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Keda Case Study
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Section 1 – Case Summary:

Keda Industrial Company Ltd. (Keda) is a manufacturer, founded in 1992 in Shunde, China, that specializes in ceramics machinery. This case outlines the steps that Dr Fan Zhu, Keda's vice general manager, and Benjun Zhang, who replaced Zhu as IT Department Head, took to implement SAP as Keda's new Enterprise Resource Planning (ERP) solution.

Although Keda experienced success as a growing business, failure to establish centralized decision making and information sharing systems had resulted in low productivity and inefficient use of its facilities. As an example of this, the case points out that Keda had a key facility that was being utilized only 24.6% of the time, as compared to a Japanese competitor with a comparable facility which had a utilization rate of 90%.

In addition to this issue, Keda's old MRP-II software had been discontinued by its vendor only three years after it had been implemented, yet the Chinese government was pressuring national enterprises to computerize operations to be more competitive on the global market.

Because Keda had a decentralized business structure with no clearly defined policy of information sharing, the business was clearly losing a lot of money from each location having their own methods of operating. This created roadblocks both to the ERP implementation process and the deployment of the system later.

The challenges that Zhu and Zhang faced throughout the process of ERP implementation ranged from uncertainty of which vendor to choose; how to select personnel to participate on the development teams; how to resolve issues and conflicts between those team members; and what to do with plant management who refused to use the systems after they had gone live.

An important thread that can be found throughout the case is that the primary issues involved in the implementation of the ERP software were not caused by the software itself, but by disagreements and lack of cooperation between the people who were working on the project. These issues, and the steps that Zhu and Zhang took to confront them, are outlined in the case questions below.

Section 2 – Case Questions:

1. **ERP are expensive and risky. Why did Keda decide to embark on an ERP implementation project?**

   Keda embarked on the ERP implementation project to remain competitive. It had become clear that Keda needed an integrated information system across all business functions and locations, especially when it became known by the executive team that one of their facilities was only in production 24.6% of the time compared a Japanese competitor with a similar facility that was used 90% of the time. With pressure from the Chinese government for local companies to be more competitive against foreign rivals, and an explicit push for improved computerization, Keda had little choice but to move forward on this type of project.

   Another factor leading to Keda's decision to implement an ERP system was that the old Manufacturing Resource Planning system was outdated and no longer supported. As Keda grew, the old MRP-II system was already unable to support multiple production facilities. The siloed system became so unruly that the firm was unable to accurately track the cost of goods sold which was instead estimated by guessing.

   As Keda continued to grow, it became apparent that there was no other choice but to proceed with an ERP implementation. The trick was to determine a plan that could balance Keda's short term needs as a growing company with the long term needs to have a well implemented ERP system that could scale with the company without taking its operations offline because it still needed to compete.

2. **What are the major processes of implementing an off-the-shelf ERP system?**

   In its blog, Skyward Technology Company, provides these steps to ERP implementation:

   1. Identify the problems / Set the Objectives

      As described in the case study:

      - Need to centralize decision making and shift from silo-based model.
      - Improve information sharing across departments and locations.
      - China was "encouraging" national corporations to computerize.
      - The old MRP-II system was no longer supported by its vendor.

   2. Define scope/team

      Benjun Zhang, who came to lead the Keda IT Department, assembled the team that lead the implementation process as discussed in the next Case Question.

3. Brainstorm/evaluate the options

   Capterra states that 22% of ERP buyers purchase the first one they find and 33% don't demo before buying it. Keda tested and selected SAP based on alignment with their core competencies and interests.

4. Data migration

   Keda's implementation team included key users from each department to ensure that all necessary information was transferred.

5. Check infrastructure

   There's little said about Keda's original infrastructure, so it can be assumed that this was not among Keda's primary issues.

6. Customization

   Zhang put together an implementation team with key users from each department, ensuring each subsystem was customized to the needs of the company.

7. Change management

   A main issue for Keda was that many existing managers resisted changing the way that they did their jobs. Keda learned this the hard way and had to replace several managers.

8. Technology & Knowledge Transfer

   Zhang put together implementation teams such that IT, each department, and consultants from SAP were all working together on the project.

9. Project management and Testing

   Keda's philosophy was "Testing was training," ensuring key employees knew how to use the systems while simultaneously optimizing it.

10. Final touch (go live) & on-going support.

    Data transfer issues upon going live resulted in some production delays.

3. **Leadership plays a pivotal role in the success of ERP Projects. Which "leadership best practices" did the Keda managers engage in?**

   Keda's best leadership practices used by its managers were:

   - Appointing a competent and technical team player (Zhang) to head the project.
   - Understanding and communicating their core competencies and contingent needs as they actively courted ERP vendors.
   - Seeking input from the vendor clients, and learning from their mistakes.
   - Selecting the vendor based on Keda's strategic alignment goals.
   - Pursuing top management involvement and support in the project throughout the whole process.
   - Selecting "top dogs" from each department to participate, especially selecting those the departments regarded as indispensable.
   - Having department managers work directly with IT ("physical collocation") to develop the modules pertaining to their department.
   - Balancing the desires of the module owners with the functionality of the system.
   - Training staff on the system while testing it, to ensure that malfunctions and gaps were identified by the people who would be using the system regularly.
   - Replacing managers who refused to work with the new system.
   - Making sure the ERP system was fully implemented and stabilized before approving system modifications.

   Each of these practices contributed to the successful rollout of SAP, allowing Keda to experience dramatic improvements in data accuracy (up to 98% from 85%). This allowed Keda to more accurately track materials purchases, reduce inventory, improve production and make better management decisions.

4. What were the main challenges faced by Keda in each stage of its ERP project? What factors contributed to the project's success in the face of these challenges?

Challenges:	Factors of Success:
Pre-ERP implementation	
• Keda's IT Department had no specific goal, MRP-II system lost vendor support.	• Zhu developed a plan to address short term needs and long-term goals.
• Keda's organizational structure was siloed.	• Six-month planning for blueprint to share information across departments.
• There are many ERP vendors worldwide.	• Vendors were carefully vetted from around the globe until a good match was found.
• ERP projects lacking manager support are more likely to fail.	• Top management took part in vendor selection.
• Strategic goals to centralize information sharing.	• Implementation teams consisted of "key users" from each department, consultants and IT officers.
• Physical colocation of department managers with IT developers was unpopular.	• Reward system to incentivize department manager involvement, with a penalty for missed project meetings.
During ERP Implementation	
• Operations and workflows needed redesigning.	• Key users wrote specification and requirements based on inputs and outputs.
• Key users would disagree between departments and with consultants on module design.	• When compromise was difficult, Keda used SAP's original model, adapting workflow and management systems as necessary.
• Keda had a limited timeframe for implementation and testing.	• Key users trained by consultants while testing. They then trained their teams and wrote manuals.
After Going Live	
• Going live with untested system could result in some problems and delays.	• System was deployed during slow season, reducing pressure when software problems impacted production.
• A decision needed about whether system should be deployed in stages or all at once.	• Options assessed, "less risky" option of slow phase-in determined nonviable.
• Problems with deployment and software issues caused production delays.	• Top management accepted short-term delays for first year.

• Technology disrupted perceived status of traditional Keda management.	• A strict compliance policy was adopted. Managers refusing to use the system were ultimately replaced.

5. **Are the strategies adopted by Keda in its ERP project generally applicable to all ERP implementations?**

   I believe that the strategies that Keda adopted in its ERP project are applicable not just to ERP implementations in general, but that many of the steps that they took should be applied when shopping for other software services. Smaller companies may not be able to afford to implement a full ERP system, but they still need the same kinds of system management. It is surprising that so few companies fail to research new business software before purchasing it. ERP implementation is a huge investment which affects an entire enterprise, and so it should be a priority to the firm's top management that it gets planned out and deployed appropriately.

6. **Culture plays an important role in any project implementation, and perhaps especially for an ERP implementation because the ERP concept originated in a cultural setting. How were Keda's cultural characteristics leveraged in bringing about project success?**

   Cultural factors had the potential to either leverage the ERP's success or lead it into failure. I suspect that this might be why 80% of ERP implementations in China fail in the first place: cultural resistance because it is perceived to upset the status quo.

   Keda went about things differently to make sure that they did not count in that failure statistic: instead of allowing managers to operate on their own without ERP if they chose not to, they replaced those managers. From an organizational perspective, this is important because failing to do this would mean that others who dislike the system could also refuse to use the system, and kill off the whole project even after such a huge investment had been made in it.

   In China, managers are regarded as high-status individuals, and so their employees will follow their actions. By keeping management consisting of individuals who complied with and used the ERP system, Keda ensured that incoming employees and future managers would also use the software.

Section 3: Thoughts and Takeaways:

After reading this case, what will you take away that you will keep in mind in as you embark on your professional endeavors?

The most important thing that I learned from this case study is the importance of making sure that my management team is fully involved in the planning process of something as complex and expensive as an ERP implementation. Several sources that I've looked at while researching this topic have stated that without top management support, these projects fail. These sources also highlight the importance of proper planning and teamwork. In the Logistics Technology Blog on Capterra, Andrew Marder states regarding failed ERP implementations that "none of the top issues had anything to do with software itself. They were all team-, communication-, or employee-based. Broadly speaking, these are all problems with change management."

I think that the next most important thing that I learned is the cultural context, as discussed in question 6 above. I have seen first hand how people will give up on or disregard a new system because in its early stages of going live it has bugs that still need to be worked out. While these bugs can affect short term productivity, the system is meant to improve operations in the long run. If management refuses to face and address these obstructions as they come, then that will affect the whole department

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