THE IMPORTANCE OF CRISIS COMMUNICATION IN CRISIS MANAGEMENT OF CONSTRUCTION PROJECTS

Michal Vondruška¹*

¹ Department of Construction Management and Economics, Faculty of Civil Engineering, CTU in Prague, Thakurova 7/2077, Prague 166 29, Czech Republic

Abstract

Crises are a common feature of construction projects because of the long-term nature of projects. Crises manifest themselves in sudden outbreaks of a large number of otherwise minor unmanaged risks, or in sudden harmful influence of a major risk. Resulting crisis of a construction project endangers primary goals of the project (budget, deadline, quality) as well as good-will and know-how of company that is in charge. Under current market conditions, risk and crisis management seem to be very important aspects of successful business. This paper focuses on the use of crisis communication as a form of crisis management. Analysis of a crisis in a large construction project is explored in detail with regard to principles of crisis communication and their proper use in crisis management.

Key words

Communication; construction; crisis; management; project

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*Corresponding author: Tel.: +420733530102

E-mail address: michal.vondruska@fsv.cvut.cz

1 INTRODUCTION

Crises pose special managerial problems compared to day to day problems and the evidence presented in this chapter indicates that they will become an increasingly common aspect of managerial life.

Unfortunately, traditional managerial values have diverted attention away from the need to build resilience into organizations to deal with the unexpected. To prepare better for crises, managers need to develop a mind - set that perceives them in a more positive way and that is more receptive to thoughtful, open, flexible, trusting and employee - centered management styles. Not only will this reduce the chance of catastrophic failure, it will release the untapped creative potential and energies that are yet to be exploited by traditional managerial practices. [1]

Crisis communication is an important tool for crisis management in construction projects. It is directly linked to strategic planning of a construction project, its policy and standards. It is essential that a project's communication plan reflects the organisational breakdown structure by ensuring that responsibilities and reporting relationships are compatible with the way in which information needs to be created, transmitted and received. [2]

A functional model of crisis management, which is integrated in company management structures and procedures of construction project management, needs timely, reliable, and unadulterated delivery of information concerning crisis and current status of crisis management. Crisis communication in a construction project consists of information flow among crisis management and internal participants or external environs of a construction project. Well planned crisis communication answers the following questions:

- Who to inform and in what order?
- Who provides information?
- When should information be conveyed?
- In what manner should information be provided?

The goal of this paper is to improve the tools and processes of crisis communication.

2 LITERATURE REVIEW

The communication structure is a factor in determining the efficiency of crisis management in construction.

The communication structure which emerges in response to a crisis influences reaction flow in terms of its speed of transfer and its distortion and reduction trough filtering. Efficient information flow is important to the reduction of misunderstanding, disagreement, frustration, tension and ultimately conflict. Efficient information flow also is important to the speed and appropriateness of response to a crisis. However, the influence of communication structure upon crisis management efficiency is complicated by the nature of transactional content and the interests and abilities of people operating within the structural framework. These factors can reinforce, weaken or even reverse the influence of communication structure upon efficiency.

Types and principles of crisis communication in construction projects:

Internal crisis communication

Internal crisis communication is a strategic tool of project management, which prevents, or limits, inadequate reactions and behaviour of internal participants in a construction project, i.e.

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delegates of the investor, project employees, and subcontractors. In a situation of heightened risk of crisis, or in an emerging crisis, many half-truths, rumours, and plenty of unsubstantiated information start to spread among the mentioned internal participants. Unless these half-truths are corrected, and regulated in a timely manner by an official source, they may deepen a situation of otherwise preventable crisis. [4]

Employees should be notified at the moment of crisis outbreak. They ought to be informed about current situation, and about previous events which led to current crisis. A crisis manager needs to be able to step up in front of project employees, and inform them sensitively and truthfully about current status of given project, and about the results of such situation for their further actions concerning the project. What needs to be accomplished at this stage is prevention of misrepresentations and exaggerated reports of the situation, and prevention of false alarms. Further information needs to be provided in intervals planned beforehand, or in moments of change within the crisis situation. Project employees should never learn about project crisis from their supplier, or even worse from the media. Providing information about a crisis is a task of Crisis (project) management, or company management. [2] Employees are viewed as an important unofficial source of information by the public, and they are often questioned about the crisis by their relatives and friends. Crisis may do harm to employee loyalty towards their employer, and thus further escalate.

Internally initiated crisis communication: Communication commences on the grounds of an initiative expressed by one of the members of a construction project management, project employee, or a subcontractor. Such communication is not to be taken lightly in situations of crisis. Internally initiated communication situations, where no external contacts are brought in the discourse, bring about the need for project management to immediately and personally acquaint themselves with given situation (e.g. in instances of injury at the construction site, or accidental leakage of toxic substances in the environment, etc.). Such situations need to be resolved in the same manner as if they were initiated by an external party with interest in the project. However, it is vital for this category of communication that from the announcement of the situation until the moment of full acquaintance with the crisis, whole situation is handled utterly internally. Fig. 1

Crisis management has to utilize all possible means to prepare and settle all their answers beforehand, and then relay information about the situation to public as swiftly as possible. If this course of action is not taken, there may be severe harm to the company's image, and grave breaches in company trustworthiness on public behalf. [5]

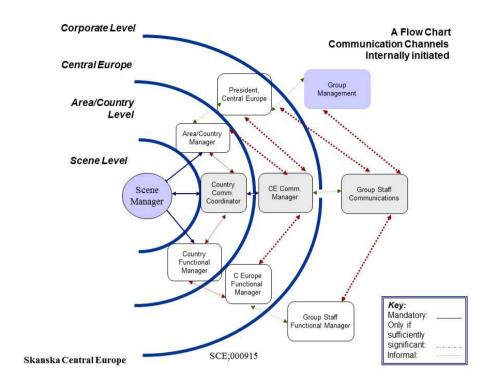


Fig. 1: A Flow Chart of Communication Channels, Internally Initiated (Skanska a.s.)

External crisis communication

External crisis communication is usually initiated when project crisis may cause negative impact on project environs or in such cases when inadequate reactions to leakage of incomplete and imprecise information about internal issues of a project may cause harm to the project.

The addressees of external crisis communication are: [6]

- Clients who need to be informed that the situation is currently being solved, with regard to the fact that their commissions will not be delayed;
- Investors who should be assured that project management is in control of the situation, and that regular reports will follow until acute crisis is assuaged. Investors need to rest assured that the managing team stands on solid ground, and is capable of handling crisis situation;
- Governmental, regional, and local authorities should be informed according to the character of the crisis so that unnecessary alarm or detriment is prevented within the community;
- Insurance companies and lawyers should be informed according to gravity of the crisis.

The essence of crisis communication is in finding appropriate means and tools for communication control among the project and its environs. The goal is to utilize project environs to assuage the aftermath of crisis. Large construction companies use communication strategies to create an image in media which helps them to acquire new contracts and commissions. Communication patterns of company management in such companies are usually spelled out in great detail in communication handbooks and materials, which constitute an obligatory system of company and project management. [7]

To name at least several means of crisis communication in construction business, we could list press releases, conferences, crisis advertising, media lobbing, and the likes.

Externally initiated crisis communication: Communication is initiated by a participant of the construction project, authorities affected by the project, or any party concerned. In externally initiated communication, ready-made scenarios need to be strictly applied, all concerns and comments from the project environs have to be considered as significant, and approached as such until the situation is fully comprehended. All company principles and communication methods need to be applied with a great amount of empathy. Communication management in construction projects is an application of general communication management theory concepts (see Tab. 2), and specific project needs to the project management handbook.

Construction practice example: SKANSKA corp. defines the rules of communication for projects carried out by the company, and communication links within company structure, in their project management handbook, section called Communication. According to these instructions and definitions, communication is of outstanding importance in any project, and all project documentation needs to meet criteria laid out by management documents (see Tab. 1). In this manner, a project manager gains essential knowledge of his company, identifies himself with company policy, and creates consistent relationships with other project participants. The fundamentals of Skanska communication policy, as follows from management documents, may be summarized as three basic principles of company communication – these are the proximity principle, the unity principle, and communication characteristics principle.

The Proximity Principle – the local branch of the company is responsible for communication, as they have the best information and knowledge of project problematics.

The Unity Principle – all relevant and substantial information is gathered centrally, and then provided to external and internal users via company communication flow.

All Skanska communication – all company communication needs to share these characteristics: Candor, Speed, Advance planning, Credibility, Ethics.

Tab. 1: SKANSKA corp. – Documents for communication management (Skanska corp.)

The Skanska Corporate Communication Policy
The Skanska Central Europe management system "Our Way of Working"
Skanska's Handbook in Good Communication
ISO 14001, (International EMS Standard ISO 14001)

Tab. 2: Overview of common principles of crisis communication according to

	Theoretical principles [4]	Best practice principles[8]
1.	Principle of direct responsibility	Principle of process accessibility and progress policy
2.	Principle of independence	Principle of pre-crisis communication planning
3.	Principle of accuracy and brevity	Principle of public relations
4.	Principle of trustworthiness	Principle of listening to the opinions and needs of the public
5.	Principle of subject knowledge	Principle of honesty, objectivity, and openness
6.	Principle of expected reaction	Principle of co-operation with trustworthy sources
7.	Principle of the worst development	Principle of continual accommodation of media demands
8.	Principle of seeking support	Principle of need to communicate with sympathy and empathy
9.	Principle of truthfulness	Principle of necessity to accept uncertainty and misrepresentations
10	Principle of openness	Principle of filing reports on efficiency of actions

3 METHODOLOGY

Crises in construction projects are described as situations causing harm to a construction company's image. Information about the course of a crisis and its management are usually kept strictly confidential within construction companies. Therefore, it is difficult to find specific

models and tool of crisis management in companies, or statistic data which would display the influence of crisis situation on project economy.

The data that form the basis of each case study should be collected from diaries that were completed by project members before, during, and after each crisis, from observations of project meetings, from documentary inspection, and from retrospective interviews with project participants. The results could be interesting and shocking and should provide revealing insights into life on typical construction project.

An efficient model of crisis management may thus only be inferred from retrospective. An option of crisis situation shall be deduced, with conclusive crisis management, and reasons for facts behind the crisis that were not laid out to be observed publicly at the time when crisis was in progress. This inductive method may help us form a general predictive model for crisis management in construction projects on the grounds of specific case studies and crisis management theory, which shall be analysed.

4 CASE STUDY

Utilization of crisis communication in project management of "Bauhaus Ivanovice hobby market" – crisis resulted from rejection to issue a permit to use

Project information:

Bauhaus, LLP project includes construction of hobby market premises with an area of 9,766 m², drive-in distribution depot, and gardening centre with the area of 9,320 m², service road, and parking area with a capacity of 488 parking spaces, diversion of high voltage conducting, water, sewer, and gas connections, outdoor pavements, park landscaping, and advertising objects. This construction is located across lots in Ivanovice (district of Brno) land register. The project is set apart from housing units by Černohorská street in the west, which is a II. class road. The eastern part is contiguous to Hradecká street, which in this part of Brno is formed by four-lane driveway from Svitavy. In the east the lot follows from currently existing Globus hypermarket, Baumarkt hobby market, and other commercial units which fill the gap between Ivanovice housing units and Řečkovice housing units. The lots attributed to the project are functionally designed by Brno land-use planning for commerce and services. Construction administration issued a land-use permit, followed by a building certificate from an authorized building inspector. After the finishing of the project, permit to use was not issued.

Course of crisis and methods of its management:

There had been a number of issues concerning the project since it very beginning, that is since the investor's decision to execute the project. Main sources of problem were local inhabitants represented by citizens' associations. This led to a series of trials, and consequent discontinuity in project execution, and in the end to project interception expressed by refusal of permit at the stage of project completion. The problems of this specific project will be summed up, and hopefully made clear, as during the times of trial, situation was rather chaotic.

The building lots in question, which were used for the project, were owned by a developer company from the start. This company endeavoured to prepare mentioned lots for a construction of a large shopping centre, due to the strategic location of these lots. The developer company entered into strategic partnership with Bauhaus, LLP as the investor. However, the investor did not make this information public. Bauhaus, LLP needed an area of 20,000 m² for its upcoming plans, and though the lots owned by developer were designed for commerce and services by Brno land use planning, flooring index of these lots only made it possible for 10,000 m² of commercial flooring to be used. Bauhaus, LLP conditioned disbursement of their expenses by

the issuing of building permit. Therefore, developer addressed Fuertes Development, Ltd. engineering company, as the latter had already had experience in building similar commercial centres, and they agreed on the following strategy. For land-use documentation purposes, the construction of hobby market would be divided into market area of 8,000 m², and construction material depot (drive-in distribution depot), with a gardening centre depot – these constituting a total area of 8,000 m² as well. Project proposition for land-use decree raised a multitude of objections and revocations in administrative proceedings, with special concern of project's influence on the environment, and digression of project size and purpose from land-use plans. Brno municipal corporation, however, gradually overruled all objections, and the project gained a decree of building emplacement.

There had been a number of remonstrative happenings organized by local inhabitants, both during the administrative proceedings, and after the decree of building emplacement was issued. These actions led to a large amount of stress aimed at the local council, and in the end even led to displacement of the local mayor. The official reason was her alleged passivity in defending local inhabitants from the construction contract, and issuing of a questionable land-use decree. [9]

The activists also organized a sociologic research led by Masaryk University, Faculty of Social Studies, in which 73% of questioned population pronounced themselves against the construction of a hobby market. The whole cause was given great attention in media, and there arose petitions and more remonstrative happenings from releases in local media. Delegates of the developer and engineering company gave only brief announcements over to press. Bauhaus, LLP offered no information on the subject, and explained that they were not participants of the proceedings, and that the project was not in their ownership.

After the land-use decree in 2008, documentation was processed for a building permit, and it was handed in to local building authority for discussion. During the necessary proceedings which precede issuing of a building permit, there was a number of objections against the project of hobby market construction. The stated reasons for those objections were mainly digression of the project from land-use planning documentation. [10] Documents had already been prepared for the future user, which was meant to be Bauhaus, LLP.

In 2010, there was a sudden twist in the project. Developer and engineering company decided to change strategy with regard to long-winded building permit proceedings. They decided to use the institute of an authorized building inspector for gaining a building permit, as defined by Law no. 183/2006, Collection of Laws, Part four, Building regulations, Catch III: Authorized inspector §143 to §151. [11]

Based on a contract with the developer, the building inspector issued a certificate for Bauhaus hobby market construction in March 2010. Thus investor's condition for disbursement of expenses was fulfilled. Building lots designed for shopping centre project, which had been given a valid certificate according to Czech legislation, were transferred to investor's company under the name Heršpická Facility Management, which is owned entirely by Austrian Bauhaus Grundstuck GmbH. Foreign owners of the investor (lot owner), and future facility user were given a guarantee of investment safety by the means of this transfer.

Immediately after issuing of the certificate, the investor started project execution. Uncovering of top soil was started, ground shaping, water, sewage, and gas connections, and diversion of high voltage conducting followed.

In May 2010, activists filed a lawsuit with Municipal court in Prague, whereby they demanded annulment of building certificate issued by the authorized inspector.

The accusants presented following reasons for their lawsuit to Municipal court in Prague, whereby they demanded annulment of building certificate issued by the authorized inspector:

- Illegitimate violation of adjective law by not allowing the accusants proper processing of documentation with individuals participating in construction proceedings;
- Divergence of certificate from valid land-use plan of Brno, the reason being exceeding the limit for feasible market area of 10,000 m², and construction project contravening the character of given locality by the means of area, construction volume, and location;
- Divergence of certificate from land-use decree by means of exceeding the limit of 10,000 m² for feasible market area, and by not abiding by the conditions of land-use decree whereby proceedings concerning public lighting need to precede building permit, proceedings concerning hobby market construction, or issuing of a certificate by an authorized inspector respectively;
- Divergence of issued certificate from land-use decree concerning lots where the project was to be executed, as these lots were not included in land-use decree, yet they were included in authorized inspector's certificate;

The lawsuit resulted in discontinuation of construction project on the grounds of precaution measures taken by Municipal court in Prague against the effect of building certificate, until such time as activists' accusations are considered. The investor continued in carrying out preliminary phase of the project, which was not a part of the certificate concerned, and filed an objection against the preliminary measures of Municipal court. These actions spurred another wave of objections from the activists, and more media interest. Municipal court refuted the activists' accusations in August 2010, and also refused the proposal of preliminary measures that should prevent the builder from project execution. The investor began project execution to its full extent. The activists filed a cassation complaint against the rulings of Municipal court in Prague.

Investor did not wait for the outcomes of cassation complaint, and started project execution phase immediately, and to full extent. Project execution took its course very fast. Builders created a protective bulwark of extracted soil around the whole construction site to prevent complaints about augmented levels of noise and dustiness. This also limited view of construction site from roads and pavements. Thanks to these measures, the scope of actively protesting public did not extend much further, despite the activists' efforts. Construction project was resented by the local public because of its negative publicity but there was not much deprecatory activity on behalf of the citizens. Discord concerning construction project thus remained located in the adjacent urban area.

During project construction phase, segregation of Ivanovice citizens gave rise to further controversies between advocates and adversaries of hobby market construction among local citizens. Land use register of Ivanovice municipality had been built over by luxury houses since 1990s. Such development lead to changes in character of the municipality, and social composition of its inhabitants. This in its turn led to influence in the municipal council, and authorization of construction projects in land use register. The original inhabitants indorsed the project, while newcomers, who gradually gained representatives in the council, were strongly against the project, as it degraded both utility and factual value of their own investments.

Thanks to this discord among the local public, Bauhaus, LLP gained arguments to defend the construction project in question, and started active crisis communication.

Crisis communication in management of Bauhaus Ivanovice Hobby market

1/ Paid advertising

On 29th July 2010 Bauhaus, LLP, and Heršpická Facility Management, Ltd. printed two statements by means of paid advertising in local press. In these statements, they declared information concerning several questions regarding the construction of a hobby market in Brno.

2/ Utilization of public relations

The investor supported local petitions among citizens advocating the construction. Paradoxically, this petition returned more signatures endorsing construction than sociologic research carried out by Masaryk University, Faculty of Social Studies, and commissioned by Nesehnutí organization.

Bauhaus hobby market construction was finished in September 2011. The investor obtained permit to use for certain parts of the project. However, at the same time, the Supreme Administrative Court turned down cassation complaints filed by both activists and investor, and passed the claim against construction to Municipal court in Prague. Municipal court avouched suspension, and intercepted the validity of building certificate. The finished project could not, therefore, obtain the remaining permits to use.

Such twist in project execution was the peak of crisis in Bauhaus hobby market construction. The buildings were fully functional, future user invested enormous financial means towards advertising and celebratory opening, the object was stocked with goods while proceeding towards permits to use. The future user had to employ over 200 employees for the upcoming commercial activities. The buildings needed to be heated, and secured against incursion.

Investor took legal measures towards legalization of the construction. However, major legal concerns arose from relatively short effectiveness of building law, and there were ambiguities concerning abbreviated building proceedings, legal character of the authorized inspector, and certificate issued by this inspector. The outcomes were largely formed by executive powers of administrative courts. It was impossible by then to forecast the results of court proceedings. The administrative and court suit encompassed local autonomy, Ministry for Regional Development, Municipal Court in Prague 8, Supreme Administrative Court, and eventually even Constitutional Court. [12]

From the investor's viewpoint it seemed inadequate to leave the matter merely in the hands of law practitioners, as the finished project, or rather the impossibility to use the finished buildings, caused economic damage worth millions of crowns. The investor therefore took advantage of the services of a PR agency specialized in crisis communication. Apart from the defensive campaign, and statements issued by the investor during court proceedings, we can trace three major tendencies of crisis communication campaign, which ought to have turned the attitude of public concerning the questionable construction project, and bring new political dimensions to the investor's issues. Such were the measures which were taken:

a/ Press release by Bauhaus LLP concerning the possibility of arbitration against the Czech Republic

On 8th December 2011 it was released in media that "Bauhaus, LLP, an Austrian company, is preparing for arbitration court against the Czech Republic; the company wants to claim 2.25 billion CZK. The company already informed Ministry for Regional Development about the preparations for arbitration court concerning an intercepted construction project of a hobby

market in Ivanovice, Brno by means of a letter. Aleš Pacal, the executive head of Czech branch of Bauhaus, confirmed that Bauhaus law practitioners are processing documentation for the arbitration court."

b/ Press release about the dismissal of previously hired employees of the hobby market

On 25th June 2012, Bauhaus, LLP emitted a press release in which they evaluated the progress of court proceedings concerning the validity of building certificates, criticized low competence levels of courts, and lengthy proceedings litigation. They further informed that "Bauhaus LLP had to make the decision towards massive dismissal of employees in order to prevent further economical damage. Such damage is a result of the aforementioned reasons, and comprise, among others, also inefficient employee expenses. Economical damage has surmounted 100 million CZK to this date. Bauhaus, LLP is ready to exact this damage legally, and from every participant of the proceedings that caused damage to the company. The certificate issued by an authorized inspector concerning the construction of Bauhaus market, which is currently a subject of lawsuit, had been pronounced by Constitutional Court of the Czech Republic to be a decree governed by public law, and as such to have the same legal and factual effects as a building permit. Authorized inspector is an executive authority, in the same position as any other executive authority. The investor of the construction obtained a certificate from the authorized inspector when purchasing the lots whereupon the construction was to be executed in good faith that given certificate is valid, and in accordance with valid laws of the Czech Republic."

The dismissed employees were given notices that stated a promise of their re-hiring in case of re-opening of the market. Thus the investor acquired their direct support in remonstrative happenings organized to support the emission of a permit to use. The dismissed employees organized a blockade of the local road, and a blockade in front of County Court in Brno.

A senate consisting of Supreme Court and Supreme Administrative Court judges rendered a decision in September 2012 that it does not appertain to court to make decisions about certificates issued by authorized inspectors, rather that it is a matter appertaining to local building authority in the first instance. Thus a decision of Municipal Court in Prague 4 was invalidated, and claims against building certificate were overruled. Further claims against building certificate were up to the local building authority to decide and settle. In October 2012 Ivanovice building authority issued a permit to use for the market centre, and following the virtue of that permit, the market was opened. [13]

Active crisis communication on the investor's behalf resulted in obvious positive outcome, as it counterbalanced the arguments of project adversaries. Subjective deductions can be made concerning the course of action which followed crisis communication, that by the means of active crisis communication, Bauhaus hobby market crisis acquired a new, political dimension, which may have influenced the final outcome of the dispute.

5 RESULTS AND DISCUSSION

Analysis of Bauhaus hobby market construction project brings us to the conclusion that crisis management only catered to crisis communication at the moment of highest risk cummulation and crisis outbreak. Both the developer and the investor purposely ignored the risks connected to the nature of the project (extent, deadline and project economy) and gave up on risk management. Existing project crisis was only managed by the means of crisis communication on the investor's behalf. Case study shows several principles of crisis communication that were employed in given crisis, and that also match general crisis communication principles in Tab.

- 1. We may conclude that following principles correspond in general guidelines and in case study:
 - Crisis communication is a planned process
 - Crisis communication has to be timely, truthful, objective, and open
 - Crisis communication needs to be ethical and managed with empathy
 - Principle of expected reaction
 - Principle of seeking support
 - Principle of public relations
 - Principle of continually satisfying the needs of the media

However, crisis in Bauhaus hobby market construction project is not a typical example of project or crisis management. Despite the high demands of construction projects on management, and their complex nature, it is very unusual for a project crisis to have such grave impact on all basic parameters of a project. It is also uncommon for project management to recede from crisis management to such extent, and to pay attention only to crisis communication. Crisis communication is usually only one of the elements of crisis management, and augments the efficiency of other strategies that are employed in crisis management. There is not a sufficient number of case studies to describe crisis management by the means of solely crisis communication. To author's best knowledge, there are no other case studies similar to Bauhaus hobby market construction crisis and its management. Research concerning different cases of crisis communication could result in more complex definitions of crisis communication, generalization of principles, and better accessibility of crisis communication principles. That would simplify use of such principles in construction project management handbooks.

Despite all odds, case study of Bauhaus hobby market construction crisis supports a general conclusion that successful crisis communication is a powerful means of crisis management in a construction project.

6 CONCLUSION

Experience is important when dealing with crises, but getting that experience is difficult and painful. The best substitute is to relay the experiences of others through case studies of past crisis management efforts. But, there are very few detailed accounts of crisis management in construction context. To redress this deficiency, this paper analyzes one actual construction crises. These paper provide a vehicle for readers to relive other managers experiences. In particular, they help to develop an understanding of how and why construction management behaved as they did during real-life crisis, thereby enabling judgments to made about the influence of certain behaviours on crisis management outcomes.

Crisis communication is a vital tool of construction project crisis management. For construction crisis management to be functional, transfer of information about current state of crisis needs to be timely, reliable, and properly represented. Moreover, construction projects need to communicate clearly with its environs, as the character of a construction project is usually permanent, and changes to environment are irreversible. The environs of a construction project need to be informed about the course of a given project, and its potential crises.

Good communication is essential to efficient crisis management because information is the antidote to uncertainty that crisis generate. Unfortunately, at a time when effective communication is of particular importance, crisis tend to create conditions in which it is less likely to occur. Information is a source of power. Under the exaggerated conflicts of interests

that emerged during the case study crises, information became an increasingly valuable commodity. This was because it represented an important source of power in negotiations and, consequently, it was more closely guarded. Indeed, the inclination to withhold information was magnified by tendency of people with similar interests to collect into groups to information for their common good.

Crisis communication in a construction project consists of information flow among crisis management, internal participants, and external environs of the project. Crisis communication answers the questions of "Who to inform, and in what order? Who provides information? When should information be conveyed? What manner to choose for providing information?"

The answers to those questions are an essential part of crisis planning, and crisis communication management. The question of manner in which information should be provided is tightly linked to strategic planning within a construction company, its policies, and standards. Several principles of crisis communication, similar in their characteristics have been found in best practice, and in theoretical fields and general principles, which ought to be taken into account as a vantage point for crisis communication in construction projects. These principles are chosen on the grounds of crisis situation analysis following from the depicted case study.

Preparing a plan of crisis communication beforehand is important for solving crisis situations, and for mitigating the impact of crisis on construction projects. If a construction company includes plans for crisis management and crisis communication in their project management handbook, such company is prepared to efficiently handle situations which match predicted plans of risk for a specific construction. Schemes of crisis management behaviour, and crisis communication for common risks (e.g. toxic material leakage, construction machinery accidents, structure breakdowns, injuries and fatalities, natural disasters) may be entered into a newly designed crisis communication plan according to company's own best practice experience. Nevertheless, due to the extent and complexity of construction projects, it is hardly possible to predict, and prepare for all potential crisis situations. The outcomes of this paper may, however, contribute to improvement of current crisis management and crisis communication systems.

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