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**COMMUNICATION
MANAGEMENT IN
PROJECT TEAMS:
THE CASE STUDY
OF A MOZAMBICAN
COMPANY**

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Abstract: The arrival of the COVID-19 pandemic surprised the world with the changes it carries with it to the present day. One of the biggest changes was the massification of digital communication as a way of survival for societies and economies. Many projects that were part of the economies of societies were cancelled, paralyzed and/or delayed, and few that did not suffer the impact of this pandemic. Since project management has always had communication management as one of the foundations for its implementation, this study aimed to verify if there were changes caused by the COVID-19 pandemic linked to communication management in project teams and to verify the effectiveness of communication management in teams in a port management company in Mozambique. To achieve the proposed objectives, the study was based on interviews with members and managers of project teams from the company under study and on a survey on the perception of communication management in teams. The results achieved show a certain degree of positivity, as the company made every effort to control the chaos caused by the pandemic. Additionally, it was verified the use of some Communication Tools and Techniques suggested in the bibliography selected for this study, although they are not being used in their entirety and not by all the intervening parties. This generated recommendations for improvement for better communication management in project management.

Keywords: Project teams, Digital communication.

INTRODUCTION

The evolution of humanity has always been linked to projects in various scientific areas that man himself developed, and for their implementation, a correct management of them has always been necessary. According to Maximiano (2014), in addition to products and

equipment that were once projects, grandiose works resulting from projects can be found all over the world, such as the pyramids in Egypt, the irrigation channels in Mesopotamia, the temples in Greece, the great wall of China and the Eiffel Tower in France. Thus, despite the projects being temporary, their results are lasting, legitimizing the application of great technical and management knowledge.

Project management, in order to meet your requirements and objectives, is the use of knowledge, skills, Tools and Techniques linked to your activities and dynamism. This management is important, as it allows for the effectiveness and efficiency in carrying out projects by individuals, groups and public and private organizations (Project Management Institute [PMI], 2017).

According to the guide "Project Management Body of Knowledge" [PMBOK] (PMI, 2017), one of the main areas of knowledge to be managed is communication management. This must integrate processes necessary to ensure that project and stakeholder information is effectively exchanged through a strategy and implement the activities necessary for that communication strategy to be properly applied.

From an anthropological point of view, from the start, communication is characterized as an essential experience. Evidently, communication is characterized as being a permutation of something with someone. In short, individual and collective life depends on communication (communication that needs rules). In the same way that for societies to exist men are needed, it is also necessary for there to be communication (Wolton, 1997).

According to Torquato (2015), communication itself is an open system that exerts an important power within organizations, which can affect and change routines and the environmental work environment. It must not be underestimated

because the simple fact of its existence among its interlocutors causes a transfer of ideas, which generates influences through the so-called expressive power. This validates the existence of other powers in organizations/companies: remunerative, normative and coercive.

Communication has its aspects as a process and technique, based on human disciplines, as it allows the intermediation of organizational discourses, adapting interests, controlling internal and external participants, thus promoting greater admissibility of the organization's or company's values. This way, communication directly contributes to achieving greater productivity, collaborating and substantiating organizational economy (Torquato, 2015).

Communication in project management is mainly done by the project manager, a person who occupies a critical position in the leadership of the project team. The manager is comparable to an orchestra conductor because they are both responsible for the product of their teams: the result of the project and the orchestra's concert, respectively. Both need to have an overview of the products of the teams they lead in order to be able to plan, coordinate and complete their projects. Both use their perception of the projects they carry out to communicate and motivate their teams, with the ultimate goal of satisfactorily completing the established goals. As the conductor is not supposed to be able to play all the instruments of the orchestra, the project manager must, like him, have technical knowledge, understanding and experience (of music for the conductor and of projects for the manager). Both must provide their teams with leadership, planning and coordination through communication (PMI, 2017).

In the years 2020 and 2021 it can be seen that communication, and especially communication in project management, has undergone and is still undergoing changes

due to the COVID-19 pandemic that has shaken the world since the end of 2019, as it brought with the need to adapt their way of life and work. Confinement and interpersonal distancing were examples of measures adopted worldwide, as a way of preventing the spread of this disease.

In Mozambique, since March 2020 (when the first case of COVID-19 was registered) the government has imposed measures to prevent the spread of the disease. Such measures have been periodically updated, since the number of contaminations has increased, as it has been verified in several parts of the world. In the country, in 2020, the state of emergency was declared 3 times and, in 2021, the state of public calamity was already declared. With this, several companies and organizations were forced to adopt new work methodologies, adopting various forms of communication.

In the specific case of projects, managers who spend most of their time communicating with their teams had to reinvent themselves, to manage their teams remotely. According to Argenti (2020), due to the pandemic, correct communication management is very important to place companies in the positions they want in the post-pandemic period and to help in the execution of contingency plans.

In this context, this study aims to verify if there were changes caused by the COVID-19 pandemic linked to communication management in project teams and to verify the effectiveness of this management in teams, in a company in the transport sector in Mozambique.

MATERIAL AND METHODS

This research is exploratory and, according to Gil (2002), its main objectives are the improvement of ideas and the discovery of intuitions. Its planning presents a certain degree of flexibility, allowing the consideration of several aspects related to the theme.

Furthermore, a field study was carried out that is concerned with description, with an emphasis not on rigor but on depth, which may result in the reformulation of objectives throughout the research. The field study focused on a working community (not necessarily geographic space) (Gil, 2002). For this purpose, a company in the transport sector was chosen, more specifically, in port management.

This company is the concessionaire of the port of Beira, the second largest city in Mozambique. The company was founded in 1998.

Porto da Beira is strategically located in the center of Mozambique. Here there is a direct connection with the country's road and rail system, allowing the connection of the main markets in the interior of southern Africa, namely Zimbabwe, Malawi, Zambia, Botswana, the Democratic Republic of Congo, to the local market and routes of international trade.

The company used as a case study that manages the port of Beira, is organized in departments namely: Operations Department (container and multi-purpose terminal and general cargo terminal), Finance and Accounting Department (finance department and accounting department), Human Resources Department (human resources department and training department), Commercial Department (new business development and marketing department and commercial department), Civil Engineering and Maintenance Department, Electrical Maintenance and Health Department, Environment Department, Health and Safety and Information and Communication Department [ICT].

To achieve the proposed objective, interviews and a perception survey were carried out. Regarding the first, the interviews, the objective was to verify if there were

changes caused by the COVID-19 pandemic, linked to communication management in project teams, to investigate the perception of team members regarding the degree of satisfaction of the) team(s) and the success of the projects. With regard to the second, the aim was to verify the effectiveness of project communication management in the company, in accordance with the Tools and Techniques used, recommended by the PMBOK.

Employees interviewed are part of project teams in the following departments: engineering and civil maintenance, new business development and marketing, electrical and health maintenance, general cargo terminal operations and ICT. Initially, a mapping and invitation to 34 employees was carried out, with a positive response and 32 collaboration, ie 94% of the desired universe.

Of the interview participants, 15% are women and 85% are men. In terms of experience, employees who have been with the company for about 8 months and others who have been with the company since its foundation were interviewed. Respondents include project managers, project team members, department heads and senior company directors.

The main lines of the interview were guided to understand:

- If there were changes associated with the pandemic in communication management and, if so, what kind of changes were they;
- Whether with the arrival of the covid-19 pandemic there was a need to develop new communication skills with project teams (technical and behavioral);
- What communication difficulties the project teams face since the beginning of the pandemic;
- What project team members think about virtual/remote communication, as well as its advantages and disadvantages;

- If work meetings have been held remotely/virtually and, if so, how they are evaluated in terms of quality and quantity;

- If there is any initiative inherent to remote Meetings that will remain post-pandemic;

- If in relation to projects that have been ongoing since the beginning of the pandemic and those that started before the pandemic with delivery dates up to now, how many were delivered without delay, how many were delivered ahead of time and how many were delivered late;

- If customer satisfaction information is collected from the projects' customers;

- How project team members believe that communication will be done for managing teams and projects in the future;

- How the company can prepare for other possible changes in the future.

The information and data collected in the interviews (which lasted on average 60 minutes, over 22 days), were transcribed, analyzed and treated collectively, with the purpose of constructing results without distinguishing between groups interviewed (leaders and collaborators). This data collection took into account some aspects mentioned by Gil (2002), essential for field studies: alliance with people who are interested in research and preservation of the interviewees' identity.

For the research on the perception of the overview of communications management in projects, a list of tools used in the planning, management and monitoring of communications phases was distributed to department leaders (where projects are developed in the company), based on the guidelines of the PMBOK. It is noteworthy that the leaders involved in the perception survey were from the same departments mentioned above. Thus, 5 leaders were invited to respond to this survey, with 4 leaders having responded, that is, there was 80% of the desired collaboration.

RESULTS AND DISCUSSION

For the interviews, in relation to the scenario before the COVID-19 pandemic, the interviewed collaborators stated that communication in the project teams was mostly done in person (meetings and face-to-face meetings). Telephone and e-mail were also used. The telephone was used to clarify doubts or exchange specific impressions and to give/receive specific/urgent orders. Email was used to schedule face-to-face Meetings and exchange minutes of those Meetings, as well as formalize decision-making at those Meetings. With regard to the management of communication in projects, it was mostly done in person and its registration was done by e-mail and physical documents (paper).

In 2019, the configuration of Office 365 was made for the entire company, which already incorporated the "Microsoft Teams" software and the "DocuSign" digital documentation management system. Linked to the first aspect mentioned, the company's objective at this time was to keep up with technological advances and update work tools, linked to the "Microsoft" software. The company has always used "Microsoft" software in the work environment. Regarding the second aspect mentioned, the objectives were to optimize the time of the approval process and reduce the use of paper. However, at the time, these "software" were not properly exploited by all departments, as there was no urgent need to make such changes, as the uses of conventional means of communication at the time did not pressurize the use of these digital work tools. The areas that then made the most advanced use of these tools were the communication technologies department and the company's management.

In March 2020, when the pandemic broke out in Mozambique, the company was forced to take preventive measures against COVID-19,

reducing physical contact, but ensuring that work at the company did not stop because of the pandemic. Throughout 2020, following the perspective of increasing measures to prevent this disease, the strategy to combat the spread of the disease was updated. At all times, the company published internal communications addressed to workers, with clear information on infection prevention measures. Such mandatory prevention measures implemented by the Company were:

- Regular washing or disinfection of hands, especially after using utensils, instruments or common objects;
- Mandatory use of masks, both in closed and open spaces;
- The physical distance of 1.5m between workers;
- Prohibition of changing clothes in the workplace, with workers having to present themselves, at the entrance, already duly uniformed;
- The ban on the use of showers in the changing rooms;
- Restricting access to lockers and changing rooms for a maximum of 5 people at a time;
- The provision of individual disinfectants to workers, for the disinfection of hands and other utensils;
- The increase in buses for transporting workers in order to reduce their occupation to 50%;
- Restriction of access to the cafeteria for 20 people seated at a time, with meals being served in individual and sealed containers;
- The separation of all company departments into 2 teams, which started to work in 2 different buildings;
- The replacement of face-to-face Meetings by virtual Meetings, through the use of “Microsoft Teams” software;
- Replacement of the management of all physical documentation for digital documentation management, through the

“DocuSign” software;

- The replacement of the use of the landline telephone by [3CX] for internal communication in the company (this means of communication does not need a data network – internet – to work);
- The replacement of submission of physical documents by external collaborators (customs agents, shipping lines, freight forwarders and customers) for a submission in a digital system, now being an electronic platform for digital document management - this platform was developed within of the company itself;
- Replacement of all previously scheduled training and work trips with sessions in virtual mode (through “Microsoft Teams” or “Zoom”).

The information collected in all the interviewed departments, except the ICT, is that in relation to technical communication skills, there was a need to be developed and improved when the COVID-19 pandemic broke out. All employees had to learn to use the new work platforms made available by the company: “Microsoft Teams”, 3CX and “DocuSign” mainly. There were other communication platforms that were made available, but which only started to be used by those interested. The electronic platform for digital document management, referred to above, is now used only by areas with a need and authorization to do so.

In addition to learning how to use these tools, the ICT department had to master them completely, as this is the department that has the responsibility to teach and assist the entire company in the use of these “software”.

Regarding behavioral skills, it was reported that individual methodologies had to be developed to combat feelings that arose due to the pandemic: stress, anguish, impatience, isolation, frustration, resistance to change, uncertainty, lack of attention and sadness.

The causes of communication difficulties recorded from the beginning of the pandemic until the time of the interviews were:

- Low internet quality (internet network oscillation);
- The low technical domain of the use of “software” by some members of the project teams (collaboration through digital technologies);
- The absence of a general communication plan and a code of conduct in a digital environment;
- The lack of definition of the official communication channel for project management, as several communication platforms between project teams are used (“Whatsapp”, e-mail, “Microsoft Teams”);
- The absence of knowledge of digital literacy by some members of the project teams (not all of them know how to interact through digital technologies; share information and data; lack of citizenship knowledge of digital technologies);
- Resistance to the change of some project team members to the use of digital media;
- The breakdown of formal communication in the work environment by some members of the project teams, since digital communication eliminated certain communication barriers that existed in the past linked to the accessibility of top leadership to the entire company.

All interviewees reported that remote communication allowed and allowed work and projects not to be paralyzed in times of crisis caused by the pandemic. It also allows safety at work and in the projects being carried out. However, all of these claim that they miss the communication that was done physically, in the past, for lack of physical contact and human warmth. This physical contact allowed a better perception of people’s reactions through the body movement of each one, in meetings and work meetings, when sharing

and exchanging information.

In all departments, Work Meetings are held remotely. As a general rule, all departments have at least one weekly meeting to align the activities and projects of the department. The assessment made by 100% of respondents is that in terms of quality the Meetings are good and objective. In terms of quantity:

- 90% say it’s good (the average is 3 Virtual Meetings per week);
- 8% say it’s too much (the average is 5 remote Meetings per week);
- 2% say they don’t care how many Meetings they have weekly.

The question was raised whether there was any initiative carried out in remote Meetings that will remain post-pandemic, and 3% responded that in these Meetings there is a good new habit, which is the collective concern with each individual. For example, at the beginning of remote Meetings, there is an interest in knowing how each person and their family are doing in relation to health. 97% reported that the Remote Alignment Work Meetings themselves are good initiatives in themselves and must remain in the post-pandemic period.

In relation to projects that have been ongoing since the beginning of the pandemic and those that started before the pandemic with delivery dates so far:

- 7% were delivered without delay;
- 3% were delivered ahead of time; and
- 90% were delivered late;

It was clear that projects were canceled due to the pandemic and that most of the delays recorded are associated with restrictions imposed by this pandemic.

It must be noted that no department has a uniform procedure for collecting customer satisfaction after delivering projects. In most cases there is a formal delivery of the project and an exchange of emails to see if there were no problems after this availability.

During this survey, around 87% of respondents reported that remote communication is to their liking and are convinced that this type of communication will continue to be used in the future. They recognize that remote communication has the following advantages:

- Better time management;
- Flexibility;
- Cost reduction associated with mobilization (which previously existed in projects for holding Meetings, training, etc.);
- Greater efficiency in project management;
- Ease of sharing real-time and useful information;
- Reduction of carbon emissions by reducing the movement of people using means of transport to participate in Meetings, etc.;
- Resource savings (there is now better definition of the scope of work and role of each member of the project teams);
- Greater participation of team members in remote project Meetings;
- Contact regardless of people's geographic location.

About 13% of respondents reiterated that remote communication has the following disadvantages:

- For those who do field work, in addition to office work, when they are in the field, they sometimes miss work calls through communication platforms that they can only access when they are in the office. Calls made, for example, via "Microsoft Teams" are lost, despite changing the status to "away" (only some people have "Microsoft Teams" connected to the company's phone, this is not the case with these interviewees);
- Lack of awareness of working hours limits, as remote communication allows greater accessibility for everyone, at any time;
- Coldness in the work environment;
- Non-correct use of communication and work platforms by everyone, despite the

company providing means for everyone;

- Loss of social life.

Of the project team members interviewed 94% believe that communication for the management of teams and projects in the future (after vaccination of the population at the level of safeguarding community immunity) will be done through mixed communication. That is, a combination of remote communication and face-to-face communication. Here, it is foreseen that the correct use of the advantages that remote communication and face-to-face communication present together will be made.

The company in question has a high level of resilience and robustness, due to the numerous situations that forced it to adapt to new habits in recent years. Examples of what is referred to are: in 2017 - momentary change in the management team due to an accident at work that culminated in the physical disappearance of 4 senior members of the company's management, in 2019 - flogging by cyclone IDAI (which destroyed a large part of the company city of Beira with winds at 220) and in 2020 - emergence of the global pandemic COVID-19. When the question of how the company can prepare for further changes in the future was raised, 80% of respondents were confident in the decisions the company is going to make, regardless of what happens, as the world is constantly changing and the direction The company is always aware of these changes.

PERCEPTION ABOUT THE OVERVIEW OF PROJECT COMMUNICATION MANAGEMENT

According to the PMBOK (PMI, 2017), project communications management has the necessary tools, so that the interests and objectives of the projects are achieved, through a correct and effective exchange of information.

As mentioned in the Material and Methods section, the Project Communications Management Overview map of the PMBOK guide was distributed to managers of the operation, engineering, maintenance, information technology and marketing departments, in order to understand which documents, recommended Tools and Techniques are used in managing the communication of projects in the company.

According to the PMBOK guide (PMI, 2017) the first stage of communications management is the planning stage. As a general rule, communications planning is carried out right at the beginning of the project, when the stakeholders are recognized and the Project management plan progresses. Here, a correct communication approach and plan must be developed so that the information needs for all project stakeholders and project objectives are met.

Project communications are the result of this planning process with the course guided by the communications management plan, which must establish the collection, creation, dissemination, conservation, recovery, management, tracking and disposal of these communication elements. In the end, the communication strategy and the communication management plan will serve as a solid basis for monitoring the result of the communication to be established. Project communications are supported by persistent points of attention to avoid slips or miscommunications. This is done in this planning phase, through the careful choice of methods, processes and message types. The main advantage of this planning process is a documented approach to effectively presenting key project information to stakeholders. Planning must be carried out regularly throughout the project, as needed.

In Table 1 are the results presented by department managers on the perception of

communications planning.

In the Incomes of this stage of communications planning, it is verified that the management plan and project data (75%) are taken into account. However, the project charter is used less often. According to the PMBOK guide (PMI, 2017), the project charter must contain information about the project, such as: purpose of the project; measurable project objectives and related success criteria; high-level description of the project, its boundaries and key deliverables; overall project risk; milestone schedule summary; pre-approved financial resources; list of key stakeholders; requirements for project approval; project completion criteria; designated project manager, responsibility and level of authority; and name and authority of the sponsor or other person(s) authorizing the project charter. In short, the project charter allows for an agreement to be reached between stakeholders on the most important deliverables and goals, and the roles and responsibilities of everyone involved in the project.

It appears that only 25% of respondents use this type of tool, and it was found that not all the information mentioned above (which must be present in the project's opening term) is included in the type of document verified (knowing that this project is not also shared by the entire project team concerned). The justification given is that there is a lack of knowledge about the importance of this type of tool. This scenario demonstrates that right from the start of the project there are reasons for communication problems/gaps throughout the life of the project.

Also in the Incomes of this stage, aspects such as Company environmental factors and Organizational Process Assets obtained a null result, in terms of organization, which demonstrates a serious gap in the planning of communication management in projects. To

Communications Planning	Results
1. Incomes	
1.1 Project charter	25 %
1.2 Project Management Plan	75 %
1.3 Project documents	75 %
1.4 Company environmental factors	0 %
1.5 Organizational Process Assets	0 %
2. Tools and Techniques	
2.1 Expert opinion	100%
2.2 Communications requirement analysis	25%
2.3 Communications technology	75%
2.4 Communication Templates	50%
2.5 Communication methods	50%
2.6 Interpersonal and team skills	75%
2.7 Data representation	50%
2.8 Meetings	75%
3. Exits	
3.1 Communications Management Plan	25%
3.2 Project Management Plan Updates	25%
3.3 Updating project documents	25%

Table 1 - Perception of communications planning

Source: Original research results

cite an example, according to the PMBOK guide (PMI, 2017), the Company environmental factors, such as: organizational culture, political climate and governance structure, personnel management policies, stakeholder risk limits, channels, trends, practices or global, regional or local habits that may interfere at this stage are not consciously taken into account. Organizational Process Assets, such as: organizational policies and procedures for social networks, ethics and protection, organizational policies and procedures, risks, changes and data management, organization communication requirements, standardized guidelines for development, exchange, storage and retrieval of information, repository of lessons learned and historical information and data and information from stakeholders and communications from previous projects, are also not consciously considered.

In the Tools and Techniques of this stage of communications planning, it is clear that all departments seek Expert opinion, and that a large part (75%) considers communications technology, interpersonal and team skills and holds project meetings. It is verified that half of the evaluated departments (50%) use the tools of communication models, communication methods, and data representation. But only 25% do communications requirements analysis.

According to the PMBOK (PMI, 2017), the planning tool allows defining the type and indispensability of information for project stakeholders. In other words, the conditions for sharing the necessary information (taking into account the type and format) are defined, accompanied by an assessment of the value of this information. The sources of information commonly used to identify and define the

conditions of project communications mentioned above take into account:

- Important information and communication requirements from the stakeholder register and stakeholder engagement plan;
- Number of potential communication channels or avenues, including one-to-one, one-to-many, and many-to-many communication;
- Organizational charts;
- Project organization and responsibility, relationships and interdependencies among stakeholders;
- Development approach;
- Disciplines, departments and specialties involved in the project;
- Logistics (number of stakeholders and locations to be considered);
- Internal information needs; external information needs;
- Legal requirements.

The Exits of this communications planning process are somehow weakened, which compromises the next phases of communications management.

It was possible to verify that in this company there are no standardized and written communication processes that can be followed by everyone. Some recommended tools are used by some, others are not used in general.

According to the PMBOK (PMI, 2017), the next step to planning is the communication management. This aims to ensure the collection, creation, dissemination, conservation, recovery, management, monitoring and final presentation of project information, in a convenient and correct manner.

The main advantage of this step is to enable the existence, between the project team and the interested parties, and the necessary fluidity in the exchange of information. Communication

management makes it possible to choose all the means for effective and efficient communication, for example, by choosing the most appropriate communication methodologies and techniques, according to the changes that occur in the project.

This step is not limited to disclosing information relevant to the project, it includes ensuring that the information being disclosed to interested parties is received by the target audience, without distortion. Here, there is space for interested parties to request information, clarifications and extraordinary discussions.

Some of the techniques and considerations taken into account that ensure effectiveness in this stage of communications management are: sender-receiver models; choice of means of communication; writing style (ie, correct use of active or passive voice, correct sentence structure, and proper word choice); Meetings management; presentations (ie becoming aware of the impact of body language and developing visual aids); facilitation and active listening.

In Table 2 are the results presented by department managers on the perception of communication management.

Based on the data exposed above, it is clear that the departments take into account the work performance reports (25%), and the project management plan and Project documents (75%). According to the PMBOK (PMI, 2017) work performance reports are documents where information must be found correctly presented, recorded to be disclosed (in physical or digital format) to make known, alert and/or generate decision-making or action on the project by those responsible (this is usually information about the progress of the project). These performance reports are disseminated through the communication process defined in the Project management plan, and may consist, among others, of graphs

Communications Management	Results
1. Incomes	
1.1 Project management plan	75%
1.2 Project documents	75%
1.3 Job performance reports	25%
1.4 Company environmental factors	0%
1.5 Organizational assets	0%
2. Tools and Techniques	
2.1 Communications technologies	50%
2.2 Communication methods	50%
2.3 Communication skills	25%
2.4 Project Management Information System	25%
2.5 Project reports	50%
2.6 Interpersonal and team skills	25%
2.7 Meetings	50%
3. Exits	
3.1 Project Communications	25%
3.2 Project Management Plan Updates	25%
3.3 Updating project documents	50%
3.4 Update of Organizational Process Assets	0%

Table 2 - Perception about communications management

Source: Original research results

and value-added information, trend lines and forecasts, regressive reserve evolution graphs, summaries of scratches. In Tools and Techniques, it appears that half of the evaluated departments (50%) use communication technologies, communication methods, make project reports and hold meetings.

The tools with low usage (25%) are: communication skills, Project Management Information System [SIGP] and interpersonal and team skills. In terms of communication skills, according to the PMBOK (PMI, 2017) the most important aspects to be highlighted are: communication skills, feedback, non-verbal communication and presentations.

Communication skills are a compact of molded communication skills, which take into account aspects such as: understanding the purpose in key messages, effective relationships and information sharing, and leadership behaviors.

“Feedback” is information about reflections on communications, a delivery or context. “Feedback” supports interactive communication between all interested parties, not leaving aside the project manager and the project team (examples: “coaching”, mentoring and negotiation).

As for non-verbal communication, it can be taken into account that appropriate body language is important to convey meaning, such as gestures, vocal tone and facial expressions. The most important techniques in this type of communication are empathy and eye contact. There must be awareness, on the part of the project team members, of how they express themselves, taking into account everything that is said and everything that is not said.

For presentations, it can be taken into account that they are a means of formally delivering information and/or documentation to project stakeholders. Presentations must

be clear and objective in the information they convey about the project. These can be: progress reports and information updates to interested parties; historical information to support decision making; general information about the project and its objectives, in order to give visibility to the project's work profile and to the team; and specific information aimed at broadening understanding and support of the project's work and objectives. Presentations are successful when their content considers: the target audience (stakeholders), their expectations and needs; as well as the needs and objectives of the project and the project team. The SIGP, on the other hand, allows the guarantee that interested parties can access and/or retrieve, without difficulty, the information related to the project in question, whenever necessary. Project information is typically managed and distributed using various electronic tools available. It can be considered that the collection of data and information, as well as automated reports on the main performance indicators can fit into this system. The techniques used in this type of system in companies, to manage and distribute information, are usually: electronic tools for project management; electronic communications management; social media management.

For interpersonal and team skills techniques that are little used in communication management in this company (25%), it is necessary to take into account that the PMBOK (PMI, 2017) informs that they allow for informal but useful solutions to solve problems that may arise and/or suggestions for performance improvement; political awareness (helps the project manager in adequately engaging stakeholders to maintain their support throughout the project). Some of these techniques are: active listening, conflict management, cultural awareness, meeting management, networking, that is, it is

necessary to maintain interaction with other people to exchange information and develop contacts.

This type of scenario allows us to realize that there are project management difficulties in the company, resulting from the reduced use of these Tools and Techniques, such as communication skills by managers and members of project teams, interpersonal and team skills, and also, as there is no standard project management information system.

As a result of the research from the communications management stage, the Exits that are obtained are not very strong, the most visible in the departments (50%) being Updating project documents, followed by project communications and Project Management Plan Updates made by a small part of the evaluated departments (25%). None of these output the Organizational Process Assets update (project records such as correspondence, memos, Meetings minutes and other documents used in the project; planned and ad hoc project reports and presentations).

From the results collected for this step, it can be seen that there is no consistency in the use of the methodologies, Tools and Techniques that comprise it.

The final phase of project communications management, according to the PMBOK (PMI, 2017), is the monitoring of communications. This is the step that safeguards the satisfaction and realization of the information needs of the project and its stakeholders. Here, it is possible to verify whether the techniques and methodologies determined in the communications planning phase were successful in increasing or maintaining stakeholder support for the project's objectives and results.

Measuring the effect of project communications must be done very carefully, so that the message with the right content

reaches the right target audience with the right channel and at the right time. Monitoring communications can require a variety of methodologies, such as customer satisfaction surveys, collecting and reflecting on lessons learned, observations to staff, reviewing issue log data, and much more.

Table 3 shows the results presented by department managers on the perception of monitoring communications.

From the research carried out, it is verified at this stage, that in the entries most departments (75%), take into consideration the management plan and the project documents. However, only 25% take into account work performance data and no department, take into account the company's environmental factors and organizational process assets. The lack of consideration of these latter elements, leads to believing that there is a need to develop:

- an organizational culture, a political climate and a more robust governance structure;
 - Personnel management policies by all departments;
 - Analysis of interested parties risk limits.
 - Organizational policies and procedures for issues, risks, changes and data management;
 - Organization's communication requirements;
 - Standardized guidelines for development, exchange, storage and information recovery;
 - Habits of reflection on lessons learned and historical information of the projects and the creation of repositories due to that;
 - Correct storage systems for data and information from stakeholders and previous project communications.
- Regarding the tools and techniques, the results show that 50% of the departments evaluated use specialized opinion,

Communications Monitoring	Results
1. Incomes	
1.1 Project management plan	75%
1.2 Project documents	75%
1.3 Job performance data	25%
1.4 Company environmental factors	0%
1.5 Organizational Process Assets	0%
2. Tools and Techniques	
2.1 Expert opinion	50%
2.2 Project Management Information System	25%
2.3 Data representation	0%
2.4 Interpersonal and team skills	50%
2.5 Meetings	50%
3. Exits	
3.1 Job performance information	0%
3.2 Change requests	25%
3.3 Project Management Plan Updates	25%
3.4 Updating project documents	25%

Table 3 - Perception of communications monitoring

Source: Original Research Results

interpersonal and team skills and project meetings. Only 25% use the Project Management Information System and no department (0%) uses data representation.

According to PMBOK (PMI, 2017), some of the methodologies that can be used for data representation are: mental mapping; and evaluation matrix of stakeholder engagement level (a way to classify the level of stakeholder engagement can be uninformed, resistant, neutral; supporter; and leader). This array can provide information on the effectiveness of communication activities. This is possible by reviewing the changes between the desired engagement and the currently accomplished by adjusting the communications as needed. Therefore, it is verified that this type of tool is not used in the company in the communications monitoring phase, which does not allow a knowledge and classification of stakeholders in relation to their involvement in the project.

Regarding the outputs of communications monitoring, a reduced number (25%) of the departments registers the change requests, project management plan updates and updates project documents.

It is verified that no department has to exit information on work performance. According to PMBOK (PMI, 2017), information on work performance include information on the performance of the project communication, where the comparison and analysis of the communications implemented with the planned (here is also taken into account "feedback "About communications). These data are harvested during project progress and are passed to control processes (eg scope, schedule, budget and quality that are defined at the beginning of the project as part of the project management plan that are then compared with verified performance). There are additional information that can pass references needed to determine if the project

is in accordance with the plan and budget or whether there are variations, at that level. This helps in making decisions on preventive or corrective action for the project. The correct analysis of the work performance data and the additional project information, allows you to understand context as a whole providing strong arguments for decision making in the project.

In this stage, the inconsistency in consideration and use of the methodologies, tools and techniques recommended by the PMBOK is highlighted.

RECOMMENDATIONS FOR IMPROVEMENT OF COMMUNICATION MANAGEMENT

From the survey carried out, first, it can be realized that there were changes motivated by Pandemic Covid-19, linked to communication management in project teams. In relation to perception about the overview of project communication management, there is a need to:

- Create from a general project communications management plan, following the PMBOK guidelines. The purpose of this plan is to allow better planning, management and monitoring communications in project teams, taking into account that it is necessary to take account:

Political aspects: develop organizational policies and procedures for social networks, ethics and protection, organizational policies and procedures for issues, risks, changes and data management, organization's communication requirements, standardized guidelines for development, exchange, storage and recovery information, creation of habits for reflection, collection and registration of lessons learned and historical information and information and information of stakeholders and communications of previous

projects; Create a Code of Conduct in Digital Environment for Behavior Uniformization in order to maintain the formality required in the communication in the desktop; Define the official channel for the project management communication and prioritization definition in case of using multiple communication platforms between the project teams (“WhatsApp”, e-mail, “Microsoft Teams”) in order to eliminate information losses and noise;

Technological aspects: improve internet quality in order to reduce or eliminate their oscillations (for example hire new Internet providers, or press the current ones to raise the quality of their services);

Employee-related aspects: map and empower members of project teams that present low technical domain of the use of software in order to improvise collaboration through digital technologies; Train the members of project teams in digital literacy in order to allow better interaction through digital technologies; sharing information and data; knowledge of citizenship of digital technologies; Disclose the advantages of using digital media in order to reduce resistance that occurs in some members of the project teams, since there is a great probability of digital / virtual communication to have great use in the future.

Connected to other verified aspects, which are presented as important, it must be recommended as follows:

- Creating a project management of project management [EGP]. According to the PMBOK Guide (PMI, 2017), EGP is a management body that normalizes project-related governance processes and facilitates the sharing of resources, methodologies, tools and techniques throughout the company. Since several departments in the company work with projects, this body can give the necessary support for the implementation and

management of projects with more quality;

- The development of an organizational culture, political climate and governance structure to enable communications effectiveness in project teams. Personnel administration policies (b) interested parties risk limits (c) channels, trends, practices or global, regional or local habits;

- Give due attention to aspects of force majeure, which will allow the company to prepare for possible changes in the future, through:

- the mapping of the possible risks associated with the type of activity developed by the company and for example risk of fire;

- A mapping of the possible risks associated with society where the company is inserted, linked to natural phenomena (cyclones, earthquakes, floods, etc.) and political occurrences (wars, revolutions, strikes, etc.);

- the elaboration of detailed reaction manuals for each of the eventualities;

- the disclosure of these reaction manuals through lectures and theoretical training;

- the simulation of all possible events in practice with the company all for better perception of all about the associated risks;

- The elaboration of a framework for “frequently asked questions in case ...” (taking into account all possible risks) and publication in all the company’s internal communication networks.

CONCLUSION

In view of the objectives of the present study initially and linked to a company in the field of Mozambique transport, it is concluded that there were changes caused by the Covid-19 pandemic linked to communication management in project teams and It verifies efficacy of communication management, which is, however of improvements as recommended in this study.

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