

Question #1: Please select one design/development issue that you can identify in the readings and then (a) name and describe the issue and (b) explain how the issue relates to the company's decision about which strategy to choose (i.e., does this issue point to a need for hiring experts or does using existing employees still seem okay).

Respondant: a) There is a design and development analysis issue concerning the size and **complexity** of the database that will be needed.
b) This issue depends on the number of customers, suppliers, and products offered by the company. If a large complex database is needed then experts should be hired. If a small database, possibly based in access, can be used then the company's current employees should be enough.

Respondant: **Security issues** - how are you going to protect the data against loss, destruction, or misuse. This might be a good issue to hire someone else to do. It might not be a good idea to have employees within the company that know how to access data that they shouldn't be.

Respondant: a) **Database security**: This concerns the data protection issues that arrive from using a database management system.
b) The db management system would make their data more vulnerable to being stolen, hacked, etc. They need to decide if the benefits outweigh the risks.

Respondant: a) **Data security** is very important especially on a web-based environment. On a web-based environment, everybody could access the information, and a very serious data security system is needed. The data security protects the integrity and access of the company's data. It stops outsiders to change and steal data.
b) This type of data security requires a professional to maintain and create the database because the web-based order environment contains customer private information. The customer's personal information should not be accessed by others.

Respondant: One issue would be **data security**. Database security is the protection of data from accidental or intentional threats to its integrity and access. If the company is attempting to make management information web-based, they have to worry about security issues, mainly protecting proprietary information. They need to have a secure site so there can be no "breach" of security. For this to be accomplished, hiring a systems professional would be the best option, so the job is done right and the site is secure.

Respondant: **Database Security**: Protection of the data against accidental or intentional loss, destruction, or misuse.

This issue is important because security is needed to protect the company from unauthorized personal using their system. They need to protect themselves from data theft and fraud. Certain records need to be kept confidential, a security based system is needed to accommodate this need.

Respondant: a. costs and risks of the database approach

as with any business decision, developing a information system can entail some additional costs and risks, for instance, **training new personnel, installation and management cost and complexity, need for explicit backup and recovery**, and so forth.

b. because it is a small company, can it justify the cost and risk?

Respondant: The design issue: **How to prevent human errors in order management.**

Even when the user interface has been designed as 'idiot proof', there is a possibility to different kind of errors i.e. in placing the order etc. So the system has to have a procedures to ensure that only right commands can be used in right situation.

The company has to make general decision how detailed are the security procedures used in the database. The issue about human errors is a good example of that - should the company put efforts on user action backups or not.

And about the use of experts the company should use external help, but also train employees to configure the system in the future.

When considering this issue the company has to

Respondant: a) One of the development issue that's extremely important for a web-base order management information system is **'loss of privacy or confidentiality'**. Loss of privacy means that information about customers are breached, and this often translates to a loss of customer confidence in the website (company).

Loss of confidentiality usually means the loss of critical data that may have high strategic value to the organization. This often lead to loss of competitiveness.

b) This issue relates directly to the well-being of the company. Loss of privacy or confidentiality often spell disaster for a company. It is a public relations nightmare, not to mention a possible loss in revenue stream due to decreased customer's confidence, and loss of any strategic advantages.

Therefore, due to the gravity of this issue, I'd recommend that the company hire a full-time IS expert to ensure the security of the database.

Respondant: An identifiable issue is **data security**. All parts of the system **MUST** be secure. This involves protection from accidental or intentional threats to integrity and access of the database. Financial information will be available over the web so encryption should be used. Third party mediation would probably be necessary because of the involvement of credit cards. These set-up would probably be difficult without the help of professionals.

Respondant: A) **Loss of privacy and confidentiality**: The database could be accessed by anyone in the company.

B) The company should consider having a private database as opposed to a public one.

Respondant: The **database security** issue is something that must be considered by everyone who implements a database system. There are number of methods to which database's integrity access can be retained from unintended consequences and these methods are most likely to be accessible by the experienced IS personnel. Experts are likely to keep up with the trend in IS technology, which will provide up-to-date database security system.

Respondant: (a)**Data quality** is very important while the organization develop its own IS system. If the data captured are accurate, consistent and available, then, the organization can rely on the data to make essential decisions correctly. Otherwise, it will misguide the organization's development. However, lots of factors effect the data quality, such as data entry regulation, data sharing in different units of the business etc. It is not easy to establish the enterprise-wide data quality standards. (b) In order to achieve high data quality, company usually take some measurement to protect their data quality. They need to make some decision on security, personnel control, physical access control, maintenance controls and data protection and privacy.

1) Do the company IS system need to arrange 2 or more space to store thier data?

2)What kind of employee do we need to hire? Can we hire the people who have the background of theft?

3)Will the application developer be allowed to access to production system?

Respondant: a) **Journalizing Facilities**. When I was at my internship at IBM, one project I worked on was an auditing system to check the quality of the parts that we were making. The data that was collected was entered into a database, and also in a log for a hard copy. b) For this issue, an expert is not necessary, for the auditor had to do was take a few measurements on the part, and record them.

Respondant: **Serializability is a concurrency control problem**. In order to achieve serializability one must implement locking mechanisms to prevent access errors. An individual retrieving data to be updated is the only one given write access, all others are locked out. **Locking** is an excellent way to prevent multiple users from write errors. I would suggest this approach to almost every situation.

Respondant: The primary issue would be the **authorization levels**. There would be some people who are not authorized to give orders, or reach order-related information. A web-based order management system would be reachable from many locations, and the information system should be designed in a way that may authorize certain IPs, or it may check a username/password entry. Security assurance has no end, there are many developments, and new authorization schemes are proposed most of the time, especially in a web environment. So, it may be better to hire an expert on web security, if there is no one in the company whose primary job is assuring security on web. The person should be informed up-to-date on the ways of securing a web-based IS.

Respondant: (a)**database security**: Protection of the data against accidental or intentional loss, destruction, or misuse. All parts of the system must be secure, including the database, the network, the operating system, and the personnel who have an opportunity to access the system.

(b)The issue of database security points that it is better to use existing employees than to hire experts. Because it is relatively difficult to secure new hired experts, using existing employees may be much more safe.

Respondant: One key issue about the development of a web-based order management information system is **unauthorized access to the database** by an unwanted party over the web. Data can be browse, change, or steal by an unauthorized user. To prevent unauthorized access, the company can use an encryption coding to prevent unauthorized user reading the data. This would require the hiring an encryption expert to translate the data.

Respondant: (a) **Personnel controls**--Ensure that the potential or current employees have a respectable background to be authorized to work with a web-based order management information system. This can be done by a highly selective hiring/screening process.

(b) Depending on the level of **security** needed by the information system and the amount of knowledge needed by an employee to design and develop such an info. system, this issue can either point to a need for hiring experts or using existing employees. However, since it's a small manufacturing company, using existing employees would seem to be okay if the company's management deems the current employees trustworthy and knowledgeable enough based on their experience with them and their past work history.

Respondant: "**Managing data quality**" needs a data stewards to act as liaisons between IT and their business unit. The members need to have a strong interest in managing information as a corporate resource and have to ensure that organizational applications properly support the organization's enterprise goal. Thus, they should have an in-dept understanding of the business of the organization. For this job, we need employees who really understand what we need from the information system. Also, we need the members who have good negotiation skills to compromise this new system to be useful for each department in the organization.

Respondant: a) The issue that might come up is **loss of privacy or confidentiality and loss of data integrity** .

b) There is really a major confidential issues when the company try to do their design and development of a web-based. Because if the employee tell their competitors, of course they competitor would know what kind of step that company might take. Therefore, those design and development will not meet / maximize its purpose. In my opinion, that company should keep their existing employees for the fact that that company have known those employees in the past as supposed the new employees who might compromise that new project .

Respondant: **Data Redundancy.**

If a web company suddenly loses all its data on current orders made, they will lose money, and many customers. The best way to do this would be creating backup facilities in such that if one server goes down, there is another one there to take its place. Most likely, one would have to hire a specialist since the task is very critical.

Respondant: (a) In this case, the **security** of the data and more precisely the possible loss of confidentiality on internet must be taken into account seriously during the project. Many data will be communicated on internet, many data will be sent out of the

manufacturing company. Most of these data concern the orders for the company: they are strategic. The loss of confidentiality appear as a real threat. The competitors should not be able to see which the characteristics of our orders. The system will have to be very well protected.

(b) There is no doubt that regarding this issue an expert's help will be very useful. The current employees might not have enough knowledge concerning the encryption, network security,...

Some choices will have to be made for the authorization rules but above all for the authentication process during the remote accesses of suppliers for instance. The existing employees might not be able to do it.

Respondant: (a)One design and development issue that definitely needs to be addressed is managing **data security**. This is to provide protection of data againts misuse, and loss of data accidentally or not.

(b)Since this is a very important task that needs to be performed by specialists of the job, there is a need to hire more experts. These new employees would have neutral position, i.e., there would be no or little reason to abuse their power to gain information unlawfully. This is so since these people have no other tasks to perform except maintaining and controlling database security.

Respondant: a)

Concurrency Control is the process of managing simultaneous operations against a database so that data integrity is maintained and the operations do not interfere with each other in a multiuser environment.

b)

Concurrency control is important for web-based order. If it goes wrong, the company would loss the order from the customer. Also, it is a specialized technique that need experts to do this job.

Respondant: One development concern would be the threats to **data security**. Failure to contol the data on the web could lead to sabotage of important customer or company information. Thus, it might be beneficial for the company to hire an expert to deal with this issue.

Respondant: **Encryption,**

Because it is a web-based order management information system, increased security is needed. This would lead to the company hiring a professional to set up the system.

Respondant: A design and development issue to consider would be how to manage the **data quality**. One of the areas included in the book is how to establish external maintenance control. This would protect them in case the software developer goes out of business or chooses to cancel support of the programs. The company would need to consider if it is more appropriate to hire an outside party for this role. An outside party would minimize an internal threat and at the same time manage issues external to the company.

Respondant: With a web-based order management system, one issue that arises is managing **data security**. Especially when sensitive order information is travelling across the web, it may be intercepted and used by someone other than the intended user if the connection is not secure. If the company does decide to install the new IS, they'll need to consider whether they have the technology and know-how to install encryption devices, views, and perhaps other user-defined procedures to ensure that nobody accidentally or purposefully changes information in a way that they shouldn't. The need for a professional depends on the level of know-how of current employees, but the level of security necessary for a web-based network seems to me that a professional may need to be brought in.

Respondant: a: **Web security**

b: A company must decide the kind of firewall to use. And the company must hire some kind of computer expert to protect database.

Question #2: Identify a second design/development issue (either one that you identified in the readings or one that concerns you). For this issue, (a) name and describe the issue and (b) explain how the issue relates to the company's decision about which strategy to choose (i.e., does this issue point to a need for hiring experts or does using existing employees still seem okay).

Respondant: a) There is a **maintanance** issue concerning the upkeep, evolution, and recovery of data in the database as time goes on.
b) The company must have a good idea whether or not their current employees have the skill to perform these tasks. If they do not, then the company should look into the cost of training or hiring experts. If the current employees have the skills, the company should stay with its own employees.

Respondant: **Backing up data** - with all the data being in one central place it is necessary to have a backup plan. This could be done by a current employee. They would have to make periodic backup copies, maintain an audit trail, a checkpoint facility, and a recovery manager. If the company has employees with the skills necessary to do these tasks then they could use them.

Respondant: a) **managing data quality**: This issue deals with making the data accurate, dependable and available in an organization.
b) this issue might involve hiring another employee to work on issues concerning how to input data, what should be input, and maintaining the database.

Respondant: a) **Database recovery** is also very important. A company depends heavily on its database system. If data is lost due to human error, hardware failure, program errors and computer virus, a company might lose money. Thus, a recovery system and backup method should be made to maintain the data.
b) The database recovery also requires a professional because the customer's information is very important to the company's business. Data lost means losing customers and business.

Respondant: Another issue would be **concurrent access**. Since this a web-based information system, it is assumed that most people in the company will have access to it. Concurrent access allows a multiuser environment where data integrity is maintained and the operations of each user do not interfere with each other. Again, a systems professional would be the best option so the system runs correctly with no problems. If the job is not done right at the beginning, it might not be easy nor cheap to fix.

Respondant: **Database Recovery**: Mechanisms for restoring a database quickly and accurately after loss or damage.

Database recovery and backup facilities are needed in case of a system failure or loss of data. A company should always have a backup copy of their database that should be updated daily. This will enhance security and as well as time and money if data is lost or corrupted in some way.

Respondant: a. **security policy and Disaster Recovery**.

for the greatest threat to business security is often internal rather than external, organizations should develop procedures to ensure a selective hiring process that validates potential employees' representations about their backgrounds and capabilities.

b. because of the above reason, if they select employers, they must keep the security policy in mind.

Respondant: Design issue: What kind of **back-up procedure** are used. Data that is stored in the database must be also saved time to time saved somewhere else. Back up procedures can also include tracking the user actions and keeping different kinds of journals.

Strategic decision here is how critical is the system and how detailed information is required about the user actions.

In this issue company should train it's own employees to take care of the back-ups.

Respondant: a) Another issue that concerns me is the **speed in which the data or the customer's inquiry will be processed**. I have personally been turned away from sites that take too long to process my inquiry or order. Therefore, data organization and the speed in which the data are processed is of importance.

b) With so many other alternatives on the internet, a successful sale may depend on the time it takes to process an order or inquiry. My policy is that 'a waiting customer is not a happy customer'. During the time in which customers have to wait, they could have easily changed their mind about the purchase, or worse, they could have brought their business elsewhere.

Thus, I'd recommend **hiring an IS expert** to ensure optimality of the code and the structure of the database for quick and reliable data processing.

Respondant: A second design issue to consider is **database recovery**. The recovery involves quickly and accurately restoring the data after loss or damage. A professional could help a company decide how sophisticated the recovery backup system should be.

Respondant: A) **Theft and fraud**: Stealing, changing, or deleting information that is valuable to the company.

B) The company should have a **secure database** and hire employees with integrity.

Respondant: Again the **knowledge/experience is a key issue in terms of choosing a professional service** or use the in-house resources. The versatility and usability of the database can be enhanced if an expert designs the DB system. An expert can analyze the nature of the DB in planning and can recommend the best possible DB system that will meet the demand/goal of the firm's DB system.

Respondant: a) Financial data such as payroll account is **very sensitive**. When we develop such IS system we need to consider the **security issue**. b) Company need to make decision on the security aspect such as

1) Do we need to hire the 3rd party to develop the system or just use the existing employee to do the job and hire the third party to set up the encryption and decoding procedure?

2) Who will be allowed to access this system and how to identify any prospective user?

Respondant: a) **Authorization Rules**. This has to do with restricting access to some employees, while granting other access to other employees. Not all employees need access to all of the company's information. b) I think an expert would be wise for this issue, because database security is very important, and should be well taken care of.

Respondant: **Deadlock** occurs when two or more users have locked a common resource and each must wait for the other to unlock that resource. Any company sharing data and using locking mechanisms will generally run into deadlock situations.

Respondant: Another issue, in my opinion, **should be the ways to deal with concurrent access**. I had my time to observe the 'locking' of a web-based information system, my old university's registration system, which have consistently 'broke down' because of the number of people trying to reach the system simultaneously. Data may be lost in these occasions, and it may be costly. Again, in my opinion, expertise in web-based ISs is necessary to design a system that deals well in a case of concurrent access, and expert(s) should be hired if a current employee doesn't have the primary job/background of dealing with this issue.

Respondant: (a) **data quality**: High-quality data which are accurate, consistent, and available in a timely fashion are very important for decision making, business policies, and data sharing.

(b) The issue of data quality points that the company should use existing employees to do the job. Because they have much more in-depth understanding of the business of the organization and closer relationship with internal personnel, it may be easier for them to ensure the data quality.

Respondant: Another issue is **database recovery** in case of failure to the database. There is a need to back up the database to prevent the loss of all the DBMS information. The use of a backup facilities would help in case of a failure. The backup facilities would provide a backup copy of the entire database. The backup facilities could be setup within the computer system, therefore there is no need to hire an expert on this matter. The backup facilities should operate automatically whenever a failure occur.

Respondant: (a) **Maintenance Controls**--Being able to maintain and enhance the info. system with ease is a concern for the company.

(b) This issue points to a need for hiring experts. They would be able to assist the company by ensuring that appropriate response rates are agreed to for maintaining data quality.

Respondant: For managing **data security**, we need experts who can professionally use the program to build the system. We need this members to build our information system and to avoid the accidental or intentional threats that might happen. Authorization rules, views, user-defined procedures, etc. need to be used for managing data security.

Technical information system experts will be needed to do these data security features. Thus, we need to hire experts for this kind of jobs.

Respondant: **Accidentally loses**, including human error, software, and hardware-caused breaches.

Hiring an expert seems like a really good idea, but we do have to remember that prob. these experts don't get used to deal with this company's database and tends to make human error than the existing employees. Thus, in my pinion, better keep the existing company...

Respondant: **Security** would be the next issue. A lack of security would most likely result in hackers damaging database information or stealing from it. Customers who realize that it is not safe to shop at the companies website due to a lack of safety will most likely avoid shopping there. Implementing encryption and passwords is the best counter to this dilemma. The hiring of specialists will also be best since data security is something that should not be taken lightly.

Respondant: (a) Everyone will have to accept some standards for a **good quality of the data** (ie consistency of the data). The employees and the suppliers will have to lose some of their reflexes. They will have to follow new procedures. They will not be able to do it immediately. There might be some inconsistency at the beginning.

(b) This issue does not point to a need for hiring experts. Internal trainings can be developed. The top management support can also help in setting quickly the new standards and procedures.

Respondant: (a) The second design and development issue is **managing data quality**. This a process where data in the organization is being maintained so that they are accurate, consistent, and available when needed.

(b) This issue also relates highly to data security. There needs to be a system for security and disaster recovery, personnel controls, physical access controls, maintenance controls, and data protection and privacy. In order to have all these, there needs to be specialized experts which the company might not have.

Respondant: a)

Database recovery is mechanisms for restoring a database quickly and accurately after loss or damage.

b)

Company should back up its database frequently that can be done by existing employees but when there is an error, they may not be able to restore the database. Doing this job, experts should be hired.

Respondant: Due to the large number of customers that will be using the information over the web, **transaction integrity** is of great importance. To maintain transaction integrity, the DBMS must define transaction boundaries (or a logical beginning and end of a transaction) for the user or programmer. By placing these constraints, only successful transactions proceed and aborted transactions are rejected. This again would require

someone who is an expert in the area to implement but would also require the knowledge of existing employees to help with the design of what constraints need to be met with each transaction.

Respondant: **Cost vs. Profit.**

Is the cost of setting up the information system and hiring a professional going to pay off in the long run. How long?

Respondant: A second issue is the design of some sort of **concurrency control**. The database would need to be able to handle simultaneous operations while maintaining the integrity of the data. Using internal resource could benefit the company since the private and public data is already known. A third party would have to do the research to figure which data is necessary to set locks on. But since the risk of an internal threat is much greater than that of an external it might be a better idea to use a third party for this case as well.

Respondant: A second issue would be the method of **backing up the data**. The company has to choose how to recover any lost or corrupted information. There are so many options for this development issue that I hope the company would have some sort of system set up for their old database. If that backup system is simply copies of the files in a file cabinet, perhaps a professional should be hired to install some sort of backup plan. However, if the existing system is electronic, I think someone in the office should already know what to do for backing up the database.

Respondant: a:authorized view, this is how which users are **having authority to view specific information**.

b:this issue is important because maybe some low ranked employee is not supposed to know some important announcements (ex. maybe it would affect stock market if the company is listed on nasdaq)

Respondant: A) **Backing up databases.**

B) For a manufacturing firm, the importance of historical data can be very important. It can show how the company was running compared to different variables such as time of year, different shifts, or even different equipment or processes. If this data is lost, the company would be losing vital info. Therefore, I think that backing up the system is very important and if the existing workers don't know a lot about it, the company should hire on more help.

Question #3: What would you recommend to the company and why?

Respondant: I would suggest the company look into these issues and decide how **complex a system is needed**. This will probably be a **driving factor of whether the company needs to hire new employees** to handle the system.

Respondant: My recommendation is that the company should **hire a professional**. They could still have their employees help with the process and work with the IS professional. That may save them money if they do part of the work. But also they will have someone that knows exactly what they are doing and how to work the security concerns.

Respondant: I would recommend that the company **use a database management system**. I think it would help improve efficiency and management of the company.

Respondant: I would recommend the company to **hire several information system professional** to create a web-based database because a high security and heavy data dependence is needed for this database.

Respondant: I think that the company should **implement an information system**. It will help thier company run more efficently. They will have an easier time managing and expanding thier business. Also, to avoid problems later on, the comapany **should hire a professional** to implement the system.

Respondant: I recommend a **web-based order management information system**, but strong security measures need to be implemented. **Authorization rules** need to be incorporated into the system to ensure data integrity and confidentiality. A **backup system** needs to also be installed to protect the data from loss and damage.

Respondant: a. **make a plan and evaluation** to decide if it is suitable for the company to develop the information system.
b. **be careful if employ its employees to develop** the information system.

Respondant: The company is small and propably it's resourses are limited. Order management system is maybe used only by few people in a company. So I would recommend that they would **keep the level of details of the system quite low** and do not use state-of-art technologies such as bio-identification etc. and also think about how critical the system is for the company's business. Who could actually use the information from the system? But on the other hand I would recommend them to put little bit more money on **hiring an expert to make the system usefull and efficient**, because probably there is no database know-how in the company.

In the human errors issue, I would recommend a simpple authentication matrix and input chekking to prevent false orders etc.

In the back-up issue I would recommend a daily back-ups, but I don't see any reasons for action tracking or more detailed back-ups. Just to make sure that the data is stored also somewhere else than the main system.

Respondant: I'd recommend that the company **hire an IS professional**.

From the reasons above, it is rather clear that the risks far outweigh the cost of hiring an IS professional. At the same time, having a good, secure order management information system could help increase revenue for the company.

Respondant: I would **reccomend that the company implement** an information system for web based orders. I would reccomend that they **seek the help of information system professionals**. This should ensure that all aspects are thouroughly investigated and that the system is properly installed.

Respondant: A) A database is a very important tool for a company to have. Because it is such an important tool **an expert in IS should set it up and train employees** on how to use it.

Respondant: I recommend **using professional service for developing IS for the company**. Using Web technology to do business will open a new door for the company and Website will serve as a new way to interact with the customer. Therefore, a professionally done/maintained company website will definitely make good attributes toward the company's success.

Respondant: Company should **develop their web-based order management** information system. This order system allow the company to response the market more quickly and give the customers more shopping choice. From the consideration of future benifit,

This IS design need to consider the following issues:

- 1) **System Security**. In web-order system, customer use thier credit card to pay the products. Company need to ensure that only the authorized person can enter into the database and the data can not be theft or fraud.
- 2) Design **controlling concurrent** Access so that several users could access and put thier orders at the same time without interfering each other.
- 3) The database management system must provide machanism for **restoring** the database quickly in order to prevent some damage or loss caused by some system problem such as human error, hardware failure, program error, computer viruses and naturral catastrophes.

Respondant: The company should definatly have a **web-based information system**. Data can be easily maintained and accessed on the web when needed. however, data security and backing up data is very important concerns. with data on the web, there is always the risk of it being insecure and computers crashing resulting in loss of data. professionals may be beneficial here.

Respondant: There are two ways to **manage deadlock**, deadlock prevention and deadlock resolution. In most cases I would try to initiate deadlock prevention because it's easier to establish. It's implemented by being sure that all user programs must lock all records they will require at the beginning of a transaction, rather than one at a time. If the program is written well the deadlock ceases to exist. If prevention is deemed unsatisfactory then deadlock resolution must be executed.

Respondant: I would **recommend the company to make sure that these issues**, with several other issues as well, **are considered**, and very satisfactory results are reached in terms of these issues, **even at the cost of hiring experts**.

Respondant: I would recommend to the company to **use some of their employees with available technology to do the job**. Except the above two reasons, I think the **cost of personnel is another reason that should be considered**. If existing employees could complete the job, it is not necessary to hire new people.

Respondant: I would recommend them to **set up a security system**, which would prevent modification of the system by an unauthorized party. The company web page would be accessible to anyone over the world at anytime. There is no knowing who might want to hack into your system. It can be a market competitor, buyer, or a former employees, therefore a strong security system is necessary.

Respondant: I would recommend **using the existing employees** who have been evaluated by the company as being able to handle and entrust a job such as design and development of a web-based order management information system. Since the company already knows the work habits of these employees, the screening process for personnel control is made easier. As for **maintenance, the company should hire a couple of experts** to be on hand for any type of maintenance related problems.

Respondant: I recommend to **hire information systems professionals** to do some jobs that need the members who have specialization in information system technology. For some job that need the members who understand organization's needs and nature of the organization, we need to **use our employees to do this job**. Moreover, we might train our employees to do some jobs that might not need specialized information system users to save our cost to hire experts.

Respondant: Do **background check** on their existing company, see if one of them involved in fraud , theft or anything like that

Respondant: I would recommend that the **company hire these specialists** since it is one of the foundations of their income. If the foundation is weak, then the company will crumble due to such huge potential income losses.

Respondant: I would definitely insist on the importance of such a tool for the company. But I would suggest **to hire a few experts to have a real team project**. Indeed, this web-based order management information system can make the company more competitive. The orders will be done easily and quickly. But the system has to be well designed. All the basic concepts of the "database approach" have to be taken into account.

I would recommend to have a **project team made up of information systems experts** and of some existing employees for best results.

Respondant: I would recommend that the company proceed with the plan. The amount of advantages that the new system produce are more than the security danger that it poses. There is a **need to hire more professionals to handle these systems development**, and concentrating fully on this task. Since the greatest threat is internal rather than external, it provides more basis to hire new employees.

Respondant: Yes. Although it is costly and the company is not a big company, I think **internet(web-based order) can help this company to promote** its business and attract more customer.

Respondant: That they should **hire as many people as required to produce** a secure website that allows for the transaction of accurate and consistent data from the customers to the mfg company. A **small mistake or error** in developing their security measures could result in harming the company itself as well as their customers as well. It is nothing to take lightly.

Respondant: A lot of **reasearch**, maybe looking at similar companies who have tried the same process.

Respondant: I would recommend that the company **hire outside experts to design and develop their database**. They could use those employees that have a little knowledge to perform general maintenance routines. But overall I would suggest hiring a third party to minimize the risk of any internal threats and to ensure that all steps have been followed to setup a secure database.

Respondant: It all depends on the company's current level of technological know-how. I don't think that most people know how to install and run a successful web-based order management system. However, if there are those in the company that feel they can do it with existing technology and personnel, I suggest **hiring a consultant to help with any troubleshooting, but placing members of the IT department at the head of the project**. The consultant can point out other concerns and perhaps find solutions to problems the current employees don't know how to fix.

Respondant: I would recommend the company to **setup a well thought of database structure by assigning level of confidentiality** on each document or information store in a database, to prevent stealing of intellectual knowledge and the act of hacking.

Respondant: I would recommend that the company take a look at what their priorities are for the new information system. Then they should **determine if their existing employees know enough about database management** and programming to acheive the set goals. **If not, they should definately look into hiring** on either a consultant or a new worker who specializes in this area.