

Design of a Mobile Application for the Logistics Process of a Fire Company

Luis Enrique Parra Aquije¹, Luis Gustavo Vásquez Carranza², Gustavo Bernnet Alfaro Peña³,
Michael Cabanillas-Carbonell⁴, Laberiano Andrade-Arenas⁵
Facultad de Ingeniería y Negocios, Universidad Privada Norbert Wiener, Lima, Perú^{1,2,3,5}
Facultad de Ingeniería, Universidad Privada del Norte, Lima, Perú⁴

Abstract—Currently, the logistics process is an important part for any company because it helps to manage the assets and products that enter and leave it. Some companies carry out this process physically, saving the information on sheets of paper or Excel files, which takes longer to do and is not at the forefront of how companies do it, which is by using mobile applications to improve this process. Likewise, it has been decided to implement a mobile application with the aim of improving the logistics process in the Callao No. 15 fire company. For the elaboration of the application, the RUP methodology was used to do it in a more optimal way, in the end, a survey of experts in Google Forms was conducted, addressed to 10 experts to know the evaluation of the mobile application. In the end, a favorable result was obtained from the opinion of the experts on the mobile application; 70% of the respondents indicate that the usability of the mobile application has a “Very high” level; it can be seen that 80% of respondents indicate that the presentation of the mobile the application has a “Very high” level; it can be seen that 90% of the respondents indicate that the functionality of the mobile application has a “Very high” level; besides, it can be seen that 80% of the respondents indicate that the security of the mobile application has a “Very high” level.

Keywords—Fire company; logistics process; mobile application; RUP methodology; expert survey

I. INTRODUCTION

From previous years to the present, in the fire company No. 15 of Callao they do not adequately apply the processes to be able to have an order in the logistics process. We found the inventories carried out by the firefighters themselves, since they have not defined how to carry out an entry and exit process in an inventory in the general services area. At the time of carrying out the inventory, the person in charge uses paper and a pen, in which he indicates the assets that belong to the company, and then passes it digitally to a program to be able to save, said program is called Microsoft Office Excel Spreadsheet. Although it is true that papers are used, this happens many times that these papers are lost, in the course of being digitized to the computer, causing loss of time, since everything has to be done again, which generates discomfort and dissatisfaction for part of the heads of the company and the areas, since they all work with the window to be able to be guided by where each element, object or object is located, since the company's warehouse is small, so they are also stored in other environments. In the program used in the company, when more than 500 articles are entered, the program is slow, since the computer is not prepared for this storage capacity. It

is also observed that everything is disordered in the program, showing a disorder by areas.

According to the authors Rasheed et al. [1], indicate that the World Health Organization (WHO) has decided to optimize its supply chains so that losses are lower in the medicines it has. In addition, the solution that was applied for this case was the development of a logistics software to control the medicines in its warehouse. Although the WHO in 2005 had already used software for this case, they decided to use more updated software. On the other hand, this new software has facilitated the logistics of medicines due to how friendly the system is, being faster, more efficient and safer.

On the other hand, the authors Bernal et al. [2], tells us The recommended solutions meet current and emerging needs in an agile B2B or B2C e-commerce environment. Rather, suppliers and customers offer and demand mobility, storage and customs services for the products it offers. In this case, your goal is to ensure that your logistics processes have added value from the beginning to the end of the business processes in the trade. On the other hand, this will also generate more profit for the companies that use them.

According to Pekarckikoba [3], when today's software and digital tools are used, the result is more efficient, taking less time to execute and giving a more optimal result. Furthermore, these tools have standards, are transparent and reduce unnecessary work. Rather, the modeling that was implemented and the e-kanban test when it was commercialized increased the efficiency of logistics in its processes. On the other hand, this model can be used as a digital solution for business processes.

Besides, the authors Fedorko et al. [4], suggest that the use of for the logistics of the company optimizes the storage of the products it offers in the warehouses. The objective is to reduce the time needed to collect the orders that the company's customers have made. Although the logistics processes have been optimized to cover various needs of the production processes in the warehouse. On the other hand, with the optimization of logistics, a time saving of 48 minutes and 36 seconds has been achieved.

The author Zhao [5], the goal is to find key points that affect customer satisfaction and warehouse utilization to achieve time reduction and minimize system congestion. In addition, a method called Box-Behnken was used to optimize and increase the speed of classification, distribution, storage through software. However, this method has parameters such as the speed of classification, distribution and storage capacity to

optimize the logistics of companies. Rather, when this method was used, a better response was obtained in the company's logistics system in terms of distribution and storage, achieving it in less time.

This project is carried out for the Callao No. 15 fire company, which will be implemented in the general services area, who is in charge of the logistics process, in this case inventories. This project is being carried out in order to optimize time and so that physical paper cannot be used, in which case it could be lost in the process of typing it into a computer. It will be done through a system, with the URP methodology which helps us to carry out the designs, programming, training, etc. This project is important, since with this you can improve the fire company, in the case of making everything more didactic and easy on the subject of inventories and thus make a digital transformation. The problem that is being solved is the losses and delays caused by doing everything on physical paper. The positive repercussions for this project is that they can be motivated to continue with the digital transformation in the different areas of the fire company. The negative repercussions of this project is that there will be people who will not want to adapt to new technologies and stay with the old as they are used to.

The people who are going to benefit from this project are the chief of general services, the deputies, and the first chiefs of the fire company, as well as all the firefighters, since they could also use it throughout their firefighter career.

The objective of this project is to facilitate logistics process for the fire company Callao No. 15, ordering the products that are used, the products that arrive, with the detail data of each product and secure the data through a mobile application design.

The article has the following structure: In Section II the literature review, in Section III establishes the Rup methodology, in Section IV the results, in Section V the discussions and finally Section VI with the conclusions and work future

II. LITERATURE REVIEW

In this section of the article, emphasis was placed on the analysis of the research carried out on the subject of logistics software, where it will be seen what methods have been used and what their results were.

The authors Angolia and Pagliari [6], in this case a simulation is described in the dynamic environment for logistics decision-making with software. In addition, strategies for sales and operations were used to improve logistics and the supply chain in the company's inventory. On the contrary, this software helps to comply with the weight regulations that the products must have for the carriers. On the other hand, logistics software generates a great advantage for the recruitment of employees by the company.

The authors Byun et al. [7], take into account that the use of mobile applications in the logistics field called logistics in life. In addition, this sector has been used for mobile applications, which outperform traditional logistics companies. Likewise, the goal of this research is to measure whether these apps comply with the rules of use to satisfy users through measurement and evaluation. Specifically, evaluations of the

use of apps in Korea and other countries were carried out through the analysis of Big Data.

According to the author Nuanmeesri [8], this work has developed a mobile supply chain application for a window with a goal of marketing, distribution of products and logistics in agriculture and consumption according to the economic guide of Thailand 4.0. In addition, this work on the delivery supply chain of agricultural products focuses on trade, delivery and logistics using algorithms to find delivery routes for the products. Also this app fits the distribution of products, supply chain in an economy that is based on values. As a result, the mobile application has resulted in its effective use for the distribution of agricultural products in the supply chain in trade, distribution and logistics regarding Thailand 4.0.

The estimation of data on the reuse of waste by means of special statistical software and using the principles of logistics. Furthermore, such research goes beyond the research called "Environmental Assessment of Waste Recycling Based on Logistics Principles and Computer Simulation Design", which creates a succession of data that must be examined and evaluated separately. Likewise, these data that symbolize 15 classes of waste for 5 years, enter the analysis. As a result, the classes of waste that form a large part of the final manufacture of waste were located through descriptive statistics [9].

According to authors Ahmad and Bamnote [10], it informs us that software cost estimation (SCE) is an emerging concern for software companies during the software development period, because it asks for elements of effort and cost to create the software. In addition, these elements are created using Artificial Intelligence models, which can be less accurate and less reliable by increasing the risk factor of software projects. Said investigation. Also, this research proposed an algorithm whose function is to develop a model to optimize the price of the software. Since this research used a set of data collected from a software engineering database to run an effective performance study.

According to the authors Naseer et al. [11], tells us that Software engineering is a professional field in terms of education and practice. Software projects are key elements of software engineering courses. The goal of this project is to forecast the teams that are expected to achieve an evaluation that is not above average in the production of software products. The proposed method that stands out among the others in the forecast of teams that have a low performance in a phase of premature appreciation. The proposed method supported by J48 stands out from others by conceiving 89% correct forecasts.

The authors Garnov et al. [12], the reason for this research is to evaluate the effects of the digitalization method of cargo and logistics provision in the agriculture of the country of Russia. In addition, a technique has been used that handles information from Rosstat, GooglePlay provision and Yandex.Radar provision as information source. Likewise, this work reveals that one of the important trends in the field of freight transport is the use of technologies, such as transport and warehouse management systems, to automate the trading methods of carriers with mobile applications for shipments. and product orders. In conclusion, this digital system will connect all market users and increase the transparency and

traceability of freight transport.

The authors Rajabizadeh and Rezghi [13], the automated search for snake portraits will be able to help avoid venomous snakes and also offer an excellent method for patients. Also, in this work, k-nearest neighbors, support vector machine and logistic regression techniques are used in combination with principal component analysis and linear discriminant analysis as the feature extractor. Furthermore, this research shows MobileNetV2 as an effective deep neural network algorithm for snake portrait categorization that you can use even on mobile devices. Ultimately, this discovery shortens the path to creating mobile applications for the search for snake portraits.

Social networks today play a very important role in disaster response by locating needs in a short period of time and, therefore, optimizing situational awareness. In addition, this research aims to increase interest in a reserved search book to qualify this feature. Also, an overview chart is shown to check if it is feasible to act on the data created by the users before their review of the logistics planning of disaster replication. In conclusion, this research is adjustable to a diversity of logistics organization difficulties, this research shows its handling by means of a mobile delivery application of disaster replication basic goods [14].

The authors Barbosa et al. [15], the applied sciences of portraiture have increased to a significant horizon in recent years, used in different branches of research, such as those focused on the search for plants. Also, in this research, HerbApp, a mobile application that is used to separate herbal plants from non-herbal ones, is shown in order to spread the knowledge among people about the importance of plants. Likewise, other plant traits and traits are used to do pattern finding and data analysis. In conclusion, the experiences show that guidance facilitates efficient results.

In conclusion, to improve the logistics process of the Callao N°15 fire company, it is necessary to stop using Microsoft Excel as a database and start using a mobile application for this process, thus storing the data of the products that are used and the products that are used. The gap found is that there is still a lack of the use of emerging technologies that allow optimizing its processes.

III. METHODOLOGY

In this section, the methodology that was used to develop and implement the mobile application for the Callao N°15 fire company, which is the object-oriented methodology called Rational Unified Process (RUP).

A. Processes of the RUP Methodology

According to the author Tia [16], RUP, as shown in Fig. 1, is a methodology for making software used by software companies. Likewise, there are different types of RUP software projects, which are small scale, large scale and re-engineering, which have needs and uses for each role. In addition, in this methodology there are different roles that one person cannot do because they work at the same time. In conclusion, the objective of the RUP methodology is to be able to develop high-quality software that meets the expectations of users and customers.

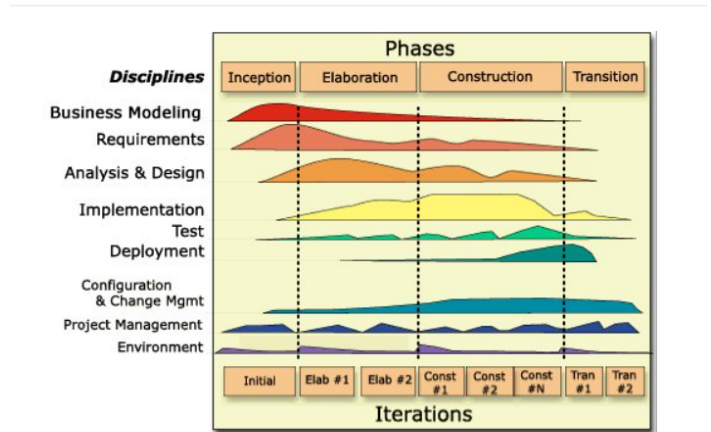


Fig. 1. Methodology RUP (Rational Unified Process).

In Fig. 2, it indicates that they have six processes (business modeling, requirements, analysis and design, implementation, test, deployment). It is a software engineering process that provides an orderly approach to the assignment of tasks and commitments in a software development company.

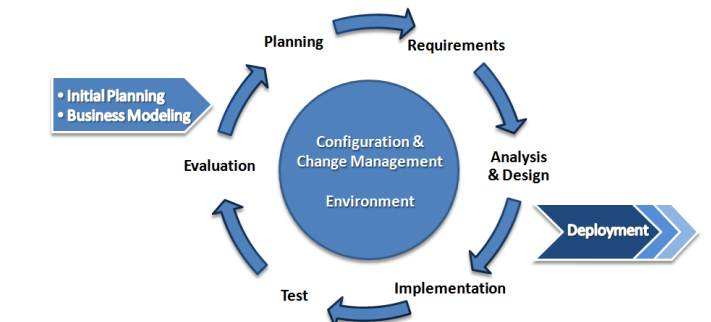


Fig. 2. Processes of the RUP Methodology.

B. Prototype Tools:

1) *Bizagi Modeler*: It is a Platform that consists of three components. Each of them facilitates a key step in the transformation and automation of your business processes. According to the author Germanía [17], Bizagi is a software for the representation of processes through sketches, structures, trade rules, actors. Likewise, the moments of the work process between their tasks are published, the time it takes for each task and the process are shown. Furthermore, the phases of Bizagi software development are modeling, building and process execution. In conclusion, the Bizagi software is very important when carrying out a process improvement [18], because it details what the process is like and what parts can improve to optimize the process.

2) *Star UML*: It is a software modeling tool based on the Unified Modeling Language (UML) and MDA (Model Driven Architecture) standards. The authors Naing et al. [19], Star UML is software for developing a fast, flexible, extensive,

full-featured and freely available Unified Modeling Language platform. It also uses UML for software design, uniting the notorious approaches to detailing organization and behavior. In addition, it is excellent in characterization for the user's environment and has greater extensibility in its functions. In conclusion, Star UML is used to create detailed process diagrams in the UML language.

3) *Figma*: According to the author Arifin et al. [20], Figma is a prototyping interface layout program that runs on a web page via a browser. Likewise, said page layout program, but it is actually considerably more than that. In addition, this program can make software prototypes for computers, cell phones and tablets. In conclusion, the author's final opinion about Figma is surely the best program for developing layout projects collaboratively as a team.

C. Development Tools:

1) *C#*: It is a component-oriented object-oriented programming language. According to the author Jankowski et al. [21], C# is an object-oriented, type-safe programming language. Likewise, it allows developers to establish several types of consistent and secure apps that run in the environment. In addition, it has its foundations in the C language group and will subsequently involve a group for C, C++, Java, and JavaScript developers. In conclusion, C# is a language that can be used for both desktop and mobile applications.

2) *Microsoft Visual Studio*: The Visual Studio IDE is a creative launch pad that you can use to edit, debug, and build code, and then publish an app. According to the author Hrabovskiy [22], Microsoft Visual Studio is an IDE (Integrated Development Environment) developed by the Microsoft company for software development. Likewise, it is available for OS (Operating Systems) such as Windows, Linux and macOS, not counting free and paid versions. In addition, it has compatibility with programming languages such as C++, C#, Visual Basic .NET, F#, Java, Python, Ruby, and PHP. In conclusion, Microsoft Visual Studio is an integrated development environment for making desktop, web, and mobile software.

3) *Microsoft SQL Server*: In this section was development of the six processes of the RUP methodology to know what steps the mobile application has followed to improve the inventory logistics of the Callao No. 15 fire company.

D. Development Methodology

In this section was development of the six processes of the RUP methodology to know what steps the mobile application has followed to improve the inventory logistics of the Callao No. 15 fire company.

In the Canvas model, it will be described how the mobile application is constituted in all aspects to know what objective it wants to achieve with its implementation.

1) *Requirements*: As shown in Table I and Table II, an interview was conducted with the client to find out the requirements that the mobile logistics application will have so that it works as the fire company wants. In the functional requirements table it will be shown what functions the logistics mobile application will have.

In the non-functional requirements table it will be shown how the logistics mobile application will work.

TABLE I. FUNCTIONAL REQUIREMENT

Non-functional requirement	Requirement Description	System Use Case	System Use Case Description
RF001	Register product	CUS001	Manage check-ins and check-outs
RF002	Search product	CUS001	Manage check-ins and check-outs
RF003	Modify product	CUS001	Manage check-ins and check-outs
RF004	Delete product	CUS001	Manage check-ins and check-outs
RF005	Consult product	CUS002	Operability of tools, accessories
RF006	Observe product status	CUS002	Operability of tools, accessories
RF007	Modify product status	CUS023	Operability of tools, accessories
RF008	Browse product	CUS003	Manage Location
RF009	Observe product location	CUS003	Manage Location

TABLE II. NON-FUNCTIONAL REQUIREMENT

Non-functional requirement	Requirement Description	Classification	Priority
RNF01	The response time for patient search of 8 seconds	Response Time and performance	High
RNF02	Access will be for authorized users only	Security	High
RNF03	User-friendly design and interface	Usability	High
RNF04	Navigability between fields and interface components (tab key, enter)	Usability	High
RNF05	A specific system function will be accessed based on your role	Security	High
RNF06	The application can support changes in its functions	Maintainability	High

2) *Analysis and Design*: As shown in Fig. 3 to Fig. 11, see how the logistics process of inventories works through the graphics made in Bizagi and StarUML, you will also see the design of the mobile application through a prototype.

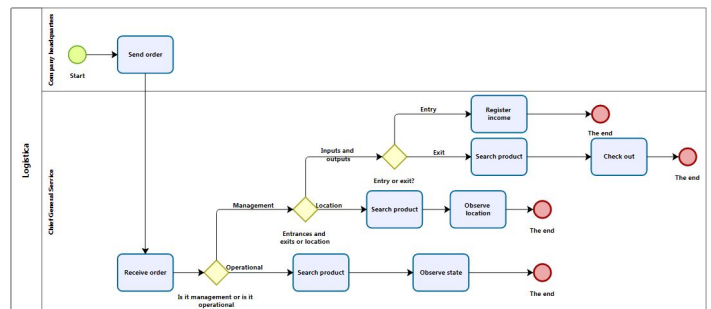


Fig. 3. Business Process Diagram.

In Fig. 3 is observed business process diagram will describe

in detail the logistics process of the business product company, which will describe how the process is carried out and who is involved in it.

In Fig. 4 shows the use case diagram of the system, it show

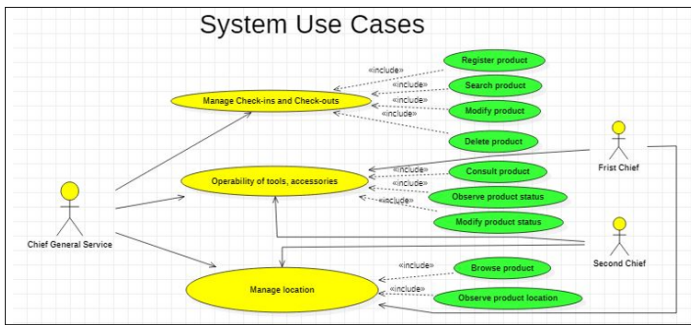


Fig. 4. System Use Case Diagram.

what functions the mobile application must have according to what the fire company requires and needs for its logistics process.

In Fig. 5 shows the input and output activity diagram, that

Manage Check-ins and Check-outs

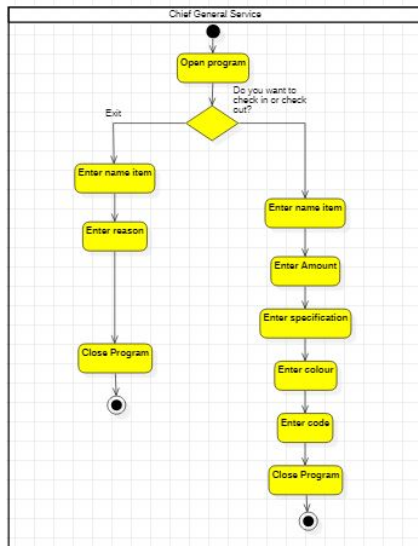


Fig. 5. Input-Output Activity Diagram.

the mobile application performs for the input or output of the products involved in this process.

In the operability activity diagram you will see the steps that the mobile application performs to see the outputs operability of the products involved in this process.

In the location activity diagram see the steps that the mobile application performs to see the location of the products involved in this process.

In the input sequence diagram, see how the user interacts with the mobile application when they input a product to the fire company.

In the output sequence diagram, see how the user interacts

with the mobile application when it outputs a fire company product.

In the sequence of operation diagram, look like the user interacts with the mobile application when needed to view the location of a fire company product.

In the operability sequence diagram it will be seen how the user interacts with the mobile application when he needs to see the location of a fire company product. In Fig. 6 shows

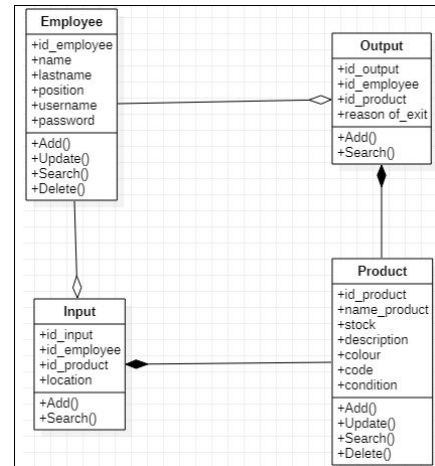


Fig. 6. Class Diagram.

the class diagram, it describes how the mobile application database is composed with its respective attributes and operations that each table contains.



(a) Star (b) Login

Fig. 7. Prototype Start and Login.

3) *Implementation:* The final design of the mobile application interfaces made in the Visual Studio IDE will be observed.

4) *Tests:* It will be observed how the inventory logistics mobile application works.



(a) New user (b) Menu

Fig. 8. Prototype New User and Menu.



(a) Outputs (b) Operability

Fig. 10. Prototype Outputs and Operability.



(a) Inputs - outputs (b) Inputs

Fig. 9. Prototype Inputs - Outputs and Inputs.

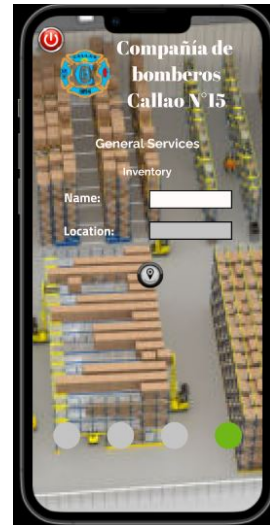


Fig. 11. Prototype Location.

5) *Deployment*: It was observed how the logistics mobile application will be executed on the mobile devices of the employees of the fire company.

IV. RESULTS

This section show the results of the case study, such as the RUP methodology, which was used in this work.

A. About Expert Judgment

As indicated in Table III, for this part a survey of experts was carried out in order to know how the experts feel with the implementation of the mobile application in the fire company,

dividing them into four criteria. which are usability, presentation, functionality and security. It was made with the likert scale from 1 to 5, where 1 is very low to 5 is very high.

The expert opinion table will show the survey that was done to each expert and what each one answered regarding the logistics mobile application.

1) *Usability Criteria*: Interpretation: From Table IV. It can be seen that 70% of the respondents indicate that the usability of the mobile application has a "Very high" level. In other words, there is 70% of those surveyed who reaffirm a very positive position and 30% consider it "High".

2) *Presentation Criteria*: Interpretation: From Table V. It can be seen that 80% of the respondents indicate that the presentation of the mobile application has a "Very high" level. In other words, there is 80% of those surveyed who reaffirm

TABLE III. EXPERT JUDGMENT

Criterion	Question	Half	Standart desviation	Scale
Usability	1. You feel that you are satisfied with the ease of use of the mobile application.	4.30	0.83	High
	2. You feel that you are comfortable with the use of the mobile application.	4.20	0.79	High
	3. You feel that the use of the mobile application is simple.	4.50	0.71	High
	4. You feel that using the mobile application you will complete your tasks in less time.	4.10	0.74	High
	5. You feel that using the mobile application you will complete your tasks more optimally.	4.50	0.71	High
Presentation	6. The mobile application interface is user friendly.	4.50	0.71	High
	7. The mobile app interface is well organized.	4.30	0.82	High
	8. The mobile application interface represents the image of the company.	4.30	0.82	High
	9. The colors of the mobile application interface have contrast with each other.	4.50	0.71	High
	10. The images of the interface help to understand what the functions of the mobile application are.	3.70	0.68	High
Functionality	11. The functions of the mobile application meet the needs of the user.	4.50	0.71	High
	12. Each functionality of the mobile application is properly located.	4.60	0.70	High
	13. The functions of the mobile application are understandable for the user.	4.00	0.94	High
	14. Mobile app features improve the way you get things done.	4.80	0.42	High
	15. The functions of the mobile application is adequate for this area.	4.50	0.53	High
Security	16. The mobile application is more secure allowing entry to only registered users.	4.50	0.53	High
	17. The mobile application protects the integrity of the information.	4.40	0.52	High
	18. The mobile application gives reliability to the information.	4.20	0.63	High
	19. The mobile application is safe for users.	4.60	0.52	High
	20. Mobile app security optimally protects data.	3.80	0.79	High

TABLE IV. USABILITY

		Usability (Bundled)			
		Frequency	Percentage	Valid percentage	Accumulated percentage
Valid	High	3	30,0	30,0	30,0
	Very high	7	70,0	70,0	100,0
	Total	10	100,0	100,0	

a very positive position and 20% consider it "High".

3) *Functionality Criteria:* Interpretation: From Table VI. It can be seen that 90% of the respondents indicate that the functionality of the mobile application has a "Very high" level. In other words, there is 90% of those surveyed who reaffirm a very positive position and 10% consider it "High".

4) *Security Criteria:* Interpretation: From Table VII. It can be seen that 80% of the respondents indicate that the security of the mobile application has a "Very high" level. In other words, there is 80% of those surveyed who reaffirm a very positive position and 20% consider it "High".

B. About the Case Study

The mobile application has in its design 9 interfaces for its elaboration, operation and implementation for the fire company to improve its logistics process, which are:

- Star: It is the presentation of the software with the logo of those who carry it out [Fig. 7(a)].
- Login: It is the interface that will allow the registered user to enter a username and password registered in the application [see Fig. 7 (b)].
- New user: It is the interface that allows new users to register to have access to the mobile application [Fig. 8(a)].
- Menu: It is the interface that allows the user to see and access the functions of the mobile application [Fig. 8(b)].

- Inputs - outputs: It is the interface where it shows the functions that can be accessed and they are to input products and output them [see Fig. 9(a)].
- Inputs: It is the interface that allows the user to register a product through their data, which are names, description, stock, color, code and location see [Fig. 9(b)].
- Outputs: It is the interface that allows the user to exit the products that are no longer needed by means of their name and the reasons for which they are exiting [see Fig. 10(a)].
- Operability: It is the interface that allows the user to know and modify the operability of the product through its name [see Fig. 10(b)].
- Location: It is the interface that allows the user to know where it is located by means of its name (see Fig. 11).

C. About the Methodology

- Benefits: The benefits of the RUP methodology are:
 - Encourages reuse of software code.
 - Reduce the difficulty of maintenance by making it easy to improve the changes that can be made and add more features to the software.
 - It makes it easy to reuse some functions of the software for other projects.
 - Maintenance is easier to perform using this methodology.
 - It can be applied to different software to make them of quality.

TABLE V. PRESENTATION

Presentation (Bundled)					
		Frequency	Percentage	Valid percentage	Accumulated percentage
Valid	High	2	20,0	20,0	20,0
	Very high	8	80,0	80,0	100,0
	Total	10	100,0	100,0	

TABLE VI. FUNCTIONALITY

Functionality (Bundled)					
		Frequency	Percentage	Valid percentage	Accumulated percentage
Valid	High	1	10,0	10,0	10,0
	Very high	9	90,0	90,0	100,0
	Total	10	100,0	100,0	

TABLE VII. SECURITY

Security (Bundled)					
		Frequency	Percentage	Valid percentage	Accumulated percentage
Valid	High	2	30,0	30,0	30,0
	Very high	8	70,0	70,0	100,0
	Total	10	100,0	100,0	

TABLE VIII. COMPARISON OF METHODOLOGIES

Advantage	RUP	SCRUM	XP
Documentation	5	4	3
Software projects	4	5	3
Presence in companies	4	5	3
Phases	4	5	3
Iteration	5	5	4
Total	22	24	16

- Comparison: As indicated in Table VIII, in this part you will make a comparison between the RUP, SCRUM and XP methodologies, this comparison will be made through 5 criteria that the methodologies have. The rating will be from 1 to 5, with 1 being very poor, 2 being poor, 3 being fair, 4 being good and 5 being excellent.

V. DISCUSSIONS

The mobile application made in comparison to the prototypes the author Nuanmeesri [8], which is a mobile application for the logistics of agriculture and its consumption, whose function is used in the distribution of agricultural products to find routes for supply from the farms to its destination where it is marketed, instead the mobile application for the fire company apart from knowing the location of the products that enter and leave the fire company, you can know the state in which they are find the product and that can avoid mishaps when using it. Also, in the aspect of the function of the mobile application of the authors Garnov et al. [12], has the objective of managing the process of transport and warehouse logistics by automating this process through the use of technology for the processes of shipments and orders of products offered by Russian agriculture, a similar case to the one that has the fire department application that is being implemented for the logistics process for the fire company that also has the

same functions, but the information that is handled in the fire company is from its own database, otherwise it is the of the aforementioned authors who used information from other databases that are not their property but from other agencies or applications such as Rosstat, Google Play and Yandex.Radar, generating satisfaction in both cases for the users to whom it is addressed. Also take into account the security that you must have in the logistics part [23].

VI. CONCLUSIONS AND FUTURE WORK

The conclusions of this article are that by using the mobile application it helped to improve the logistics process of the fire company, reducing the time in which said process is carried out and helping to organize the products that are inside the warehouse the company. Likewise, the RUP methodology is suitable for developing and implementing mobile applications, software and other technologies, related to logistics or sales of many companies that want to optimize and automate their processes to compete in the current market, these types of technologies being mandatory have the companies to grow more in the area in which it works. The expert judgment carried out for this mobile application has given an affirmative response to the implementation of the mobile application for logistics processes because its rating was always high or very high regarding the criteria in which the mobile application was rated. In conclusion, in the future, the RUP methodology should be used to create software related to logistics and sales, using mobile applications, software or other technologies to optimize company processes digitally, leaving behind the sheets and Excel files that they generate. an unnecessary waste of money and time for the company, preventing it from competing in the current market.

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