подход к задачам КА с помощью информационной панели ключевых показателей эффективности, где панель представляет собой набор ключевых показателей эффективности, выбранных на основе реализации задач КА. Применение данной панели позволит компаниям пойти по пути внедрения КА с пониманием и оценкой эффективности использования данной методики. Плановое использование и отслеживание результатов в итоге повлияет на стабильность и жизнеспособность компаний.

Ключевые слова: клиентская аналитика, задачи клиентской аналитики, клиентоориентированность, база данных, показатели эффективности, идентификация потребителей, привлечение потребителей.

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CUSTOMER INTELLIGENCE ТАПСЫРМАЛАРЫНА АРНАЛҒАН КРІ ПАНЕЛІ: ҚОЛДАНЫЛУЫ МЕН БИЗНЕС ҮШІН МАҢЫЗДЫЛЫҒЫ

Андатпа

Елдердің экономикалық дамуына, жаңа жұмыс орындарын ашуға, білім беруді дамытуға, қоршаған ортаны жақсартуға және халықтың өмір сүру деңгейін арттыруға бизнестің қосқан үлесі өте зор. Кәсіпорындардың өздері үшін тұтынушылардың аналитикасы (ТА) маңызды рөл атқаратын тиімді маркетингтік қызметке негізделген тұрақты және бәсекеге қабілетті даму өте маңызды. Бұл қазіргі заманғы шынайылықта тұтынушыларға назар аудару компанияларға нарықта неғұрлым табысты және тұрақты болу мүмкіндігін беретінімен негізделеді. Әлемдік цифрлық трансформация көптеген компанияларға өнімдер мен қызметтерді кастомизациялау үшін үлкен мүмкіндіктер беру арқылы бәсекеге қабілеттілігін арттырып жатыр. Жаһандық цифрлық трансформация компанияларға өнімдер мен қызметтерді кастоматизациялау үшін көптеген мүмкіндіктер берді, бұл бір жағынан бәсекеге қабілеттілікті арттырады, ал екінші жағынан тұтынушылармен жұмыс істеу үшін жаңа мүмкіндіктер ашады. Маркетингтік әрекеттердегі тұтынушылардың дерекқорларына сүйене отырып, тұтынушылар аналитикасын (ТА) қолдануды бастауға болады. Тұтынушылардың деректер қорын жинау және өңдеу үшін бүгінгі күні ТА-ны пайдалануды бастауға мүмкіндік беретін көптеген әдістер мен технологиялар бар. Бұл зерттеудің мақсаты – негізгі тиімділік көрсеткіштерінің панелін пайдалана отырып, тұтынушылар аналитикасын қолдану мақсатында практикалық тәсілді ұсыну, мұнда ақпараттық панель ТА мақсаттарын іске асыру негізінде таңдалған негізгі тиімділік көрсеткіштерінің жиынтығы болып табылады. Бұл панельді пайдалану компанияларға осы әдістемені пайдалану тиімділігін түсіну және бағалау арқылы тұтынушылар аналитикасын енгізуге мүмкіндік береді. Нәтижелерді жүйелі пайдалану және қадағалау, сайып келгенде, компаниялардың тұрақтылығы мен өміршеңдігіне әсер етеді.

Тірек сөздер: тұтынушылар аналитикасы, тұтынушылар аналитикасының міндеттері, тұтынушыға бағдарлану, мәліметтер базасы, тиімділік көрсеткіштері, тұтынушыларды сәйкестендіру, тұтынушыларды тарту.