



# Study of the existing and requirements for the development of an e-commerce management system

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**Abstract.** Our focus lies in the realm of exchange relations, specifically in the context of email communication. Our aim is to conduct a study that analyzes the current situation, with a particular emphasis on examining the tools available in the market for managing email communication. This study seeks to identify the types of existing tools and their functionalities, ultimately resulting in a comprehensive list of features that an effective email management tool should possess. This will aid us in determining our requirements for designing and developing our e-commerce management system, which will be centered around efficient email communication.

**Keywords:** Emailing, Different types of emailing, Analysis, Study of the existing, Study of the requirements E-commerce management system

## 1 Introduction

A tool for sending emails provides a convenient means of communication with a targeted group. Email marketing enables the quick dissemination of information to a large audience, including prospects, customers, ambassadors, and partners. Marketers highly favor email as a direct communication channel within their marketing strategies. Moreover, email campaigns facilitate the acquisition of new prospects, customer retention, and audience engagement. In today's communication strategies, having a reliable email-sending solution is essential and serves as a potent lever for web marketing. Depending on the objective, emails can take various forms, such as follow-up emails, which are part of a marketing automation strategy and involve a series of emails after initial contact, newsletters that present company news and new products, and transactional emails that serve as acknowledgments of receipt. In accordance with our research methodology focused on creating an e-commerce management system, we have put forth a strategy to bring our system to life. The initial phase, as we have determined, is the analysis stage (Bailloul & Khaldi, 2021). This article specifically delves into the analysis aspect, as we conduct a comprehensive examination of existing web-based solutions for similar projects. This study will provide us with valuable insights into the products available in the market, the various features they offer, and the approach we should adopt to cater to our project requirements.

## 2 STUDY OF EXISTING PROFESSIONAL EMAILING TOOLS

### 2.1 Definition of emailing:

Electronic mail, commonly known as email, was introduced by Ray Tomlinson in 1972 and has since become one of the most widely used services on the internet. It facilitates the exchange of written messages across computer networks (Mailpro, n.d.). Emailing, a relatively new concept, involves sending emails to a large number of individuals, typically for marketing purposes. It is a form of direct marketing that entails sending electronic messages simultaneously to multiple recipients in a targeted manner. Between 2009 and 2013, there was a 20% increase in the use of emailing by businesses. This method allows companies to disseminate information, distribute flyers, and promote products on a large scale through electronic communication. Service providers utilize specialized software to handle the sending process based on specific strategies, whether it involves customer retention, follow-up, or attracting new clientele. Various methods are employed, including mass mailings, individualized one-to-one messages, and trigger marketing, which automates messages based on individual profiles.

The implementation of one or more scenarios is made feasible by marketing email software, allowing for the automation of marketing actions. This entails a series of actions being triggered when a contact or potential customer takes a specific action, such as receiving a customized email, being added to a designated contact list, or being assigned a score. Platforms that provide automated campaign capabilities not only save time but also accompany prospects throughout their customer journey, ensuring the delivery of personalized messages and potentially boosting conversion rates.

With the prevalence of email addresses among the vast majority of internet users and the fact that 95% of them check their email multiple times throughout the day, email has emerged as a swift and efficient method of reaching a specific audience. The primary benefit of email campaigns lies in the ability to personalize messages at a lower expense when compared to alternative forms of communication, such as telemarketing or display advertising. Additionally, email campaigns provide the opportunity to gather valuable statistical data, such as the rate at which recipients open the emails, indicating the number of individuals who actually read the message in relation to the total number of recipients.

### 2.2 Definition of Different Types of Email

Sending According to the Sarbacane website (Sarbacane, n.d.), it is now necessary Advertisers can integrate email into their marketing strategy. In fact, e-marketing strategies cannot do without it A large part of conversion happens through this:

- **Informational emails**, also known as informational emails, are designed to help your audience learn more about your company and/or brand. So, by definition, it's an email designed primarily to inform your prospects and

existing customers, rather than drive them toward your conversion goals (such as a purchase from your email).

- **Lead Emails:** The goal of lead emails is to attract new customers. Business prospecting emails are an important tool in your lead generation campaigns. Effective emails that attract new customers must be personalized.
- **Promotional emails** are designed to increase sales by suggesting promotional offers. It can also be used for loyalty or customer acquisition purposes.
- **Loyalty emails** are messages sent to customers as part of a loyalty email campaign designed to reinforce the trust relationship already established through purchase, account creation or subscription. Customer loyalty emails can contain informational content (newsletters).
- **Transactional emails** include all emails that must be sent automatically immediately after performing an action or event on the website: Registration confirmation. Order Confirmation. Notifications (shipment tracking, new messages, etc.).
- **Follow-up emails** are designed to convert customers who have not responded to email activity or who have become inactive.
- **An invitation email** is an email sent to a list of recipients to announce a future event, invite them and encourage them to attend by expressing interest.
- **Notification emails** are automated emails Triggered by an event, action or non-action (birthday, purchase, cart abandonment). There are many goals for sending email notifications: notifications, engagement, reactivation, sales, thank you, building loyalty.

### 3 Research results

Search the web for project management applications for email in general and email in particular, we found a variety of tools in all areas. In fact, GetResponse, ConvertKit, SendFox, Mailjet, MailerLit, Dolist or SendGrid to create email campaigns and trigger marketing automation actions. In addition to complete email marketing management, these services often offer a library of templates and easy-to-use editors to help create emails. Sending can be automated, saving a lot of time and increasing sending rates compared to simple messaging tools. Below we provide an overview of the various tools mentioned above and analyze each to suggest a feature list for email tools.

- **Sendinblue** is the global reference for email sending. The solution is complete and allows you to fully manage your email marketing. A comprehensive template library and a well-designed editor help create attractive emails (Sendinblue, n.d.). Each campaign can be A/B tested for maximum impact Model. Sendinblue automatically optimizes campaigns, including choosing when to send them.

Statistically, everything is measured to make the right decisions, such as click areas and email open analytics. Sendinblue goes beyond simple email solutions, specifically providing landing pages, form registration, and Facebook ad editors to centralize your marketing campaigns and create them in minutes. The platform also manages marketing automation campaigns with personalized transactional emails. Likewise, it integrates the implementation of SMS marketing and live chat modules to interact with visitors

- **Mailchimp** is one of the market leaders in the email market, offering comprehensive services for managing contacts, emails, and marketing campaigns (Mailchimp, n.d.). The platform has a true integrated CRM to manage contacts and with the help of audience dashboard, the interests of target groups can be identified to formulate appropriate actions. You can also add tags this is then used to segment audiences to launch targeted campaigns. There's also an A/B testing feature to find out which email recipient is most receptive to its target group. This tool has complete editor for creating emails using drag and drop the system does not require any programming knowledge and benefits from content Studio to manage and store all images, this allows them to be reused for other projects. The platform plus, adding GIFs is easy with Giphy integration. Mailchimp are experts in one-step and automation multi-level marketing campaigns such as welcome emails when registering, the email will be based on a person's birthday subscribers sent based on contact actions
- **Sarbacane** is a comprehensive solution that handles email campaigns, contact management, and SMS marketing (Sarbacane, n.d.). With Sarbacane, you have access to a user-friendly editor that allows you to create impactful emails that reflect your brand's identity. Whether you prefer to start from scratch or draw inspiration from one of the many available templates, customization options are endless. The platform's CRM management enables precise targeting based on customer data, ensuring personalized communication with your contacts. When it comes to deliverability, Sarbacane boasts a wealth of experience in the field. Detailed reports are generated to provide valuable insights on recipients and enhance performance. Additionally, Sarbacane offers SMS campaign management, allowing you to send messages to all your contacts. The platform even supports automated SMS campaigns. For those seeking more advanced features, Sarbacane enables the inclusion of images, videos, and text blocks in enriched SMS messages. Sarbacane also offers additional strengths, such as the ability to create landing pages and forms using its editor, as well as the inclusion of a live chat feature to facilitate interactions with visitors.
- **GetResponse** provides a comprehensive solution for managing all aspects of marketing, including email campaigns, landing pages, conversion funnels, webinars, and marketing automation (GetResponse, n.d.). When it comes to creating emails, you have access to a wide range of templates and images from Shutterstock, making it quick and easy to design professional-looking emails. The editor features a user-friendly drag and drop system, allowing you to effortlessly

add elements such as text, images, buttons, videos, social media buttons, and even HTML code. In terms of automation, GetResponse offers various types of emails, including follow-up emails for subscribers, automated emails for purchases, cart abandonments, and visits to specific web pages. Additionally, this service allows you to schedule and send emails at the most optimal times. Notable features also include A/B testing to compare different versions of emails, sales funnels to enhance conversions, and detailed statistics for measuring performance. Likewise, Sarbacane provides an array of integrations that allow for seamless synchronization of customer data with popular platforms like WordPress, WooCommerce, Prestashop, Salesforce, Magento, and PayPal.

- **Mailjet** : For marketing teams responsible for email campaigns, Mailjet offers a comprehensive solution (Mailjet, n.d.). The platform promotes collaboration, enabling teamwork with varying levels of access and the ability to provide real-time feedback on projects. This feature is especially beneficial for larger accounts. The standout feature of Mailjet is its editor, which allows users to create email templates from scratch or choose from a library of pre-designed templates. Even individuals without technical expertise can easily design engaging content. Additionally, Mailjet provides users with interactive registration forms that can be seamlessly integrated into campaigns. With Mailjet, it is possible to send targeted and personalized emails to specific segments of the audience. Through Mailjet's personalization features, users can send different emails to different contacts, tailoring both the content and appearance to suit individual recipients. Mailjet offers support for A/B Testing, allowing you to determine the most effective content and identify what works best. Additionally, Mailjet provides management of Marketing Automation strategies for transactional emails, enabling you to engage users at crucial moments in alignment with your marketing strategy. With its global reach and customizable features, Mailjet offers powerful tools to meet your needs. You have the flexibility to manage your emails, events, and contacts through APIs, tailoring them to your preferences. Furthermore, Mailjet provides comprehensive reporting tools, providing insights into performance and facilitating improvements in your actions.
- **MailerLite** is a platform that enables small and medium-sized enterprises to create email campaigns without any coding knowledge (MailerLite, n.d.). The intuitive email editor not only saves time but also provides helpful suggestions for drag-and-drop elements like headers, multi-column layouts, CTA buttons, e-commerce products, social media buttons, and even surveys to gather feedback from contacts. The inclusion of our own HTML code is another feature available. With regards to marketing automation, this tool simplifies the process of setting up automated actions, such as sending an email to a subscriber who clicks on a link, and incorporating a delay between the click and the actual email delivery. Additionally, it is possible to connect your Google Analytics account to track all campaign clicks. In the advanced settings, there is an A/B Testing function specifically for email subject lines, and the option to set up automatic reminders for contacts who have not opened or clicked on any links in the email. To expand your audience,

there are other options such as the website editor, landing pages, pop-ups, and integrated forms. Furthermore, subscriber segmentation is available to provide more personalized content to contacts.

- **ConvertKit** serves as a tool for managing marketing emails. It provides an editor that allows users to personalize emails, forms, and landing pages using preexisting templates. It also offers the option to automate tasks based on the interests of the target audience. To save time and ensure message deliverability, ConvertKit simplifies the email creation process by allowing users to create plain text emails without the need for a more complex editor. Basic formatting options are available, and for further customization, users can add images, CTA buttons, and HTML code. Additionally, ConvertKit enables users to create custom forms that allow for white paper downloads or newsletter subscriptions. You have the option to implement a pop-up form that will appear once a specific percentage of the page has been scrolled. ConvertKit provides an editor and pre-made templates, eliminating the need for coding, allowing you to create landing pages effortlessly. The integration with Unsplash enables access to a wide range of royalty-free images for visually appealing landing pages. Additionally, automation features make it simple to personalize content sent to subscribers based on their actions. It is worth noting that ConvertKit offers seamless integration with over 70 partners, including Shopify, Zapier, and WooCommerce. With comprehensive reports, you can gain insights into subscriber engagement with marketing emails, enabling you to create targeted audience segments for future campaigns.
- **SendFox** serves as a tool for content creators to facilitate their email communication. With (SendFox, n.d.), you have the power to effortlessly build contact lists, customize emails, and schedule automated sending. The user-friendly editor requires no technical expertise, allowing you to seamlessly incorporate text, images, and links. Take personalization to the next level by adding fields for individualized emails using recipients' first and last names. But it doesn't stop there - you can set up automated emails based on subscriber actions. Additionally, SendFox offers Smart Pages, which showcase creators' top content. Share these pages by including the link in your social media bios or email signatures. Simplify audience interaction by creating forms. When it comes to contacts, easily add email addresses manually or import lists from CSV files, Mailchimp, or Google.
- **Dolist**, an editor specializing in email marketing, provides a comprehensive range of services (DoList, n.d.). Setting itself apart from competitors, Dolist offers a variety of independent services to tackle various aspects of email marketing. Dolist also serves as a valuable resource for companies seeking assistance with their marketing endeavors. This includes providing support in various areas such as creating engaging digital emails, seamlessly integrating HTML, efficiently managing operations, and offering comprehensive training in the field of email marketing.

In summarizing this section, an initial examination reveals the existence of numerous robust online resources that possess diverse capabilities, contingent upon the specific

style and purpose of email communication. In the subsequent section, our aim will be to assess the distinct tools in order to provide a comprehensive overview of the essential functionalities that a complete email tool should encompass.

## 4 ANALYSIS OF RESULTS AND REQUIREMENTS

### 4.1 Analysis of results

Typically, the examination of various tools available in the market for email project management reveals high-performing products that encompass multiple management features for handling contacts, emails, and marketing initiatives. Alongside their management capabilities, these tools often provide template libraries and user-friendly editors to facilitate the creation of emails.

Based on the various features and capabilities of the emailing project, it becomes evident that undertaking such a project is no simple task. It is an ambitious endeavor that demands significant effort in order to fully grasp the intricacies of the emailing domain. In order to effectively execute a project, it is crucial to delve into the examination of what currently exists. This exploration provides valuable insight into the products available in the market, their various functionalities, and how they align with our project requirements. As a result, we have compiled a concise overview of the key characteristics found in the existing emailing tools on the market.

The analysis of various tools available in the market for managing email projects reveals that these products are generally high-performance, offering a range of management functionalities for contact, email, and marketing actions. Alongside management capabilities, these tools often provide template libraries and user-friendly editors to assist in email creation.

Given the multitude of functionalities involved in email projects, it becomes evident that undertaking such a project is not an easy task. It requires ambition and effort to comprehend the intricacies of email marketing. Therefore, studying the existing tools becomes essential in project realization. This study provides clarity regarding the available products in the market, their functionalities, and how they align with our project requirements.

Here are the key features summarized for existing email tools in the market:

- **Email Editor:** This feature allows users to create emails by adding text, images, CTAs (Call-to-Actions), or HTML blocks. Email management tools often offer user-friendly drag-and-drop systems and responsive templates for headers, CTAs, landing pages, social media buttons, forms, etc.
- **Basic Contact Management:** This functionality enables the import of address files from websites or Excel documents. It also allows for recipient segmentation and

the creation of mailing lists for more targeted messaging. Additionally, automatic management of unsubscribes is facilitated through the creation of blacklists.

- **A/B Testing:** A/B testing allows for the comparison of two versions of an email to identify which performs better. This feature helps refine the email marketing strategy and deliver relevant content to recipients.
- **Campaign Scheduling:** This feature enables users to schedule emails in advance and send them at the optimal time, considering specific days or times for maximum impact.
- **Mass sending:** Thanks to the utilization of professional sending servers, mass emailing software enables the swift dispatch of a substantial number of emails to either a B2B or B2C mailing list. This ensures high deliverability rates and prevents the emails from being flagged as Spam.
- **Analysis of campaign performance:** The evaluation of campaign effectiveness involves the establishment of key performance indicators (KPIs) and the examination of metrics such as click areas, click rate, open rate, bounce rate, reactivity rate, and unsubscribe rate in order to assess the performance of an email campaign. Subsequently, the data collected can be integrated with the CRM or Google Analytics for further analysis.
- **Sms Marketing:** Through the utilization of SMS marketing, businesses have the ability to swiftly communicate with and specifically target customers by implementing automated systems for the distribution of commercial messages.

In summary, this final section focuses on the examination of the achieved outcomes, enabling us to present a comprehensive list of essential features that an email marketing tool should possess in order to effectively manage e-marketing activities.

#### **4.2 Analysis of the requirements**

A thorough analysis is crucial when it comes to investigating the requirements for the development of an e-commerce management system, to ensure that it meets the specific demands and expectations of users. In this comprehensive review, we highlight the potential needs of such a system, encompassing aspects such as product, order and customer management, intuitive user experience, promotions and discounts management, analytics and reporting, security and privacy, content management, integration with social networks, returns and refunds management, mobile device adaptability, inventory management system, customer support, personalization and recommendations, as well as tax and delivery charge management.

The requirements research process is a collaborative and iterative effort, involving stakeholders such as marketers, potential customers and development teams. This close collaboration ensures that the system will respond effectively and fully to market expectations. By considering these crucial needs, we are confident that we can develop an effective e-commerce management system tailored to the specific requirements of the sector.



## Conclusion

To summarize our research, we first established the fundamental concepts related to emailing and its various types. We then conducted a comprehensive examination of the available emailing tools in the market. In our study, one tool in particular stood out as it enabled us to identify the characteristics of existing tools in the market and understand their functionalities. This analysis led us to propose a comprehensive list of functionalities that an emailing tool should possess in order to ensure optimal user experience. Ultimately, the findings from this study will help us determine our specific requirements for the ideal tool. The implementation of our e-commerce management system design, a project we intend to showcase in an upcoming article.

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