Ciência, Tecnologia e Inovação: Desafio para um Mundo Global

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Franciele Braga Machado Tullio
Lucio Mauro Braga Machado
(Organizadores)

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APRESENTAÇÃO

Em “Ciência, Tecnologia e Inovação: Desafio para um Mundo Global 4” trazemos doze capítulos que pontuam os desafios para o desenvolvimento da sociedade a partir da ciência, tecnologia e inovação.

Temos aqui demonstradas as tecnologias que permitirão cidades inteligentes com uso consciente e ecológico de espaços públicos, que analisam alternativas à pavimentação tradicional e que demonstram preocupação com os desafios na comunicação.

Trazemos também estudos na produção de alimentos, buscando maximizar produção, minimizando desperdícios.

Além disso, temos ainda estudos avaliando os impactos de toda essa inovação no mercado de trabalho e nos trabalhadores.

Esperamos que esta obra possa contribuir para os desafios futuros da humanidade. Boa leitura!

Franciele Braga Machado Túllio
Lucio Mauro Braga Machado

SUMÁRIO

CAPÍTULO 9

OPTIMIZED COMMUNICATION PLAN AND ITS IMPACT ON THE EMERGENCY AND CONTINGENCY PLAN REGARDING RESPONSE TIMES IN CRISIS SITUATIONS IN THE AIRLINE INDUSTRY

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ABSTRACT: There is a gap in the communication plan for crisis response in place. The deepening and exploration of typologies of organizational crises in the air sector will optimize the response times that can satisfy or mitigate the worsening of the situations, setting off a new challenge.
This work analyzes the crises spread in the Organization, taking into account their effects, response time (partial and total) and entities involved. In theory, the goal is to understand how the crisis response should be and how the system responds to the same type of crisis. It is through the gathering of information, reading and research of the subject literature that this will be analyzed based in success cases, typologies of crisis and models of response time existing in other infrastructures. The study will shine a light on the different crisis typologies as well as their propagation at a Portuguese medium size airport, leading to the creation of a model for a quick and effective response to it; thus minimizing the response time and eventual recourse due to the analysis of success cases in similar infrastructures. After the development of studies and research on crisis typologies and their affectation in terms of effects, time and entities involved, it is the objective of this study to produce a model or several to optimize the response time in crisis situations.

KEYWORDS: Airports, Airports system, crises, typology, communication plan, response times, air sector

PLANO DE COMUNICAÇÃO OTIMIZADO E RESPETIVO IMPACTO NO PLANO DE EMERGÊNCIA E CONTINGÊNCIA RELATIVAMENTE AOS TEMPOS DE RESPOSTA EM SITUAÇÕES DE CRISE NO SETOR AÉREO

RESUMO: Existe uma lacuna a nível de plano de comunicação para resposta a crises. O aprofundamento e exploração de tipologias de crises organizacionais no setor aéreo, de modo a otimizar os tempos de resposta capazes de satisfazer ou mitigar situações, desencadeia um novo desafio. No trabalho proceder-se-á à

análise da propagação de crises na Organização relativamente aos seus efeitos, tempo de resposta (parcial e total) e entidades envolvidas. O objetivo é: na teoria entender como deveria ser a resposta à crise e na prática compreender como o sistema responde para o mesmo tipo de crises. É através da metodologia de recolha de informação, leituras e pesquisas em literatura sobre o tema que serão analisados casos de sucesso, tipologias de crise e modelos de tempos de resposta existentes noutras infraestruturas. O estudo das tipologias de crise assim como a propagação das mesmas no aeroporto de Lisboa, levarão a cabo a criação de um modelo ou modelos para resposta em tipologias de crise identificadas, minimizando o tempo de resposta e com eventual recurso à análise de casos de sucesso em infraestruturas semelhantes. Após o desenvolvimento de estudos e investigação sobre tipologias de crise e a afetação das mesmas em termos de efeitos, tempo e entidades envolvidas, é objetivo deste estudo a produção de um modelo ou vários para a otimização do tempo de resposta em situações de crise.
PALAVRAS-CHAVE: Aeroportos, sistema aeroportuário, crises, tipologia, plano de comunicação, tempos de resposta, setor aéreo

INTRODUTION

Based on studies carried out at a doctoral level of one of the authors (Piedade, 2017), the motivation that guided the realization of a new, more comprehensive research emerged. The deepening and exploration of other aspects in terms of organizational crises in the airline sector triggers a new challenge. It is on this basis that the idea of studying the typologies of crisis arises, as well as their propagation, in order to optimize the response times capable of satisfying or mitigating crisis situations. Especially when the interference of new social technologies is predominant for the affectation / change and or resolution of the crisis itself.

It is based on the theoretical study that was later carried out, that we set out to develop a new study, this time having the airport system of Airport A as its object (for reasons of confidentiality we will call it that), and bearing in mind objectives that may lead to production of a model for the optimization of the response time in crisis situations. This work is based on the development of studies and research on crisis typologies and their impact in terms of effects, time and entities involved.

The specific objectives that this study set out to achieve were: to survey the types of crisis at Airport A, namely air and land sides; analyze the spread of crises in the Organization in terms of their effects, response time (partial and total) and entities involved - in theory understand how the crisis response should be and in practice understand how the system responds to the same type of crises, and finally, to create a model for responding to crisis typologies identified or not, minimizing the response time with eventual recourse to the analysis of successful cases.

METHODOLOGY

The work methodology for this study followed the following steps: literature review, information collection, readings and literature searches on the topic. Success cases, types of crisis and response time models existing in other infrastructures were analyzed; a case study was prepared maintaining the stated methodology, namely the comparative analysis of the case under study with the existing good practices, and a proposal was made and respective validation, of the performance model.

LITERATURE REVIEW

A crisis is nothing more than a phenomenon that affects the development of the organization's normal activity; it is an occurrence with a negative potential that affects the organization, the company, the industry, as well as its audiences, products, services, image and reputation. It disrupts the normal flow of the organization's business, possibly jeopardizing its existence or not, but it may also not be catastrophic to the point of destroying the organization (Fearn-Banks, 2011).

Due to new environmental developments, terrorism, the proliferation of the media causing increasing exposure, companies have come to play a major role in crisis management (Coombs, 2007a). Still citing the same author, no organization is immune to a crisis because it can arise from inside or outside the organization, and the way in which the crisis is dealt with can save the organization or destroy it, especially when it comes to how communicates in a crisis situation.

The Institute for Crisis Management, defines crisis as a significant interruption in the business of an organization that encourages extensive media coverage. The result of this impact on public opinion can affect its operations and still have political, legal and financial impacts on its business.

The causes of a crisis can have a very wide origin, however there is a set of reasons that seem to be of greater relevance in the emergence of problematic situations (Lampreia, 2003); examples include human error, technical breakdown, restructuring and dismissals, debatable financial and commercial practices, lack of internal communication, external attack, natural disaster, and the problem or crisis of others.

Organizational communication is thus an element that cuts across all of the organization's actions and which sets up, in a lasting way, the construction of its culture and identity; the function is to promote internal cohesion around the company's values and mission, increase the organization's public visibility and promote its products and services, articulating and integrating the various languages that make up an organization's communication, which must be harmonized in in order to establish a unique language of the organization, allowing an effective communication (Oliveira, 2004).

Organizational communication consists of the company's relationship with its internal and external public, involving a set of procedures and techniques aimed at the communication

process and the dissemination of information on situations, results, mission, objectives, goals, projects, processes, standards, procedures and instructions (Matos, 2004).

Currently, the role of communication is to support a well-structured management model with the capacity to lead the company to face increasingly competitive challenges, in a society that becomes more demanding in quality and rights (Cardoso, 2006).

In crisis management, communication has also received particular attention from managers and researchers (Coombs and Holladay, 2010). The message conveyed, the information that is shared, the communication channels and their recipients are fundamental components of communication in crisis situations and whose management may dictate the organization's survival or non-survival.

Crisis management is defined as a process for strategically planning to eliminate some of the risk and uncertainties of the negative occurrences of a crisis, which may put the organization in control of its own destiny (Fearn-Banks, 2011). Crisis managers have an unremitting and continuous work to reduce the probability of a crisis situation as much as possible, as well as to prepare the organization for the day it arises (Coombs, 2012).

The various academic investigations allow us to structure guidelines on how to act when the crisis arises: speed - disseminating a response within the first hour after the crisis has occurred; accuracy - when the company communicates with its stakeholders, they will require accurate information about the event and how it might affect them; consistency - the organization must send unified responses to its statekolders promoting consistency of the message - communication between the organization and its stakeholders is a two-way process; availability to the media - who should be the first sources to contact; and honesty - because the lack of it harms the relationship between the organization and its stakeholders. All this information must necessarily be fast and accurate for it to be useful (Coombs, 2007b; Coombs and Holladay, 2012).

Business models need to change, companies need to transform so that they are able to respond adequately to the impact and demands of social media. We will stop looking for the news, it will be the news that will come to meet us or even we will create it (Qualman, 2009).

According to Rainie and Wellman (2012), current technologies are still far from realizing any possible future scenario in its entirety, however, they represent a potential evolution from current trajectories.

In the air sector, the concept of crisis is closely linked to the concept of risk, because the sustainability and viability of the air sector depends largely on risk management, that is, on the identification, analysis, elimination, mitigation and prevention of hazards as it is. described in ICAO Doc.9859 (2013).

Manuele (2003: 59) defines risk as "the potential for the realization of the unwanted, negative consequences of an event".

ICAO (2013) defines risk as the "chance" that someone may be harmed by various dangers, together with an indication of how serious the damage may be.

According to the International Civil Aviation Organization (ICAO) Doc.9859 (2013) risk management (safety and security) in aviation is the identification, analysis and elimination

(and / or mitigation of an acceptable or tolerable level) of hazards, as well as subsequent risks that threaten the viability of an organization.

It is up to the organization, in the scope of its activity to anticipate crises, before they happen. Therefore, one of the truly important aspects for resolving a crisis, at the right time, is the timing of intervention in an emergency situation, as well as the urgency to give an immediate response (Lampreia, 2007).

The Emergency Plan of Airport A (2012), defines the sequence of actions of the operations that must be developed to control each of the possible emergency situations that occur at the Airport and in the vicinity. For its implementation, it was necessary to define basic and fundamental aspects such as the training of personnel and maintenance of operations.

It is in the Crisis Communication Plan (2018), that all steps for external communication are included; however, internal communication is also included in the case of workers not critical to the operation. This plan defines the responsibilities and actions for information management regardless of the type of occurrence.

The general objectives of this plan are: to map as many situations as possible in order to guarantee measures that will ensure a timely response to all audiences affected by the occurrence and those considered to be priorities; ensure that all levels of management have sufficient information to implement and maintain an effective crisis management system; define the main roles in crisis communication management within the Communication Department; establish protocols with the communication areas of all stakeholders identified in the Contingency Plan and Emergency Plan in order to ensure greater efficiency in the coordination of information to be provided to the media and the public in general. It also has operational objectives: to avoid additional operational constraints; control passenger flows and agglomeration; guarantee the continuity of the operation without constraints as well as the continuity of the operation (even with calculated constraints, the reliable information must be updated and forwarded to all interested parties to reassure stakeholders and users). Finally, it is necessary not only to inform all interested parties and users but also to monitor the Organization's reputation.

The Crisis Communication Plan deals with two different plans, with their own communication procedures and appropriate to the situations: Contingency Plan and Emergency Plan.

IROPS (Irregular Operations) is defined as exceptional events that require actions or training in addition to that normally practiced in aviation in normal operation by aviation service providers, which impact passengers, often for indeterminate periods of time.

The Contingency Plan (2018) aims to minimize the impact that disruptive events and irregularities in the operation may cause on passengers and be their repository in case of disruption, integrating the procedures of each partner, as well as the expected interaction between them, when applicable.

CASE STUDY

The two case studies analyzed, both on fuel supply failures that occurred in May 2017 and in April 2019, were analyzed in terms of the chronology of events, the impact, the actions that were taken; and also on what went well and less well, and the lessons learned.

The first case study (Case Study I) started on May 10, 2017: around 12 noon, the first irregularities reported by the operators appeared. At about 4 pm, a situation report is made regarding the parking capacity and the overcrowded terminal, and then the COE (Emergency Operations Center) is activated. The situation worsens, with no forecast of recovery, in the meantime decisions have been taken in order to resolve and / or mitigate the crisis. His full recovery occurs around 23H57.

This situation affected 311 flights and 42,000 passengers and the disruption in some systems, caused the lack of information to passengers, the affected of airport capacity, and resulted in a great media coverage. In view of the above, actions were taken, namely: specific meetings, issuance of Notam, restriction on parking, conditioning of landings, preparation of passenger accommodation, contacts with the media and press conferences, and updating of the website which the little information available.

From this case, the following conclusions were drawn: coordination between stakeholders (internal and external) in the COE went well; there was an immediate response from the volunteers (Facility Airport Support Team); and the suspension of passenger acceptance at check-in was adequately carried out - avoiding more passengers at the terminals, as well as reducing landings. On the other hand, it did not go so well: the lack of precision in the information provided / received by all involved; the lack of predictability of the time to resolve the technical problem; failure to update flight information due to disruption of the information system; duplicated tasks due to the existence of two crisis centers in operation (even if they do not have the same objectives); the lack of a contingency procedure for such an unprecedented situation; and some organizational inefficiencies.

In view of the above, and for future crisis situations, it is necessary to improve communication at different levels, organize a repository of procedures and reports available to help manage contingencies, and to prevent the existence of communication tools for sharing information in real time. to improve the structure of crisis management. In view of these needs, the preparation of a Contingency Plan for IROPS began, the creation of a Crisis Communication Plan, and the implementation of improvements in operational management.

The second case study (Case Study II) takes place from April 16 to 20, 2019, again due to fuel supply failure. This time, and in advance - on April 8, there is information of a strike notice starting on April 15, which allowed operators to be informed in a timely manner of the occurrence and the airport to trigger measures to mitigate impacts. Notam is issued with the Tankering order, cargo and mail embargo is made, airport stock management is started, and the crisis room is activated. On the 17th of April, special criteria are defined for the supply of long and medium-haul flights and a status check with Operators, Administration and ANAC (regulator in Portugal). On April 18, the strike is called off, with a recovery forecast of 2 to 3

days for normal operation. On April 20, the operation will be returned to normal.

The actions taken were timely, namely: the Airport Community was informed, there were meetings at the Airport, the issuance of NOTAM, the crisis cell was activated, there were regular situation points, and there was information sharing with all the airports in the network; the airport, in successive press releases, took stock of the situation and advised passengers to inquire about their flight details with their airlines, “regretting the inconvenience caused and hoping that the situation would be resolved with the utmost urgency by the authorities competent ”.

In terms of impacts, these were lower than in the first case under analysis, but there were still 95 affected flights (technical stopovers), 7 canceled flights, roughly 6,000 affected passengers, cargo, baggage and passenger embargo, delayed flights, and approximately 5,000 tons of fuel supplied in the period.

Analyzing this case study we can reach the following conclusions: there was a quick reaction and good coordination between Airport / GOC (Fuel Operational Group) ; there was good coordination between airports; there was a fluid communication and interaction with the operators (daily, face-to-face and email status reports); there was the proactive issuance of NOTAM; there was excellent adherence by operators to the proposed measures; there was activation of the crisis cell; inventory management was transferred to the airport; there was a rapid adjustment in crisis management in the face of new information; the timing of communication was excellent, with the media and communication to passengers on the airport screens; there was an excellent reaction from the teams on the ground and the management teams.

On the other hand, there were also situations that went less well, such as: non-compliance with minimum services and non-compliance with civil requisition; the increase in operators operating costs due to intermediate stops for refueling with delayed arrival at destinations, with cargo and mail embargo; there were non-boarded passengers; and fleet and crew management and the time to recover from normality took some time. In view of these conclusions, we can understand the urgent need to disclose the IROPS Contingency Plan (although with procedures that are not fully integrated) and the total dependence on supply by road / professional category, which constitutes a risk of blocking strategic infrastructure, like the airport.

SWOT ANALYSIS

Based on the specifications of the case studies I and II, it was possible to carry out a strategic analysis (SWOT), regarding Strengths, Weaknesses, Opportunities and Threats, respectively.

Therefore, in our case, the strengths in which the company can act and work were the capacity for reaction, coordination with partners and authorities, communication, transparency and the competence of its teams. On the other hand, its weaknesses were the dependence

on road transport, the lack of reserve capacity, the lack of redundancy, operating costs and the impact on performance.

Referring to the cases under study, we can understand as opportunities the launch of the IROPS plan through workshops, the verification of the possibility of other means that provide redundancy and, finally, learning and gaining resilience with the situation. Considering the threats, these were identified as the professional category that gained strength, possible strikes in the future inspired by this, and the creation of alternatives and / or redundancy.

ANALYSIS OF THE RESULTS OF CASE STUDIES I AND II

As we saw earlier when analyzing each case in terms of what went well and less well, and also from the lessons learned, we can conclude that it is necessary to make a repertoire of the types of irregular operations. In this way, we can have a contingency plan for immediate action, and the new situations that may arise are typified in order to resolve them as quickly as possible, qualifying the problem in terms of resolution time, impact and propagation.

In the first case (Case Study I) the lack of accurate information in real time, as well as the unpredictability of the resolution time, the novelty of the event and the inefficiency of the crisis cell were conditioning factors for a timely response to the crisis. In view of these facts, future procedures for the improvement of internal and external communication were triggered, requiring the existence of a communication tool for sharing information in real time, the creation of a repository and the decision to prepare an action plan, IROPS contingency.

In the second case under study (Case Study II) the answer was almost immediate and it showed that there had been a certain degree of understanding of what went wrong or right with the previous one. There was a quicker, more efficient reaction and a correct coordination between the involved participants and stakeholders, although the crisis cell did not function in an improved operational way. The need for immediate implementation and disclosure of the IROPS contingency plan, as well as the lack of communication channels for stakeholders, proved to be the central problem in this crisis.

After studying the cases and analyzing them, it becomes necessary to understand other types of irregular situations and create good practices, in order to obtain sufficient data to allow us to produce a rapid response model for immediate action.

ANALYSIS OF MANAGEMENT OF IRREGULAR OPERATIONS IN AIRLINES

An effective management system for irregular operations can predict the occurrence of these events and help to reduce their impacts. Let's look in general at what is considered an irregular operation for airlines.

Traditionally, Operations Control Centers (OCCs) are mainly comprised of aircraft Flight Dispatchers, maintenance operators and other operational personnel. Currently, there is a tendency to integrate into these control centers other departments that are critical to decision

making, such as the commercial department, the media, ground operations etc. (Jimenez Serrano and Kazda, 2017).

We begin by analyzing what data is needed to provide factual decisions during Irregular Operations (IROPS). The need to implement these decisions requires immediate access to data in real time, as well as its understanding by the frontline and operational team. Decisions are made based on previous operational experience, without considering the real long-term impact on the value of passengers (Jimenez Serrano and Kazda, 2017).

If we consider disruption development projects as parts of a complex system that involves application implementation, systems integration, database management, employee training, improvement processes and executive supervision, the implementation process is very different from system in place and requires a different approach and management mindset, regardless of the airline.

According to Amadeus (2019), there are 10 rules for communication during irregular operations that are listed: 1. Establish the facts; 2. Separate public; 3. Say what you can and as soon as you can; 4. Always lead with what is most important for each audience; 5. Apologize; 6. Be optimistic; 7. Avoid “diluted” words; 8. Answer direct questions with an explanation in the background; 9. Keep abreast of changes in information and reaction to your news; 10. Update regularly and manage expectations about progress.

After analyzing the results of case study I and II and irregular operations in airlines, we can propose a model that responds to contingency situations and in the shortest time.

From the point of view of the crisis management model in the airline sector, it was intended to identify the main variables necessary for the creation of this model, transversal to the entire sector, with the integration of new technologies and in order to improve crisis management, according to the inputs pointed out in the study.

SUGGESTED MODEL

The model was designed to be a tool to support the management of disruption in crisis situations by implementing communication strategies integrated with new social technologies and targeted to different audiences. The implementation of this model has the ultimate objective of allowing an adequate response to the dimension and scope of the crisis, as well as allowing its prevention and anticipation of the crisis itself in order to minimize its effects and provide an answer in the minimum amount of time.

When natural phenomena, technical failures, labor strikes, policies, legislation, and other situations happen, they create adverse conditions that affect the organization and therefore cause a crisis. In view of the above, we have created a model that, due to its characteristics, can help in its management. When a crisis occurs, two situations can occur: all procedures and means of action are defined in the IROPS contingency plan, or they are not documented in the plan due to the emergence of an unprecedented crisis.

Considering the case in which the crisis is already portrayed and studied in the IROPS

Plan, the activation of the crisis room is immediate as well as communication with all stakeholders, at the level of the internal public (employees and collaborators) and the external public (customers, partners, stakeholders). The next step will be to put the IROPS procedures into practice, disseminating information in real time, in a precise, timely and assertive manner. Considering that the crisis develops within the parameters of the IROPS procedures, then it is out of date (Overcome Crisis), which can give rise to two resolutions: either the company reacts effectively, or new solutions will have to be evaluated.

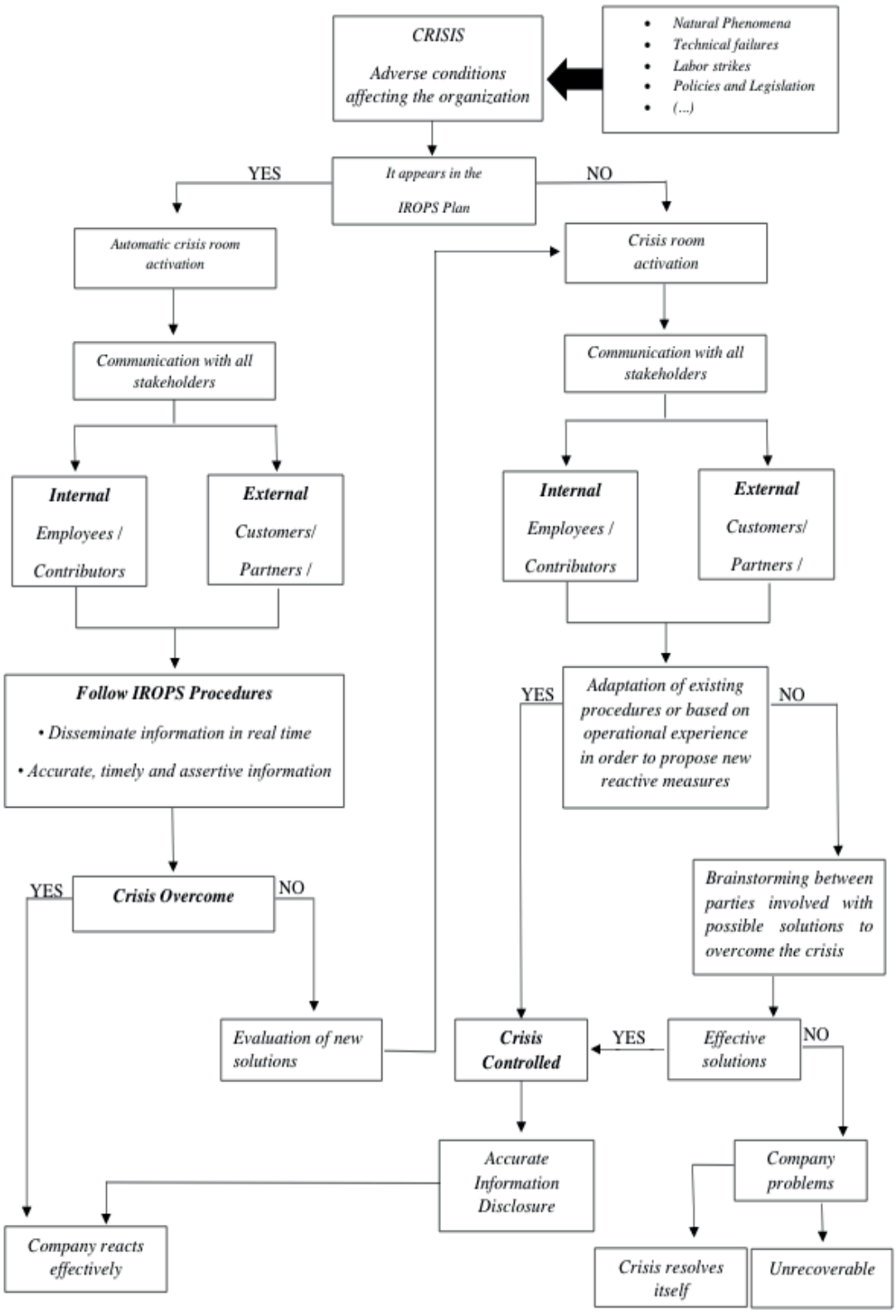

Figure1: Purposed model for management of disruption in crisis situations.

Considering that the crisis is not part of the IROPS Plan, then the crisis room must be activated and, consequently, proceed with communication with all stakeholders, the internal public, (employees and collaborators) and the external public (customers, partners and stakeholders). The situation is immediately analyzed, following the adaptation of existing procedures, or based on existing operational experience, in order to propose new reactive measures. One of the possible situations will be: if based on the existing knowledge and procedures, a solution is found, the crisis will be controlled (Controlled Crisis), then proceeding to the precise disclosure of the information, making the company react effectively. If it is not possible to adapt existing procedures and there is no prior operational knowledge of the type of crisis, then there will have to be a brainstorming between the parties involved.

The solutions that come from the effectiveness of the reaction methods (which will be included in the IROPS plan repository) may or may not be effective. If the solution found to be effective for the resolution of the crisis then the crisis is considered controlled and the steps are followed up to the level where the company reacts effectively. On the other hand, if the solution found is ineffective then there will be problems in the company and two situations can happen: either the crisis resolves itself, or the situation becomes irrecoverable (this being the worst expected result in a crisis).

It is intended a model based on true, concrete, timely and subject to scrutiny information. Crisis management must be undertaken by professionals who assume the definition of messages for different audiences. This model presupposes a platform for articulation and coordination with all parties involved (employees, the media, stakeholders, partners, customers and the community in general) with the aim of informing, reacting (or giving answers in the shortest possible time) and value the company from the point of view of its public reputation and image. Based on the procedures set out in the IROPS plan, and following the different steps, we can reach a situation of overcome crisis, which assumes that the company reacted effectively, or in the case of a crisis not overcome, we will have an evaluation of new solutions for the resolution of the crisis. If the disruption is not included in the IROPS plan, another situation arises, the main objective being the control of the crisis for a final solution or, if it is not immediate, there will be a brainstorming between the parties involved with possible solutions for future repository and with the purpose of minimizing the negative impacts on the company with a view to not affecting its image.

Finally, the company must adopt a posture of transparency and availability to address the questions, doubts and concerns of all its stakeholders, which naturally arise in a crisis.

CONCLUSION

Aviation is vulnerable to disruptions that are known in the air as IROPS (irregular operations), which can be caused by natural disasters, excess reserves, local attacks or military actions, terrorism, technical or logistical problems, crew health, strikes, among others.

These factors prevent and interrupt the work of airlines and airports. It is up to the sector to manage disruptions and is understood as a set of measures that are used to, whenever possible, recover and remove the catalyst of the problem. Hence the need to discuss what are the problems, and the opportunities, and how to address them to reduce the impact of interruptions. Today social media has become a tool used as a communication channel that, depending on its use, can deal with the consequences of disruptions, informing different audiences, both internal and external, in a timely and timely manner.

FINAL CONSIDERATIONS

The ability to respond in terms of skills, good articulation and coordination with workers, the media, stakeholders, partners, customers and the community in general, providing timely, easily accessible and timely information on the point situation and ways of resolving, to those targeted is considered good practice.

The contributions of the proposed crisis management model lie in the potential and added value of its application. There are no models that are watertight or predefined variables that are suitable for all crises; we will have to understand what the needs are in each crisis.

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