



Enterprise Resource Planning

SunFish ERP White Paper

“Analyzing the Benefits & Costs of an ERP System Implementation to determine the Return on Investment (ROI)”

Situation Analysis – Challenges for today’s business processes & communication

In today’s dynamic business world, an organization’s profitability and competitiveness is more than ever determined by competent investment into processes and workflow that leverage technologies and productivity. A constantly changing business community and globalization significantly challenge traditional business structures and communication. Among the most pressing issues department heads and executives have to deal with are:

- Reducing operating costs and increasing the effectiveness and productivity of employees at the same time;
- Equip mobile, regional and decentralized working personnel with the tools, applications, network resources and communication means so that they can work as an integrated team;
- Shortening decision making processes and product to market periods by gaining access to timely and accurate data, which allow intensive collaboration and cooperation;
- Building an infrastructure that provides employees with IT resources they need in order to interact with colleagues, partners and clients over regional distances;
- Facilitating new business opportunities and promoting competitive advantages through faster and more effective response to customer demands;
- Developing standards that allow the company to combine their business processes with technologies and services;
- Providing a standardized information platform that takes into account the business and working requirements of the

different departments/divisions within the organization;

- Measuring business benefits of IT investments vs. costs and calculating the Return on Investment.

To adapt to the changes of the more complex and dynamic business environment and the increased stress of competition, companies search for resources and technologies that support continuous improvements of business process which in turn increase productivity while reducing costs. Many companies have invested in automation systems such as Enterprise Resource Planning (ERP) and achieved good results.

Though, it seems a smart move to integrate and by doing so, automate and streamline a company’s diverse business processes and department communication in one single platform; it is also a strategic move as ERP systems touch virtually all aspects of the corporation in a variety of ways and typically initiate a paradigm shift in the corporation’s business processes.

Therefore, for companies intending to implement an ERP application, the investment decision ultimately depends on measuring the value or benefit of the technology to be purchased compared to the investment costs. The most important method used for such cost-benefit analysis is the Return on Investment (ROI).

The following provides a guideline for companies on how to approach a comparison between benefits and costs of an ERP implementation and from that, derive the ROI.

SunFish Clients





Schott Igar Glass



SunFish ERP Overview

SunFish ERP functions include General Ledger, Cash & Bank, Asset Management, Purchase/Account Payables, Sales/Account Receivables, Inventory, Customer Relationship Management, Production Management, Expedition/Shipping, Reports and Analysis. Embedded with all modules are alerts, reminders and notifications.

SunFish ERP is fully compliant with Indonesian tax laws and regulations. With its adaptability, SunFish ERP can be deployed in multiple offices around Indonesia, and even around the world with almost no constraints.

SunFish ERP is highly flexible and customizable. Flexible features such as multi-language (English, Chinese, & Indonesian), multi-currency (USD, Yen, IDR, etc.) and multi-legislation allow SunFish ERP to be implemented across all borders.

SunFish ERP is entirely web-based, so it can be accessed from any place and at anytime, with just an Internet connection.

SunFish ERP utilizes a role-based advanced security system. Users will have different roles and access rights to the application, based on their position in the company. For example, the management personnel may have access to virtually all features and information in SunFish ERP, whereas an entry-level staff will have far more restricted access - the system automatically represents each user with the appropriate interface and data and therefore protects vital information from unauthorized access.

SunFish ERP White Paper

“Analyzing the Benefits & Costs of an ERP System Implementation to determine the Return on Investment (ROI)”

Achieving and Calculating ROI

Introduction

Any large system implementation project involves considerable cost including fees paid to vendors (software acquisition, services and hardware) and internal costs (business process re-engineering, staff retraining, internal implementation time, etc).

For an implementation to be both successful and beneficial, careful consideration should be given to the expected benefits, total cost of implementation/ownership and risk of the project.

Benefits from an ERP project vary by company, industry, solution and vendor. No standard calculation or estimation method can sufficiently project the benefits applicable to any specific situation; however, following a structured method of analysis will lead to a reasonable estimation of expectation of benefits.

As the implementation of an ERP affects all business processes of a company and usually requires changes to traditional structures and workflows to achieve optimal results, it is difficult to completely, accurately calculate the expected ROI before an implementation and even the actual achieved ROI after the implementation.

To simplify the ROI calculation, this paper breaks down benefits and costs into the following four groups, whereas risk levels can then be generally applied to the expected benefits based on the vendor’s previous success rates:

Benefits

- Short term benefits (<1 year)
- Long term benefits (>1 year)

Costs

- Vendor costs
- Internal costs

Benefits Calculation

Calculation of benefits can be measured in the short term and evaluated over the long term whereas benefits achieved in the short term will generally increase overtime as the system allows the users to increasingly optimize the operations.

It should be noted that an ERP system does not, itself, optimize a company’s operations, but rather the system allows for improved transparency and provides tools to allow the users to perform optimization that was not previously possible.

The following list of benefits is explained and examination of company specific financial data will allow provision of estimates. The following comprises only a partial list of major benefits:

• Inventory Reduction

In implementing an ERP application, one primary goal is the reduction of inventory levels including raw materials, WIP and finished goods. By reducing inventory levels, the financial value stored in that inventory becomes cash on the balance sheet and is available for other investment. Typically proper implementation of an ERP application will lead to between a 10% and 30% reduction in general inventory levels. The following calculation is therefore applicable:

$$\begin{aligned} & \text{(Value of Raw Material + WIP + Finished} \\ & \text{Goods Inventory)} \times \text{Estimated Reduction} \\ & \text{Rate]} \\ & = \\ & \text{Increased Cash from Inventory} \end{aligned}$$

The benefit of Increased Cash can then be assigned a yearly value based on the companies IRR as in the example calculation below:

$$1,000,000 \text{ USD (Inventory)} \times 15\% \text{ (reduction rate)} \times 20\% \text{ (IRR)} = 30,000 \text{ USD per year}$$

• Improved Process Efficiency

The ERP application maps and automates each of the companies major business processes, working in an integrated cyclical fashion starting from the procurement of materials, warehouse management, production management, machine maintenance and through sales management. Automation of these processes increases speed, reduces errors and reduces labor costs in the management of processes. Aside from these benefits, SunFish ERP provides more transparency in each of the individual processes allowing management to easily restructure and reorganize processes over the long term to further improve efficiency.



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SunFish Enterprise Resource Planning

In general process efficiency is subject to both an initial positive and negative impact in the first year of an ERP application use. While the benefits shown above are both obvious and immediately apparent, initial process change also requires increased effort to absorb the change. Process efficiency improvements can therefore cause reductions in costs of an average of 15% in Year 1, and reach an average of 30% in year 2 (compared to the pre-implementation costs). The following calculation is therefore applicable:

Administration Payroll and Ancillary Costs (Sales processing, Warehouse Management, Inventory Control, Procurement, Production Management, Accounting) * 20%
 +
 Manufacturing Payroll Costs * 5%
 +
 Overhead Costs (Paper, Electricity, Telephone, etc.) * 10%
 =
 Year 1 Process Cost Savings

Note: Year 2 Process Savings will be substantially higher (usually double) the savings achieved in Year 1

• Improved Vendor Relations

A significant portion of the companies costs are derived from purchases to vendors. This includes, primarily, the purchase of raw materials as well as purchase of manufacturing equipment (machines, spare parts), outsourcing services if applicable, and other purchases. SunFish ERP allows an overall reduction in procurement costs by tracking all vendors, RFQ's, previous purchases and terms or purchases. Depending on the current efficiency in the procurement process, savings will vary, however assuming an already efficient and transparent procurement process, a minimum of 2% is typically available through simple improvements with minor future increases available in subsequent years. The following calculation is therefore applicable:

Vendor Procurement Costs * 2% =
 Procurement Savings

• Improved Sales Efficiency

Sales are the company's source of revenue, and well pure efficiency of the sales process is already calculated under process efficiency improvements, other benefits of the improved sales process are apparent to customers and lead to increased sales. SunFish ERP provides the sales team an insight into the companies manufacturing process, allowing sales people to accurately project shorter delivery lead times to customers which improves market competitiveness.

Additionally, SunFish ERP allows more complex pricing methods to be derived for customers. Aspects such as customer order volumes, credit, payment efficiency and special promotions can be incorporated into pricing to provide the appropriate pricing to various qualities of customers. These improvements in the sales process are often as important to customers as product quality and pricing and can make the difference in a customers purchase decision. Increases in sales revenue are highly dependent on a number of factors and require a more complex assessment to determine potential impact, however, the following sample calculation is generally applicable:

Sales Revenue * Estimated Increase %
 = Increased Revenue

• Accounting Optimization

Improved accounting methods and increased transparency in the finances allow management to oversee, in real-time, all the financial details of the business. This insight improves decision making and eliminates errors while vastly increasing efficiency. While such benefits are inherently impossible to project, they are consistently visible post implementation and in most implementations lead to between 0.5 and 5% saving in company expenses.



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Introducing SunFish ERP

SunFish ERP is an advanced Enterprise Resource Planning (ERP) application that automates and streamlines a company's core business processes connecting it with its suppliers, customers, business partners and subsidiaries thus ultimately supporting organizations to achieve operational excellence and sustain profitable growth.

SunFish ERP intertwines information of finances, personnel resources, production and distributions with inventory management solutions, client data bases, and order tracking systems, creditor accounting and many more. Information are updated by users in real-time and are all the time available to everybody who is associated with the system.

SunFish ERP provides instant, intelligent, global solutions to your organization, allowing to quickly respond to any change in market conditions, by providing real-time reports on the status of the goods, financial balances and market or customer behavior thus enabling faster and improved decision-making as well as alignment of valuable resource with strategic business goals.

Some examples of this include reduction in borrowing costs, location of corruption in finance, transfer of funds from short-long term investment, measurement and the subsequent reduction of overtime costs, etc. Although specific prediction is not possible the following calculation is applicable based on previous implementations:

$$\text{Operating Costs} * 1.5\% = \text{Accounting Initiated Savings}$$

• Improved Maintenance & Reduction of Downtime

The maintenance cost of equipment and associated downtime caused by improper maintenance can significantly impact the performance of a business causing increased employee overtime as well as late delivery. Improvements in maintenance will primarily save overtime costs, and such savings vary by industry and business so no typical estimation is available. However, the following calculation is generally applicable:

$$\begin{aligned} \text{Downtime related costs} * \text{percentage of preventable downtime} \\ = \\ \text{Improved maintenance savings} \end{aligned}$$

• Waste Reduction

Raw materials represent a significant cost of production and a variety of factors can cause waste to occur in production, especially waste occurring through theft, expiration and improper mixing. Although some amount of waste is unavoidable, a majority of waste can be eliminated through proper ratio management and the automated inventory control available in SunFish HR. In the average industry range, waste can be reduced by between 20 and 60%. Although a specific estimation of potential waste reduction can be difficult the following calculation is applicable:

$$\begin{aligned} \text{Value of Wastage} * \text{Estimated Reduction Rate} \\ = \\ \text{Waste Reduction Savings} \end{aligned}$$

Cost Calculation

Cost calculation includes a variety of aspects and is intended to provide a detailed overview of the total cost of ownership in consideration of the initial and long term cost of purchasing, implementing and maintaining the ERP application. The following points provide the basis for calculation of cost:

• Software License

The software license cost is easily determined by totaling the costs of software required for the application as provided by the vendor, and including any third party licenses necessary to operate the application.

• Implementation Costs

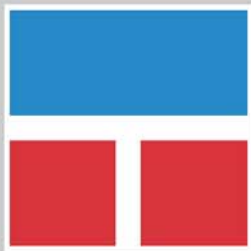
The Implementation costs as provided by the vendor should represent the total implementation costs, including consulting, configuration, software customization, data conversion, training and initial support.

• Hardware Costs

An estimation of these costs is available from DataOn and includes cost of servers and network improvements.

• Internal Training

Internal training costs represent the cost to the company of lost productivity and increased overtime required to train staff during conversion to the new system. An estimate is provided by DataOn, however, internal staff costs should be considered to determine a more accurate internal cost of training staff.



Brawijaya Women and Children Hospital
ColumbiaAsia



System Overview White Paper

Executive Summary

With the Internet moving from a passive publishing medium to an interactive business environment, almost all corporations realized that a strategy for sales and support over the Internet is needed to remain competitive.

For most, however, the biggest challenge is not if or when to consider an Internet solution, but rather how to select the best strategies and tactics to develop and sustain competitive advantage. But, implementing an Internet capability to address the unique needs of customers, business partners, suppliers, and employees is no easy task.

Most are resorting to either appointing development houses that must start from scratch and “rebuild the wheel” almost always, or purchasing massive — and expensive — products, which most organizations can only utilize just a fraction of the applications functionality.

SunFish offers an alternative. A “factory floor” for creating Internet applications, SunFish provides an overlay engine that commoditizes the work of a development house.

DataOn SunFish System Introduction

The DataOn SunFish System is a combination of a high-level application platform, a library of modular applications and a web-based software development kit.

Producing a complete web system with SunFish allows organizations to quickly rollout a solution to meet their current needs while maintaining the flexibility to extend the system as future requirements arise.

SunFish offers a platform for database enabled, dynamically generated on-line solutions for private and public organizations across all industries, and allows corporations to realize their web aspirations quickly and economically on a stable, scaleable platform.

Development houses and IT departments can utilize SunFish to develop custom applications that meet specific requirements, while maintaining the benefits of a completely integrated platform.

SunFish provides a customizable administration platform that incorporates existing applications available in the SunFish Application Library (SAL) or custom developed applications using the SunFish Development Kit (SDK). SunFish also provides integration to existing legacy systems and compatibility with a variety of hardware platforms, operating systems, databases and web servers.

Once configured the customized SunFish system is “wrapped” in a desired graphic shell to produce the final product. In short, SunFish offers the fastest respond in building and managing powerful large-scale on-line solutions.

SunFish provides the following functionalities:

- System Administration
- User Administration
- Application Administration
- Role-Based Security Administration
- Data Admin Module
- Delivery Channel and display management

The functionalities will be further discussed in the SunFish Core Architecture section.

The SunFish Factory takes:

(i) existing platforms (O/S, database, web server) and (ii) legacy applications (the existing programs and specific applications), and run them together with SunFish Modules (existing DataOn modules, partner modules, and customized modules) to allow organizations to make complete online applications, such as WAP, web, XML or SMS.

The SunFish Factory enhances productivity by reducing routine task building so that more resources and time can be concentrated on critical applications tasks.

For an organization, this means faster, less expensive turnarounds for making unique applications. And with SunFish’s enhancement capabilities, more value-added functions could be easily added.

An added benefit is that unlike making a web application “from scratch”, which entails having to deal each time with problems of security, scalability, stability, and extensibility.

The SunFish Factory simply solves all of them by including them in its Factory architecture.

• **Change Management**

Change management costs represent the ongoing productivity costs associated with transitioning staff from the traditional method to the revised business process adopted when utilizing SunFish ERP. An estimate is provided by DataOn based on typical promotion and inefficiency costs encountered during an ERP implementation.

• **Internal Conversion**

SunFish ERP requires a variety of data to be gathered and prepared for the system to be effective. While much of this data is typically available and can be automatically converted by DataOn staff, some data is typically unavailable and requires effort by the company to collect.

Internal Conversion costs represent the cost of collecting and formatting the data for conversion by DataOn staff. An estimate is provided based on typical experience, but should be evaluated by the company based on the currently available data such as financial records, stock information, mixing formulas, vendor/customer data, etc.

CONCLUSION

Based on the preceding calculations of major benefit and cost assumptions a calculation can be made as to the Return on Investment to be expected from implementation of SunFish ERP. Using the final values that are the outcome of each benefit calculation whereas the ERP application and related costs can be retrieved from the vendor, the ROI (or Yearly Net Benefit) calculation can be reduced to the Sum of all Benefit Values (cash from inventory, savings from process re-engineering, procurement, accounting, maintenance, waste and increased revenues) divided by the Sum of all Costs (software, hardware, internal training, maintenance, internal changes and conversions).

Expressed as formula, the ROI becomes:

$$\text{ROI} = \sum \text{Benefit Values} / \sum \text{ERP Acquisition Costs}$$



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GRAND SHOE



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Reference:

For the Introduction Part:
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