Role of Communication and Technology in Crisis Management

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Abstract

This study aims to indicate the role of the communication process and new technologies in the crisis management, by showing deferent concepts related to the crisis management, its phases, how can we manage crisis using communication, and how can we use technology to manage crisis. The main idea of this study is that stakeholders (internal or external) are very important to overcome on a crisis, and every organization must identify the full range of its stakeholders, so it can receive their help when it is necessary.

Keywords: Communication, Technology, Crisis Management

Introduction

In recent years, there has been a growing number of crisis faced by organizations, and there has been a significant change in the perception of challenges in the field of crisis management, because of that organizations have made a lot of researches to find effective methods to manage these crises, in order to reduce losses, and between these methods we find communication, and thanks to the technological evolution, managing crises becomes realistic.

Definition of the word crisis

The word crisis refers to a situation or a case faced by the decision maker in one of the administrative entities (country, enterprise, project family...), where events comes successively, and where the reasons are intertwined with the results, and because of that, the decision maker will lose control of this situation, and with its future trends (Idriss Lekrini, 2014, P10).

Definition of crisis management

The crisis management is to overcome on a crisis using scientific and administrative tools to avoid its negative aspects, and take benefits from its positive aspects (learning from it) (Mohssine Ahmed Elkhadiri, 2003, P 34).

Also it could be defined as a set of activities (financials & operational), that allows the maximization of a value of an enterprise, by reducing costs associated to the volatility of its cash flows (George Dionne, 2013, P 8).

Phases of crisis management

The crisis occurs in three phases; first, there is the crisis preparation (pre-crisis) which means the appearance of a few or many signs, before the occurrence of a crisis, a sensibility of the prevention is a systematic vigilance of the early warning signals, must also be developed by organizations, Professional abilities (stress management, preparation for the media communications, and organizational (flexibility, communication's fluidity, a quick mobilization of resources, response capacity), could be improved and tested, this first phase could be resumed to two crisis management mechanisms anticipating and sensing.

The second phase is the crisis recovery, where the organization follows one of the most important aspects of the crisis management: “the damage containment”, to avoid the crisis affection of other organizations sectors.

Finally, an organization that lives a crisis, must learn lessons and admit its weaknesses, this phase is very hard, because organizations are attempted to hide their faults than learning of it, this phase is the learning process (Marine-Christine Therrien, 2012, P 2-3).

Communication for crisis management

The organization should not wait for a crisis to happen before deciding on how best to communicate during one. Much of the overall crisis communications strategy can be discussed and agreed well ahead of any event. This will give the organization time to develop and test the necessary relationships, plans, protocols and templates well before a crisis hits.

The pre-crisis phase has a strong emphasis on preparation. This should include horizon scanning to anticipate any potential events, which may have a significant negative impact on the organization.

During the crisis, communications can be broken down into three distinct phases: short, medium and long term. As crises differ in duration, these phases are not associated with timeframes but are aligned with how the crisis itself has progressed. These phases are broadly defined as:

- Short time: or ‘pre-consequence', where the opportunity still exists to influence how the crisis unfolds and shape reactions to it.
- Medium term: or ‘consequence response', where communications are centred around explaining events and how the organization plans to recover from them.
- Long term: or ‘post response', focusses on rebuilding (and potentially

improving) the organization's reputation.

The phases of communicating in a crisis (including pre-crisis) and how the organization will approach each part, should be included in the organization's crisis communications plan. When a crisis hits, pre-planning means that the organization have already had the opportunity to think through and potentially exercise what the organization might do in the situation, rather than simply reacting to events (Tony Pearce, 2013, P5).

Stakeholders' identification

A stakeholder is defined as any group or public affected by the organization's operation (Christine M. Bailey and al 2005, P393).

Identifying the full range of the stakeholders of an organization, and their information needs, is a critical in the first step in preparing for any crisis event.

the stakeholders will have both broad and specific information needs and failure to meet these will result in a wide range of negative consequences, that will remain well after the crisis has been resolved.

Stakeholders can be divided into two groups - those external to the organization and those internal to it. During a crisis, concentrating on one group at the expense of the other will inevitably have a negative impact. Both internal and external stakeholders should be considered although not necessarily given equal emphasis.

External stakeholders

An organization's reputation and revenue streams are largely dependent on its external stakeholders. Mapping out the stakeholders prior to a crisis event will enable the organization to ensure that this time-consuming process does not have to be repeated from scratch at the start of every crisis, but rather can be revisited to ensure that the list remains current and any additional stakeholders specific to the crisis are identified.

Internal stakeholders

During a crisis, the organization will face pressure from external sources to re-establish pre-crisis service levels as soon as possible. The organization internal stakeholders are vital to ensuring that any crisis is successfully navigated and that the organization's response is conducted in a timely and effective manner.

Maintaining two-way communications internally is critical to successfully navigating a crisis. It will also ensure that the message is consistent across all parts of the organization. If internal stakeholders are not kept informed, a range of negative consequences may occur that will prolong the crisis.

Whilst the organization may have a social media policy in place, the ease of access to the internet through smart phones or computers means staff will probably access social media during a crisis, regardless of official advice.

Ensuring the staff have up-to-date and accurate information, will help ensure that incorrect and damaging information does not make its way into the public domain (Tony Pearce, 2013, P9).

Choosing the right communication channel

A communication channel is the method by which a message is delivered. There has been a rapid rise in the number of channels available to organizations to use to communicate with their stakeholders, thanks to advancements in technology.

When choosing a channel, you should ask:

- Who is your target audience? Use the channel most appropriate for your audience. For example, if you are attempting to communicate with people in remote communities, radio may be more appropriate.
- How quickly does the message need to be distributed? If it needs to be sent immediately, radio is a better medium than a daily newspaper.
- What resources do you have available? Some channels, such as social media need an organization to monitor and interact rather than acting as a 'fire and forget' resource. Do your staff have the time to perform this function in a crisis?
- How detailed is the message you are trying to convey? Different media have different length restrictions. For example, it may be better to use a text message to direct people to your website where you can publish more detailed information.
- Are you looking to inform or actually engage your audience? Television may be great for getting your message to people, but social media will allow you to get rapid feedback.

The organistion will probably use a mix of communication channels rather than any one individual medium during a crisis. This will allow the organization to communicate effectively with a range of its affected stakeholders (Tony Pearce, 2013, P 13).

Structuring the message

During a crisis, every detail of every message is scrutinised and acted upon. For this reason, the structure, language and content of each of your messages needs to be carefully considered.

Long-winded and rambling communications can lead to confusion, ineffective actions and may prolong the crisis. Well- crafted communications can help resolve the crisis more quickly and may enhance your reputation (Tony Pearce, 2013, P 17).

Collecting, analyzing, and responding to feedback

The organistion should gather feedback during and after a crisis to ensuring that it is

responding in an appropriate and positive way.

This information is also useful for a post-crisis review. It is important to capture the lessons identified during the crisis so that they can be incorporated into the organization's planning for any future event.

During an ongoing crisis, analysing feedback can allow the organization to actively manage and respond to any misinformation that may circulate. Fast and decisive 'myth-busting' can be crucial for correcting false information that stakeholders may be acting upon. It will also help counter any associated reputational damage. Feedback will in addition identify if there are information gaps that are being filled by external speculation, which it can fill with accurate information.

Not all feedback is useful however. Skill is needed to identify quality feedback and use it to enhance the organization's current and future response. Likewise not all feedback should be equally weighted. For example, people with recognised technical expertise may carry more authority than a casual observer (Tony Pearce, 2013, P 20).

Technological aspect of crisis management

In modern societies, technology plays an important role and thereby creates new technological challenges. Due to the proliferation of technology the availability of communication-channels is highly dependent on electricity (Medienwirt Christian Neuhaus, 2010, P 2).

Nowadays, crisis management is not able to operate efficiently without the support of the state of the art ICT. In order to find an optimal operation model in crisis management it becomes more frequent to take the advantage of various technological innovations (e.g. trusted computing and agent-based infrastructure) or organizational solutions (e.g. cloud computing). In this section, an outline of new technological opportunities for improving crisis management is provided (Jan Zych and al, 2012, P 106).

Mobile technologies

Currently, mobile technology is advancing rapidly, both in terms of mobile phone popularity and capabilities. Modern mobile devices (palmtops, mobile phones, etc.) are capable of performing tasks that used to be reserved for personal computers. With regard to capabilities, there is a marked trend to integrate hitherto separate devices into a single solution. Modern mobile devices are often equipped with auto-focus a digital camera with several Mega pixels, Full HD video recording possibility (such resolution was barely achievable for dedicated digital cameras just a couple of years ago); moreover, these devices have several GBs of internal storage (with possibility to further increase using flash memory). Combined with broadband (e.g. based on HSDPA or WiFi b/g/n) data transmission and access to modern services (e.g.: online maps (even with traffic information and predictions), weather forecast or social media) mobile phones are considered to be a great tool in crisis management, used not only for communication

between responders, but also for dissemination of information among the public in general (Jan Zych and al, 2012, P 106)..

Social Media

Social media is set of technologies that allow people to exchange multimedia information. Despite the fact that the information in social media comes from sources that are not verified, social media allow people to exchange information ideas, opinions and experience. Therefore, social media has become very popular and this trend is growing.

The example of the 2010 flooding in Central Europe emphasizes the importance of using social media during crises situations. Citizens of the Bydgoszcz city in Poland were using a forum to inform each other about the water level; this source of information was much more effective than official communiques in traditional media. Nevertheless, with the growing popularity of social media, this information could be disseminated even faster - using applications like Facebook, Twitter, Web log and others. Comparing social media to internet forums, one may notice that the former one allows to exchange information almost in real time e.g. through smartphones. The cost in terms of development and maintenance of infrastructure as well as disseminating the information to many recipients is negligible, since social media does not require any additional costs apart from the Internet connection bills (Jan Zych and al, 2012, P 107)..

Cloud Computing

Another new opportunity for crisis management is the use of dedicated services in modern business models - cloud computing. The main idea behind cloud computing is to provide services from remote centres using the Internet as a communication channel. In other words, cloud computing provides applications that run on the Internet. Cloud computer services are divided into four models:

- IaaS - Infrastructure as a Service. This model provides all the equipment needed by an organization to support operations, it includes hardware, servers, storage and network components. In this model, the cloud provider is responsible for maintaining the equipment.
- PaaS - Platform as a Service. In this model, cloud providers deliver a computing platform including an operating system, a programming language execution environment, database and web server. With PaaS applications developers can design, run and debug their software solutions on a cloud platform, and do not have to worry about buying and maintaining the hardware and software layers.
- SaaS - Software as a Service. It comprises software applications that are installed on the cloud and that can be accessed by cloud users. Since the software applications are located on central hosts, the cloud users can access them through a browser. In SaaS, users do not have to maintain the data and

infrastructure on which the application is running e.g. games, google docs, e-mail, etc.

- BPaaS - Business Process as a Service. This model includes any business processes delivered as a service over the Internet (for example, payroll, printing, e-commerce) and accessible by multiple web-enabled interfaces and devices such as PC, tablets and smartphones.

Cloud computing could contribute to crisis management by facilitating information sharing among first responders at different management levels (central, regional and local) and making the emergency notification more accessible to the public. Additionally, cloud computing reduces costs when it comes to data storage and recovery after a disaster. Companies that own the infrastructure locally could be severely affected by a disaster as their server may be permanently destroyed and backup may be lost. In the case of a disaster affecting a cloud computing data centre, user data will not be lost since suppliers of cloud infrastructure replicate user data and cloud servers across multiple data centres.

Furthermore, the data stored on the cloud is highly secured by cloud providers. In the data centres, the integrity of the information is protected with power generators, monitoring systems and 24/7 security personnel as well as technical specialists.

There is a wide range of possible cloud computing applications in crisis management. It not only improves the current services (in terms of e.g. costs, scalability confidentiality, availability, security, redundancy and performance), but also provides new opportunities (Jan Zych and al, 2012, P 107-108).

Conclusion

In this study we've shown how the communication process could be used to manage a crisis in the right and effective way, also the new technologies and their role in the crisis management, by shortening reactions times, and improving consistency of message, and providing relevant and redundant information for stakeholders and by providing back-channels between organizations and its different stakeholder. Instead of standardizing communication.

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