{ Combining visitor management with access control is an obvious step to take }

5. Visitor management effectiveness and efficiency

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Introduction

Visitor management concerns the registration and handling of visitors. A professional visitor management process gives visitors and potential customers a good impression of a business. Depending on the type of business, the focus of visitor management is on safety and security, comfort and hospitality, or simply on obtaining information about the visitors. Visitor management can be a complicated and sensitive business process which requires careful planning and design.

The primary objectives of a visitor management system are to implement the company's security policies, obtain reliable information about visitors and visits, and to give a professional impression without excessive costs. Optimising this process can lead to significant cost reduction, improved security and access to valuable visitor data. All aspects of the visitor management process will be discussed in this article.

Using the method of analysis presented in this paper, the impact of decisions in the visitor handling and registration policy can be assessed. The flow description can be used to optimise existing visitor management policies or to define a new policy. As this article will show, visitor management has strong relations with both technical and organisational aspects.

Definition of visitor management

Visitor management is defined as the subject concerned with registering and handling visitors. In general a visitor can be described as a person who is visiting or is going to visit a site for a limited period of time and does not have any contractual relation to this site. A site can be a physical site (e.g. building, location) or a virtual site (e.g. website). The actual presence on the site is described as the visit. People with contractual relations are usually referred to as employees, permanent residents or contractors.

The importance of visitor management depends on the type of business conducted by the site. In commercial companies, the majority of visitors may be consumers or prospects and expect to be treated as such. In the defence industry, for example, information protection is vital and it is necessary that high security regulations are applied to visitor management.

In all cases, the management of visitors consists of two main steps. Before the actual visit starts, the visitor is registered:

- personal details.
- purpose and details of the visit.
- expected date and time of the visit (now or in the future).

Once the visitor is registered, the actual visit can start. The visit ends when the visitor has left the site and the ending has been registered.

This paper describes in detail the process flow and actions during the registration and visit.

Registration of visitors

The registration of visitors takes place prior to the actual visit. The most basic registration consists of the visitor name and the date of the visit. If the security policy states that visitors should have a responsible contact person within the site, this contact person is also registered. For sites in city centres or highly populated areas, a car-park reservation may also be necessary prior to the visit.

Visitors are typically registered by staff on the site to be visited, but in certain cases, visitors can do the registration themselves.

The registration often starts with a pre-registration some time before the visit, followed by completion just before the visit starts.

Depending on the security policy of the site, the registration process may consist of the following activities:
- Check that the visitor is not on a blacklist.
- Determine whether the visitor has visited the site before (reuse personal details).
- Data entry of personal details.
- Capturing of photo, ID (passport, ID card, drivers license), signature.
- Biometric enrolment (verification or identification).
- Assign access control rights (duration of visit, rights and permissions during visit, authorisation groups).
- Print a personalised badge.
- Enter visit details (who/what is being visited, contact or approval person).
- Enter site specific details (parking space, license plate etc).
- Enter office and destination.

Visit

The visit starts when the registration has been completed. A common procedure is to have some sort of reception desk at which the visitor registration is completed. The contact person is traced and informed about the arrival of the visitor. This is when the visit starts. At the end of the visit, there is formal visit end which can consist of handing over a badge to a receptionist or a card collector.

Depending on the security policy of the site, the following activities may be relevant to the visit process:
- Visitor arrives at carpark and uses e.g. intercom to announce his arrival.
- Check for parking reservation based on name or license plate.
- Visitor parks car and goes to reception.
- Reception completes registration.
- Issue the badge.
- Find contact person and inform about arrival of the visitor.
- Request visitor to wait in reception to be collected by contact person.
- Transfer of visitor from reception to contact person.
- Record movements of visitor in/on the site.
- Release visitor to reception by contact person.
- Release visitor by reception.

Workflow analysis

The processes described in the previous paragraphs consist of the following atomic actions:
- Human interaction (inquiry, explaining procedure etc.).
- Data entry/selection.
- Data capture.
- Decision making (what access control rights must be assigned, handle irregularities).

The enrolment process in particular a high security environment will consist of many combinations of these activities.

In workflow modelling, the process is normally represented schematically in a flow diagram. The actions and decisions for each actor are connected in a logical sequence. The actor is the person performing the action or taking the decision.

The general procedure for assessing the complexity of the workflow is to determine the number of human interactions, actions and decisions. By adding typical durations for the actions, the total duration of the registration can be computed.

Typically, the human interactions and data capture are most time consuming. Data entry/selection and decision making are most sensitive to errors.

Privacy aspects: Roles, preferences and permissions

Managing visitor information is subject to privacy regulations. In some cases, (inter)national rules and regulations limit the visitor registration. Other situations call for precautionary data hiding/ protection for safety, political, cultural or commercial reasons.

Sophisticated permission models based on user roles may be required to optimally fit the company's privacy policies. By adding user preferences, the visitor management system can be tailored to minimise data entry, decision making and prevent human errors.

Exception handling

As in any automated environment, visitor management needs extensive exception handling policies. Handling exceptions is perhaps the most heavily underestimated part of the visitor management process. Few companies take the time to make a risk-effect analysis of the visitor management process and end up with situations in which visitor data is lost, visitors are not registered or safety and security is compromised.

Exceptions in the visitor management process can consist of:
- Failures in system components (servers, software bugs, maintenance slots, network problems, client PC, enrollment devices etc).
- Exceptions to the standard process flow: certain visitors get special treatment, insufficient badges, contact person cannot be traced etc).
- Interruptions to the standard flow: person cannot be enrolled, no more badges, parking full, etc.

The most effective procedure for evaluating the need for fallback systems or procedures is to create a list of all of the things that can go wrong during the process, and assess the effect of each exception by answering the question "what if…." for each step in the process.

For businesses in which health and safety aspects are of vital importance (refineries, chemical plants) the availability of a reliable presence list at all times may be a requirement. In these cases, the handling of failures in the visitor registration system cannot be tolerated. If, however, visitor information is only captured for indicative reporting, a simple fall-back procedure may be sufficient.

Exceptions of a different kind are related to the human interactions or decision making steps in the process. A common situation is the untraceable contact person (e.g. stuck in traffic). In this case there can be a reason to bypass the ruling security policy and allow the visitor to get into the office without the contact person being in the office. The risk and effect may be low but if the system cannot handle this situation because the contact person is mandatory and must be in the office, the process is interrupted. The goal is to identify these types of situations in advance and take appropriate actions to prevents chaos at the reception desk.

Logging, archiving and reporting

Action logs for the visitor management process must be kept for tracking and tracing purposes. It is important to identify the potential users of the logging information and the requirements they have: any data which was not recorded in the past cannot be retrieved. In some cases, rules and regulations require an archiving and cleaning procedure; e.g. visit or visitor information cannot be kept for more than 3 months on-line and must be archived for generating historical reports. In huge systems, the performance of the system may reduce dramatically if too many visit and visitor records are kept on-line.

General reports contain statistics such as number of visitors and visits per building, and use of parking facilities. Special reports are related to tax or criminal investigations, but also tracing the actions of reception employees by a security officer.

Reporting can be used to provide management information about the visits to the company. In addition, the output can also be used to calibrate and optimise the visitor process. Suppose there is a complaint about the duration of the registration process (visitors experience too much delay at the reception desk). By evaluating registration durations of previous visits, a reference point can be set and the effects of optimisation of the process can be determined.'

Analysis

An overview of all aspects related to visitor management has been presented. Depending on the business aspects, the visitor management process can be an important process which calls for a thorough analysis. In this paper, some thoughts are provided to assist in visitor management tool selection projects, (re)design and implementation of visitor management policies and finally an analysis to optimise the process.

There is no such thing as the perfect visitor management process; too many business-related aspects and related values are involved. For this reason, the only useful advice is to aim for a flexible solution which can be easily adapted to changes in business processes and rules and regulations without compromising security.

Based on feedback from visitors (questionnaires), reception desks and employees, visitor management can be evaluated and improved on a regular basis. When analysing the process, there can be focus on both the effectiveness and efficiency of the process.

Effectiveness of the visitor management process refers to the quality of the results: has the running of the process resulted in achieving the objectives? Are visitors satisfied by the way they were received and treated? Are security measures in place and have they reduced

the risk of incidents and resulting damage? Does the organisation have sufficient insight into visitor related information? Depending on your focus you can decide on the scope of the analysis.

Efficiency refers to the optimal use of resources to manage, automate and execute the process. While maintaining quality at a certain level, your organisation can try to make the process more efficient by gaining insight into the activities that are carried out by personnel, and other resources (equipment, facilities, systems) that are being used related to visitor management.

Combining the analysis of effectiveness with insight into the efficiency of the process may lead to valuable information regarding the costs involved and the ROI (Return on Investment) of investments related to visitor management.

Visitor Management and Access Control

The scope of this article is the visitor management process. In reality, your organisation will deal with all sorts of processes that are more or less security related. One of the challenges of security management is to understand the relationship between these processes and to see the opportunities to increase both security levels and general customer satisfaction.

For the management and execution of processes many systems are being used: systems to collect and store information, systems to generate reports, and systems to influence human behaviour. Using one system for several processes may result in more efficient use of resources, but it may also provide other benefits, like improved availability of richer and more valuable information.

Combining visitor management with access control seems an obvious step to take. Access control systems already store information about employees and are able to provide employees with access to zones within the building in a secure and friendly way. Extending this functionality to visitors (and contractors) should not be too difficult for any modern system that deals with access control and security. A few advantages of using an access control system for visitor management are:

- It is possible to provide an access badge to visitors to give them access to the site immediately and easily.
- Movements of visitors are stored in the access control database and can be linked to employee movements, which can improve analysis possibilities after incidents.
- The system can enforce a policy that says that visitors can be linked to an employee if that employee really is registered to be present on site.

The challenge of using an access control system for visitor management purposes, is to find a system that offers sufficient visitor management features. Our expectation, however, is that suppliers of modern systems for security and access control will be able to offer from a functionality point of view what you as an organisation are looking for in both visitor and security management.