

ERP Adoption – Status Report

For Acme Manufacturing solutions.

University of Essex Online

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Poba - Nzaou et al. (2008) explain how SMEs (small to mid-sized enterprises) are undeniably valuable for all countries, including developing ones. To survive and stay competitive in the rapidly evolving market conditions, SMEs are expected to leverage information technologies and information systems (IT/IS), thus eventually ERPs.

Acme Manufacturing is an SME that wants to scale up and down its production based on market conditions, including managing the supply chain more efficiently, thus deciding to acquire an ERP system. To fulfill this request, XYZ company IT risk consultants make the following assumptions before identification of potential risks:

El Madani (2018) explains differences concerning SME definitions, including the EU. We assume Acme Manufacturing is a mid-sized SME, and its yearly turnover does not exceed 30 million euros based on the number of employees.

Bakas et al. (2011) describe in a detailed way what kind of structural/organizational differences exist between SMEs. Therefore, we assume Acme Manufacturing has a flat structured organization based on this comprehensive research paper.

Kiran & Reddy (2019) discuss how important it is to complete the project within the allocated budget. The study outcome shown in the paper indicates only 8.6 percent of ERP implementations in SMEs could be achieved with the allocated budget. In addition to that, failure to complete the project within the agreed timeline might lead to degraded organizational performance and returns of ERP

implementation. Therefore, we assume Acme Manufacturing has an adequate level budget covering all of the shortlisted options.

In Canada or Germany, companies with similar activity sectors have an average annual budget of \$100 mil with an average employment number of 140. (Gray Tools Canada, 2021) (Feinttechnik GmbH Eisfeld, 2021), (IBISWorld - Industry Market Research, Reports, and Statistics Canada, 2021), (IBISWorld - Industry Market Research, Reports, and Statistics Germany, 2021).

To shed light on Acme manufacturing's financial stability, SMEs might have access to limited funding alternatives. Kaya, 2014 stated that the lack of disclosure of business strategies and transparency could be constraining factors to meet their financial needs.

Ling, 2017 researched 295 SMEs in Malaysia. He found that 73% of the businesses did not use information technology resources to run their business. Ling also stated that instead of investing in IT, SMEs rely on IT outsourcing. Considering Acme's manufacturing size, we assume that the company will outsource IT and utilize cloud computing features.

SME and micro-enterprises are the terms that refer to the commercial words which approach a limited number of employees, often around ten permanent workers for micro-entities, up to 50 workers for small enterprises, and around 250 employees for the medium-sized companies. Apart from those two significant risks (Operational and Financial risks mentioned), there are some potential internal risks to handle small/medium companies, which are stated below:

	Potential Business Risks (2b)	Risks Associated with Potential Solutions (3c)
A COTS (Commercial Off the Shelf) solution provided by a major manufacturer at a purchase cost of \$100k. Support costs vary depending on the level required but a basic telephone support-only contract starts at \$50k p.a.	<ul style="list-style-type: none"> High one time investment Iskanius (2009) states that cash-flow challenges could lead to the inability to pay product licenses or cover product upgrade costs. 	<ul style="list-style-type: none"> Exceeding the budgeting for the solution Telephone support only which means hands personnel is still needed.
An Open-Source solution that will be installed and supported by their internal IT department, relying on community (forum) support for any escalations	<ul style="list-style-type: none"> Iskanius (2009) argues that most potential risk factors connected to the business could be related to employees and senior management, especially skills, knowledge and experience. In addition to that, resistance to change within the organisation cannot be underestimated. It is stated that (Duong, 2009) employee turnover is high in terms of small companies, and there is a scarcity of know-how experts, resulting in personnel waste and additional training costs. Long-term, the human component will reduce productivity and have an impact on the employer brand image of small enterprises. 	<ul style="list-style-type: none"> Lack of experience from IT department to support such case Specific functionality issues such as a certain flavour of hardware needed. Might not support all the needs of the business. Lack of professional support in case of disaster. Security vulnerabilities Operational Insufficiencies
An in-house created solution built by a student as part of her final year project and supported by the developer, as well as the internal IT department.	<ul style="list-style-type: none"> The potential OSS (open-source software/system) risk described in the section above is also valid for this section. Hiring of project manager dedicated for the task Quality risk management is the trigger to identify the product importance in the ration of other competitors. Therefore, it is highly intensive to maintain the quality assurance. 	<ul style="list-style-type: none"> Lack of experience and knowledge of the personnel to implement the desired solution The outcome solution might not work at all or be properly implemented. Security gaps within the code Maintenance is time consuming for IT staff, operational insufficiencies will be a result

It is essential that in the assessment of risks, we pinpoint the effects or ramifications to Acme Manufacturing following the implementation of the ERP System:

- Operational risks can damage the everyday functions of Acme Manufacturing (Sutton,2014).
- (Ojala et al.2006) states that SME firms do not have the finances to employ a full-time project manager to defend the integrity, confidentiality, or availability of information on the open-source ERP system. The internal IT department of SMEs such as Acme Manufacturing frequently lacks the competence of a large, vastly skilled IT department to manage ERP systems (Ojala et al.2006).
- This reduces the competitive capacity of Acme manufacturing as it may not meet its operational demands, such as the reconciliation of purchase order backlogs of sporks (Sutton,2014).
- (Sutton,2014) postulates that financial risks lead to a shortfall of current and future business opportunities.

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