Study of the Existing for the Development of an E-Commerce Management System

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ARTICLE INFO	ABSTRACT
Published Online: 18 September 2023 Corresponding Author: **Bailloul Youssef**	We are interested in this work in the relations of exchanges and in particular the emailing. Our objective is to propose a study concerning the analysis of the situation and in particular the study of the existing in the market of the tools which treat the emailing to define the nature of the tools which already exist on the market and especially to identify the various functionalities of these tools to propose a list of functionalities which a tool emailing can integrate for a good management of a tool emailing and at the same time, that will help us to define our needs for the design and the development of our system of management e-commerce being based on the emailing

I. INTRODUCTION

An emailing tool allows you to send emails in order to communicate easily with an audience. Email marketing makes it possible to transmit information quickly to a large number of people, whether they are prospects, customers, ambassadors or partners. Very popular with marketers, email represents an interesting direct communication channel in a marketing strategy. In addition, email campaigns help to acquire new prospects, retain customers and engage an audience. A solution for sending emails is now essential in a communication strategy and represents a powerful web marketing lever. Depending on the purpose, an email can take different forms. The follow-up email, which is part of a marketing automation strategy, makes it possible to plan a series of emails after a first contact, the newsletter, a marketing email format which presents the news and new products of a company or even the transactional email which plays the role of acknowledgment of receipt.

Based on our research methodology concerning the design and development of an e-commerce management system, we have proposed an approach for the realization of our system through which, we have fixed the first stage as the stage of the analysis [1]. Indeed, through this article which concerns the analysis, we are conducting a study concerning the study of the existing in the market via the Web dealing with this type of project. This study will allow us to have a clear idea about the products that exist in the market, the different functionalities they contain, and the way in which we must approach our project needs.

II. STUDY OF EXISTING PROFESSIONAL EMAILING TOOLS

A. Definition of emailing

Invented in 1972 by Ray Tomlinson, e-mail or electronic mail is one of the most used services on the internet. It allows the exchange of text messages through computer networks [2]. Emailing is a recent concept. It is defined as the distribution of emails to a large number of people generally for marketing purposes. In another way, emailing is a direct marketing approach which consists of sending electronic mail to several recipients of a database at the same time in a targeted manner. From 2009 to 2013, the use of emailing by companies increased by 20%. Send information and flyers, but also promote products on a large scale through electronic messages. Service providers take care, through specialized software, of the sending according to the strategies, whether it is a question of building loyalty, following up or attracting new customers. Among the methods used, we note mass mail, one-to-one (individual sending) or trigger marketing (automation of messages according to profiles).

Indeed, software for sending marketing emails makes it possible to automate marketing actions through the implementation of one or more scenarios. More specifically, when a contact or prospect takes a particular step, this will trigger a certain number of actions such as sending a targeted email, adding to a specific contact list or even assigning a score. Emailing platforms that offer to automate campaigns save time, follow a prospect throughout his customer journey,

deliver the right message through personalization or even increase his conversion rate.

Since the majority of Internet users today have e-mail addresses and 95% of them consult their mailboxes several times a day, e-mail is becoming a fast and effective means of reaching a targeted audience. The advantage of emailing campaigns is above all to be able to personalize a message at a lower cost compared to other means of communication such as telemarketing or display advertising. It also offers the possibility of obtaining statistical information such as the opening rate. The latter indicating the number of people who read the email compared to the number of recipients at the base.

B. Definitions of the different types of emailing

According to the Sarbacane site [3], it is necessary today for advertisers to integrate emailing into their marketing strategy. Indeed, an e-marketing strategy cannot do without it because a large part of the conversions go through it. There are several types of emailing:

- **The informative email**, also called informational email, is an email whose purpose is to help your audience learn about your company and/or your brand. It is therefore, by definition, an email aimed primarily at informing your prospects and customers, and not at pushing them towards your conversion objectives (for example, buying your products or taking advantage of a promotion).

- **The prospecting email**, the objective of a prospecting email is to acquire new customers. The commercial prospecting email is an essential tool in a lead generation campaign. An effective prospecting email must be personalized.

- **The promotional email** is intended to boost sales by proposing a promotional offer, it can also be used for loyalty or prospecting purposes.

- **The loyalty email**, is a message sent to a customer as part of a loyalty emailing campaign aimed at strengthening the relationship of trust already demonstrated by a purchase, the creation of an account or a subscription. The customer loyalty email can have an informative (newsletter) or commercial (generating sales) purpose.

- **Transactional email**, they include all emails that must be sent automatically and instantly following an action or an event on a site: Confirmation of registration. Order confirmation. Notifications (delivery tracking, new message, etc.).

- **The follow-up email**, is an attempt to convert a customer who has not reacted to a mailing action or who has become inactive.

- **The invitation email**, is an email sent to a list of recipients to announce a future event, invite them and convince them to participate by showing their interest.

- **The notification email**, is an automatic email triggered by an event, an action or a non-action (birthday, purchase, cart abandonment). The objectives of notification emailing are diverse: to notify, to engage, to relaunch, to sell, to thank, to build loyalty.

C. Study results

Searching the Web for project management applications in general and emailing in particular, we found a variety of tools in all areas. Indeed, to send emails to a contact database, there are tools such as Sendinblue, Mailchimp, Sarbacane, GetResponse, ConvertKit, SendFox, Mailjet, MailerLit, Dolist or SendGrid, which offer the possibility of creating emailing campaigns and trigger marketing automation actions. In addition to full email marketing management, these services typically offer libraries of templates and easy-to-use editors to help with email creation. Sending can be automated, which allows considerable time savings and a higher sending ratio compared to simple messaging tools. Through the following, we present an overview of the different tools mentioned above and we analyze each of the tools in order to propose a list of features for an emailing tool.

- **Sendinblue** is the global reference for emailing. The solution is complete and allows you to fully manage email marketing. A comprehensive template library and a well-designed editor help create engaging emails [4]. Each campaign is A/B testable in order to send the most effective model. Sendinblue is able to automatically optimize campaigns, including choosing when to send campaigns. In terms of statistics, everything is measured to make the right decisions, such as the click area and the analysis of email openings. Sendinblue goes further than a simple emailing solution, notably by offering a landing page, form registration and Facebook Ads editor to centralize marketing campaigns and create them in minutes. The platform also manages marketing automation campaigns through personalized transactional emails. Likewise, it integrates SMS marketing and the implementation of a real-time chat module to interact with visitors.

- **Mailchimp** is one of the leaders in the emailing market, it offers a complete service to manage contacts, emails and marketing actions [5]. The platform has a real integrated CRM to manage contacts and allows, thanks to an audience dashboard, to identify the interests of an audience to set up appropriate actions. Similarly, you can add tags that will then be used to segment an audience to launch a targeted campaign. An A/B Testing function also exists to find out which email object works best with its audience. The tool has a complete editor to create emails thanks to a drag and drop system that does not require coding skills and thanks to a content studio that manages and stores all the images, allowing them to be reused for other projects. The platform also makes it easy to add GIFs thanks to its Giphy integration. Mailchimp is a specialist in the automation of one-step and multi-step marketing actions such as the welcome email during registration, the email based on the birthday of a subscriber, the one sent according to the actions of a contact,

product recommendation or order confirmation. In addition, the service allows you to set up hosted, integrated or contextual forms and landing pages to encourage registrations. In addition, you can also program and publish content on Facebook and Instagram or create a website with a personalized domain name.

- *Sarbacane* is a global solution that manages emailing campaigns, but also contact management, and SMS marketing [6]. Sarbacane includes a complete and intuitive editor to create effective emails in the colors of its brand. We can customize everything from scratch, or take inspiration from one of the many templates available. You can activate your contacts finely thanks to the CRM management of the platform by freely carrying out targeting according to customer data in order to communicate in a personalized way. On the deliverability side, Sarbacane benefits from recognized experience on the subject. Complete reports are generated in order to provide the right information on the recipients, and thus improve its performance. The platform also allows you to manage SMS campaigns and send them to all contacts. Automated SMS campaigns are notably available. Sarbacane also goes quite far on the subject with enriched SMS which implement images, videos or blocks of text in the messages. Whether for emails or SMS, we can create marketing automation scenarios and automate recurring campaigns. Other strengths of Sarbacane: the creation of landing pages and forms via the editor and the implementation of a live chat to interact with visitors.

- *GetResponse* is a complete marketing management solution: emailing, landing pages, conversion tunnels, webinars and marketing automation [7]. For emailing's, you can have access to templates and images from Shutterstock to allow you to create emails quickly and easily from a template. The editor has a drag & drop system which offers the possibility of dragging and dropping elements such as text, images, buttons, videos, social network buttons or even HTML code. Regarding automation, there are several types of emails: follow-up emails for subscribers, automated emails for purchases, cart abandonments, visits to specific web pages. This service can also schedule and send emails at the most relevant times. Other options should be highlighted: A/B Testing to test several versions of emails, sales funnels to improve conversions and detailed statistics to measure its performance. Similarly, many integrations are available so that we can synchronize customer data such as WordPress, WooCommerce, Prestashop, Salesforce, Magento or PayPal.

- *Mailjet* is a complete solution for marketing teams in charge of emailing [8]. The platform is largely collaborative and therefore allows teamwork, with different degrees of authorization or the possibility of commenting on a project live. The solution is very practical for large accounts. Its strong point is its editor which allows you to create models from scratch, or from the library of models made available. Even without technical knowledge, one can easily design content. Another tool is made available to users which are engaging registration forms that can be integrated in a few clicks. Mailjet then makes it possible to send content to audience segments in order to send relevant and personalized emails to certain recipients only. Thanks to Mailjet personalization, you can send different emails to different contacts, whether in terms of content or appearance. A/B Testing is also supported to test what works best and identify the most effective content. Mailjet also manages Marketing Automation strategies for transactional emails: you can engage users at key times, in synergy with your marketing strategy. Mailjet is a global and customizable solution, with powerful tools. In particular, you can access APIs to manage your emails, events or contacts as you wish. Complete reporting tools are also available in order to have an overview of its performance and improve its actions.

- *MailerLite* is a solution that allows small and medium-sized businesses to design emailing campaigns, without needing to know how to code [9]. The emailing editor is well thought out and will save time because it already offers suggestions for drag and drop elements such as headers, content arranged in several columns, CTA buttons, products for e-commerce, buttons for social networks or even surveys to know the opinion of contacts. We can also add our own HTML code. Regarding marketing automation, the tool makes it easy to set up automated actions such as sending an email to a subscriber who clicks on a link, adding a delay between the moment the subscriber clicks and the time of sending the email… There is the possibility of linking your Google Analytics account to follow all the clicks of a campaign. In the advanced settings, we find the A/B Testing function, in particular on mail objects, and we can also set up automatic reminders to contacts who have not opened the email sent or who have not clicked on any link. Other options are available to help develop your audience such as the website editor, landing pages, pop-ups and integrated forms. Subscriber segmentation is also possible to offer more targeted content to contacts.

- *ConvertKit* is a marketing email management tool [10]. It offers an editor to set up personalized emails, forms and landing pages from existing templates. It also offers the possibility of automating tasks according to the interests of its audience. To save time and ensure the deliverability of messages, ConvertKit offers to create emails in plain text, with ease, without going through a more complex editor. There are basic features for formatting and for more customization, you can add images, CTA buttons as well as HTML code. Similarly, custom forms can be created, allowing the download of a white paper or a subscription to the newsletter. You can also set up a pop-up form that is triggered after a certain percentage of page scrolling. ConvertKit allows you to create landing pages without the need to code thanks to an editor and ready-to-use templates. The publisher benefits from an Unsplash integration which

allows the use of royalty-free images to illustrate landing pages. There is even the possibility of easily automating actions in order to personalize the content transmitted to a subscriber according to his actions. Note: the service also has more than 70 integration partners such as Shopify, Zapier or WooCommerce. Thanks to well-designed reports, you can understand how subscribers interact with marketing emails and from these reports, you create audience segmentations for even more targeted future actions.

• **SendFox** is an emailing tool for content creators [11]. It allows you to create contact lists, personalize emails, schedule and automate their sending. The editor is easy to use and does not require technical skills. It is possible to easily add text, images and links. Users can also embed fields to personalize emails with contacts' first and last names. Going even further, creators have the ability to set up automated emails based on a subscriber's actions. SendFox also offers Smart Pages which are pages containing the best content from creators. They can then put the link of these pages in the bios of their social networks or in their email signatures. Forms can also be set up to get in touch more easily with your audience. Regarding contacts, it is possible to manually add email addresses or import lists by CSV file or lists from Mailchimp and Google.

• **Dolist** is an editor that covers the entire field of email marketing [12]. Unlike its competitors, it offers several different and independent services that allow you to address different issues:

• *Welkom Editor*: this solution is a simple and fun email builder for creating responsive emails, in a collaborative way. The tool is independent of its routing solution, and compatible with all market players;

• *Campaign*: a solution for piloting and deploying email and SMS campaigns simply from technical and marketing design to contact targeting;

• *Wewmanager*: a complete solution for managing content. It includes marketing automation, email, SMS, social networks…

Dolist is also a support service for companies in their marketing actions: digital email creation studio, HTML integration, operational management, email marketing training.

• **SendGrid** is an emailing software dedicated to companies [13]. From the cloud-based platform, professionals can easily and quickly send transactional and marketing emails to their prospects and customers. The tool offers two types of tools: marketing campaigns and messaging API. To support companies in their communication strategy, the software includes many features:

• *Creation of emails*: the solution offers a catalog of predefined templates to help create campaigns easily;

• *Deliverability*: SendGrid guarantees delivery of emails to recipients' inboxes via secure and encrypted delivery to prevent them from ending up in spam;

• *Scheduling*: the software allows you to configure the sending of emails using a specific schedule. SendGrid also offers marketing automation functions, to trigger the sending of an email when the prospect performs a predefined action;

• *Real-time statistics*: SendGrid provides precise data on campaigns in order to measure their impact;

• *Collaboration*: all collaborators can access a single interface, and thus work together.

As a conclusion to this part, a first reading allows us to see that there are several powerful tools on the Web which contain various functionalities depending on the nature and type of emailing used. In the next part, we will try to analyze the different tools to offer the essential features that an emailing tool can have to be complete.

III. ANALYSIS OF RESULTS

The analysis of the study of the different tools that exist in the market for the management of emailing projects are generally high-performance products that contain several management functionalities to manage contacts, emails and marketing actions. In addition to management, they usually offer libraries of templates and easy-to-use editors to help create emails.

All its functionalities of the emailing project, allows us to conclude that the realization of such a project is not an easy thing, it is an ambitious project, but its realization requires efforts for the comprehension of the domain emailing. Thus, we find that the interest of the study of the existing is essential in the realization of a project. It allowed us to have a clear idea on the products that exist in the market, on the different functionalities they contain, and how we should approach our project needs. However, we summarize the main features of existing emailing tools on the market:

• **Email editor** is an editor to create emails by adding text, images, CTAs or HTML blocks. Email management tools often offer drag and drop systems that are easy to use as well as responsive templates (headers, CTAs, landing pages, buttons for social networks, forms, etc.).

• **Basic contact management** which allows you to import address files from a website or an Excel document, then segment recipients and create distribution mailing lists to address messages more precisely. Unsubscribes are also managed automatically through the creation of blacklists.

• **A/B testing** is a feature used to compare two versions of an email to see which performs better. AB testing makes it possible to refine the strategy adopted during emailing campaigns and to offer relevant content.

• **Scheduling of campaigns** which allows you to schedule emails to be sent in advance and at the best time according to a specific day or a particular time. Scheduling

emailing campaigns allows for simplified organization, regularity and more efficient time management.

- **Mass sending**, emailing software makes it possible to quickly send a large quantity of emails to a B2B or B2C mailing list thanks to the use of professional sending servers which ensure deliverability and avoid landing in the Spam.

- **Analysis of campaign performance**: it is possible to define KPIs and analyze the results of an emailing campaign according to metrics such as click areas, click rate, open rate, bounce rate, reactivity rate or unsubscribe rate. It is then possible to link the information collected to the CRM or Google Analytics.

- **SMS marketing**, it is possible to design SMS campaigns in order to communicate quickly and otherwise target customers via the automated sending of commercial SMS.

By way of conclusion, this part which concerns the analysis of the results obtained and which allowed us to propose all the functionalities that an emailing tool must have for the proper functioning of an e-marketing management.

IV. CONCLUSION

In summary of this work, we defined the basic concepts of our research concerning emailing and these different types, then we proposed a study of the existing concerning the different emailing tools existing in the market. The analysis of all of these tools proposed in our study, first of all allowed us to detect the nature of the different tools that already exist on the market and the definition of the different functionalities with which these tools work, which brought to propose the various functionalities that an emailing tool must have so that a user can work under good conditions. Finally, the results obtained will allow us to define our needs for the realization of the design of our e-commerce management system, work that we wish to publish in a future article.

REFERENCES

1. Youssef Bailoul, & Mohamed Khaldi. (2021). Design and Development of an E-Commerce Management System: State of Places. RA JOURNAL OF APPLIED RESEARCH, 07(10), 2578–2583. https://doi.org/10.47191/rajar/v7i10.09
2. Mailpro. (n.d.). L'Emailing | Un outil de communication incontournable. Retrieved from https://fr.mailpro.com/legislation/emailing.asp
3. Sarbacane. (n.d.). Sarbacane - Emailing, SMS, automation. Retrieved from https://www.sarbacane.com/
4. Sendinblue. (n.d.). Sendinblue | Plateforme Tout-en-un de Marketing Relationnel. Retrieved from https://fr.sendinblue.com/
5. Mailchimp. (n.d.). Marketing, Automation & Email Platform | Mailchimp. Retrieved from https://mailchimp.com/
6. Sarbacane. (n.d.). Sarbacane - Emailing, SMS, automation. Retrieved from https://www.sarbacane.com/
7. GetResponse. (n.d.). GetResponse | Professional Email Marketing for Everyone. Retrieved from https://www.getresponse.com/
8. Mailjet. (n.d.). Email Delivery Service for Marketing & Developer Teams | Mailjet. Retrieved from https://www.mailjet.com/
9. MailerLite. (n.d.). Create Email Marketing Your Audience Will Love - MailerLite. Retrieved from https://www.mailerlite.com/
10. ConvertKit. (n.d.). ConvertKit: The creator marketing platform. Retrieved from https://convertkit.com/
11. SendFox. (n.d.). SendFox | Free Marketing Tools for Content Creators. Retrieved from https://sendfox.com/
12. Dolist. (n.d.). Dolist, votre partenaire Data, Email & SMS Marketing. Retrieved from https://www.dolist.com/
13. Sendinblue. (n.d.). Sendinblue | All Your Digital Marketing Tools in One Place. Retrieved from https://landing.sendinblue.