

# Streamline SAP<sup>®</sup> Data Transfers by Eliminating Programming

## SUMMARY

Much of the data being uploaded into SAP Solutions exists in spreadsheets. Moving data out of these spreadsheets requires either manual data entry or IT programming resources. By eliminating these requirements, IT departments can better focus programming resources toward greater innovation on internal projects and business challenges.

*“91% of organizations’ IT expenses are related to maintenance and operations. That leaves only 9% for innovation.”*

**Gartner Research**

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## TABLE OF CONTENTS

### PAGE

- 1** Summary
- 2** Introduction
- 2** The Solution
- 4** Product Features
- 5** System Architecture
- 6** Common Applications of ERP<sup>2</sup>
- 7** Conclusion

## Introduction

In today's business environment, IT managers often find themselves on a never-ending search to improve return on IT investment. This search is hampered by the maintenance and management of vast amounts of data. IT departments often find that while they have the ability to manage this data, they simply don't have the capacity. These restrictions on capacity are caused by attempts to manage the data imports through manual data entry or through writing programs.

While manual data entry can accomplish this task, it is only practical for a small number of items. Entering thousands or tens of thousands of records manually is not cost effective and is prone to transcription errors. In many cases, data to be entered already resides in an electronic format.

Using ABAP™ programming to create upload scripts is a valid technical solution. However, the task of changing, maintaining and upgrading these scripts can become a significant resource drain. In general, programming resources can better serve a company's business strategies by focusing on the development of innovative software solutions, instead of data import scripts.

It's a fact of life that business and technical users alike are more familiar and comfortable using spreadsheets when it comes to data management. It's also a fact (according to market researcher NPD) that Microsoft Office tools dominate the office suite market, having nearly 95 percent of unit sales.

Both of these facts bring up a question – why not use the most popular office suite software to accomplish the most common data management tasks?

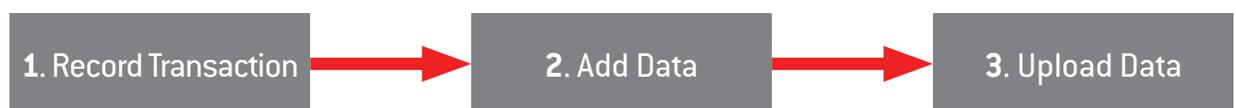
## The Solution

The answer to this question is Quadrate's ERP<sup>2</sup>. (Pronounced E R P Squared) This unique solution provides an easy, three-step process that allows users to quickly import their data using Microsoft Excel or Access – with no programming required.

ERP<sup>2</sup> is a powerful and flexible tool for uploading data to SAP Solutions systems. It works with anything from ad-hoc changes to full mass uploads. Built upon industry standard components, it couples ease of use with scalable high-end functionality at a fraction of the usual cost.

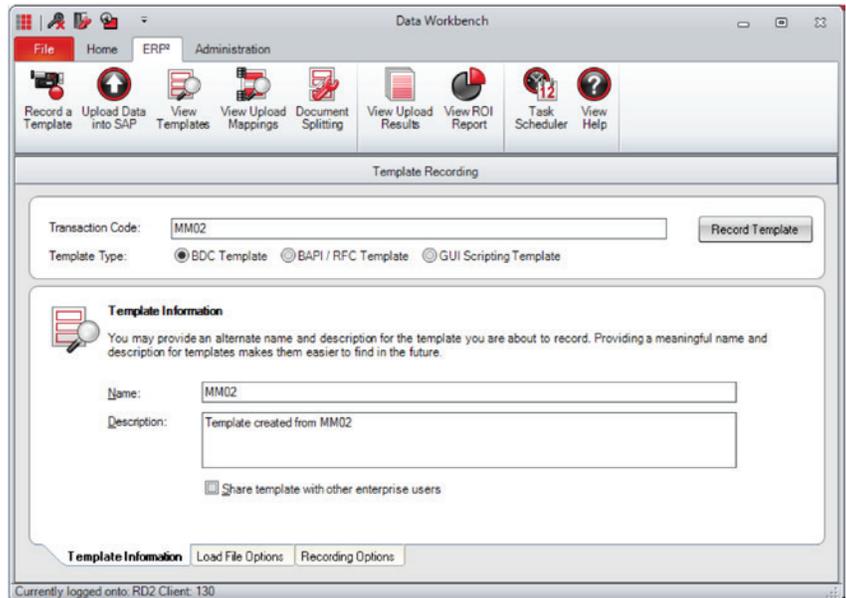
ERP<sup>2</sup> can be installed and used with a minimal amount of training, allowing people directly involved with the business to enter and update data thus saving valuable IT resources.

Using ERP<sup>2</sup> is as easy as 1-2-3:



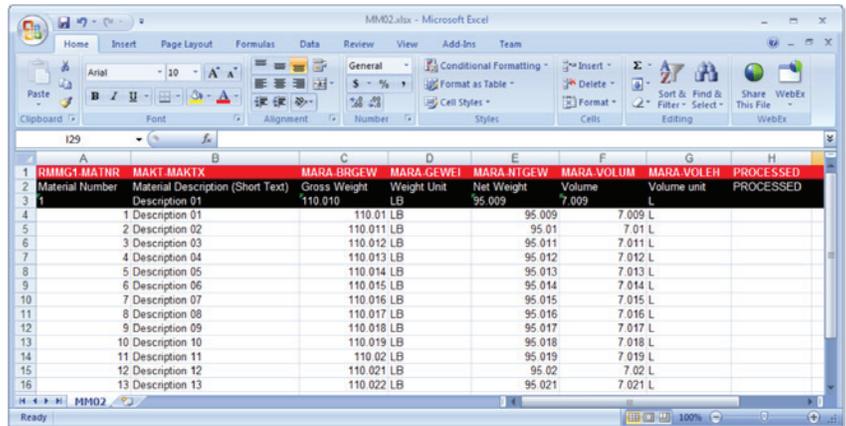
## 1. Record a Transaction

The recording step consists of launching an SAP Solutions transaction from within ERP<sup>2</sup> and marking the transaction fields to create a template.



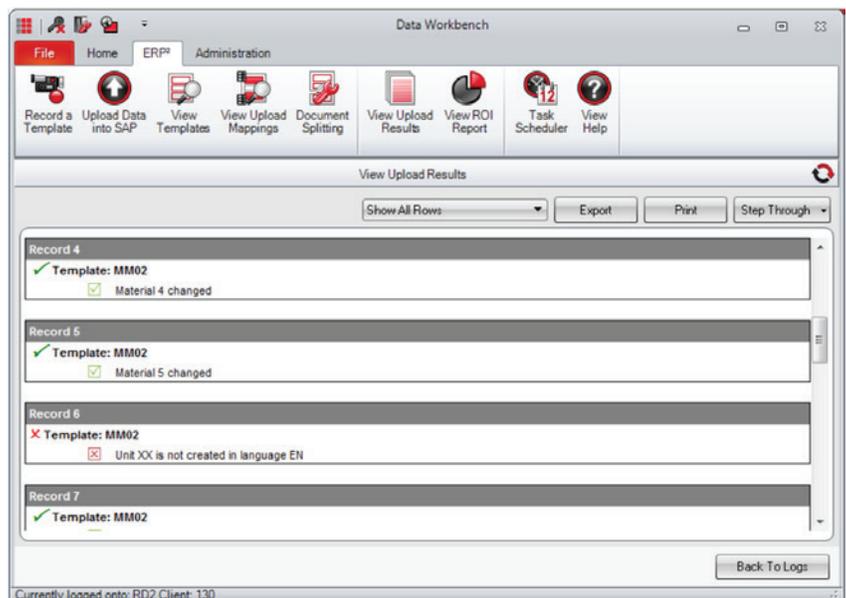
## 2. Add Data

Adding Data is as easy as placing it into the Excel or Access file that is automatically created as a result of the recording in step 1. This can be accomplished in many different ways, including importing the data from other files and databases, and using macros to create the data.



## 3. Upload Data

Uploading your data simply requires selecting the load file you wish to upload, and clicking "Upload".



# Product Features

- **Respects SAP Security**  
A user is restricted to transactions they have been given security to in SAP Solutions.
- **Broad Transaction Support**  
Works with transactions in all functional areas, including custom transactions.
- **Quadrate Message Center**  
Allows for easy software updates, maintenance, and support.
- **Upload Mapping**  
Allows users to upload data for multiple templates and multiple spreadsheets. For instance, if a user needs to upload data from two separate spreadsheet files into one transaction, he or she can create an Upload mapping that maps items from each file to a specific field in the transaction.
- **Multiple File Format Support**  
In addition to supporting Microsoft Excel and Access file formats, ERP<sup>2</sup> is designed so that other data formats – such as MS SQL Server, Oracle, or Lotus Notes – can be easily added.
- **Template Database**  
Allows for sharing of transaction templates, upload mappings, and other items that are useful for users to share.
- **Header/Detail Uploads**  
Provides support for “multi-line” transactions. For instance, when creating an invoice, a user can upload one row of header data (customer name) with multiple nested detail rows (individual invoice items).
- **Data Validation**  
Before uploading into the SAP Solution, the data can be pre-validated to eliminate incorrect data from being used.
- **Template Editing**  
Allows users to edit the BDC for a recorded template, create header/detail templates, or create a new template from scratch.
- **Read Values**  
Allows users to read back data values from fields after an upload, and have them written back to the original spreadsheet.
- **Scheduled Background Execution**  
Allows for uploads to take place at a set or recurring time, even if the machine is switched off (in a shared multi-tier configuration). Also includes error threshold settings and scheduled upload status emails.
- **Flexible License Model**  
Because we recognize customers have different needs, we have created several types of licenses: Roaming, Floating, and Fixed User Licenses. These licenses allow users to run ERP<sup>2</sup> on one or multiple PCs, and allow costs to be better spread out between users.
- **Flexible Cost Distribution Model**  
Budgeting for software purchases is easy with our flexible model of Purchased, Leased, or “Upload Blocks”. These purchasing methods allow the customer to fully purchase the product, lease a license for 3, 6, or 12 months, or just buy blocks of uploads (e.g. 100 uploads at a time).
- **User Ability Settings**  
All organizations have users with different skill levels. ERP<sup>2</sup> includes an administration tool that allows administrators to configure each user’s profile according to their specific abilities.
- **User Ability Groups**  
Allows an administrator to create groups of users who share user ability settings.
- **ROI Report**  
It is our belief that all our customers will see a fantastic return on investment by using ERP<sup>2</sup>. We are so confident in this that we show it right within our application, in a real-time report.
- **Error Logging**  
A drill-down log of all successful and error transactions, including a step-through feature to rapidly identify the cause of any errors. These logs are in addition to the audit logs within SAP Solutions, so there is a fully auditable trail of all data changes, in compliance with Sarbanes-Oxley legislation.
- **Proven solution**  
Currently in 9th production version, with an 11-year history.
- **Advanced Uploading Features:**
  - Multi-transaction uploads.
  - Multi-spreadsheet uploads – e.g. multiple Excel files for one transaction.
  - Multi-transaction uploads where data returned from one upload is used in subsequent transactions (e.g. transaction stringing).
  - Conditional execution of fields in transactions (e.g. only execute a given field if its value is greater than 100).
  - Formatting of field data before it is uploaded (e.g. removing trailing spaces or leading zeros).

# System Architecture

Quadrate's lightweight architecture is built using standard Microsoft .NET technologies and open standards for maximum flexibility and compatibility with existing enterprise frameworks and networks. Our unique system is made up of several core applications and services, which are described below:

- **ERP<sup>2</sup> Client Application**

This is the main client GUI application, which is used to record templates, create upload mappings, and utilize the main features of the application.

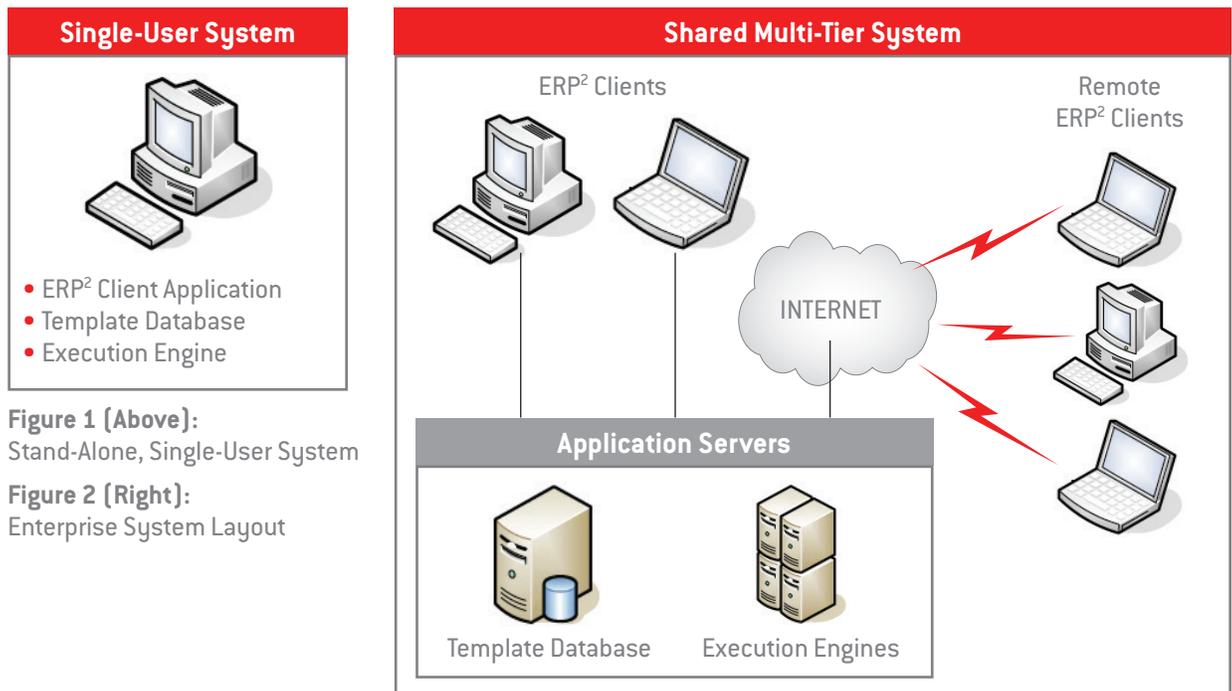
- **Template Database**

This component is used to store templates, upload mappings, log entries, and other items that can be shared between users.

- **Execution Engine**

This engine is responsible for running immediate and scheduled uploads.

The ERP<sup>2</sup> System can be deployed in several different ways, either as a stand-alone application, or as a multi-tiered system for more enterprise-oriented environments. Diagrams of these deployment models are below:



**Figure 1 (Above):**  
Stand-Alone, Single-User System

**Figure 2 (Right):**  
Enterprise System Layout

- **Stand-Alone System**

The most basic deployment option, all three components of the system are installed on a single machine.

- **Shared Multi-Tier System**

In this deployment option, the three system components are installed separately from one another. This configuration allows:

- Users to share templates (because the template database will be shared).
  - > Upload executions to take place on a separate, potentially higher-speed machine.
  - > Scheduled upload jobs to be executed when all of the client machines are powered off.

*(Additionally, it is possible to mix and match these deployment options. For instance, you could install the execution engine on each machine that has the client application installed, but still use the shared template database.)*

# Common Applications of ERP<sup>2</sup>

ERP<sup>2</sup> may be used for both Master and Transactional Data. While there are almost endless applications for ERP<sup>2</sup>, here are some of the most common, as identified by our customers:

- Mass updates and changes for employees, prices, projects etc.
- Repetitive transaction, Material price changes
- Replaces electronic data interchange for small vendors/customers
- Planning updates, Customer services
- Master Data creation, changes or deletions of vendor, customer, material and equipment master as well as fixed asset or functional location data
- Create or change purchase requests/orders, sales orders and vendor invoices with multiple line items
- Post journal voucher documents into the GL with many line items
- Payroll / Human Resources, Timesheets, expense claims
- Automate Daily Cash Reconciliation and Monthly Investment Activity entries
- Master Data Upload
  - Material Master
  - Customer Master
  - Vendor Master
- Transactional Data
  - Sales Orders
  - Delivery Notes
  - Invoices
  - Purchase Orders
  - Bill of materials
  - Budgeting
  - Expense Claims
- Create, Change, Validate, Sync and Report Data
  - Business Support (Production)
    - > Mass changes to material pricing
    - > Material extensions
    - > Periodical upload of data
    - > Adding new master data
    - > Ad-hoc reporting
  - Testing
    - > Upgrades
    - > Creation of master data for testing business scenarios
    - > Support packs and OSS notes
    - > New enhancements
    - > Changes in business processes
  - Problem Solving
    - > Reproduce data from one system to another
  - Training
    - > Build data for training sessions

*This is not an exhaustive list, since ERP<sup>2</sup> can upload data to any transaction in SAP Solutions whether it is standard or modified.*

## Conclusion

Quadrate's ERP<sup>2</sup> is a powerful yet easy-to-use application that allows users to manipulate data within SAP Solutions through a host of advanced features. By equipping these users to accomplish data manipulation tasks on their own, valuable IT resources will be free to work on other important tasks and innovative projects, thereby increasing your firm's return on IT investment.

### For more information

To more fully explore how Quadrate, a division of BackOffice Associates, LLC, can help your organization achieve a successful ERP implementation, visit [www.boaweb.com](http://www.boaweb.com) or email [info@boaweb.com](mailto:info@boaweb.com).



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#### About BackOffice Associates®

BackOffice Associates® is a worldwide leader in data migration and information governance solutions, with a concentration on enhancing SAP® data quality since 1996. Our range of products and services address the needs of business and IT users seeking to unlock the value of their data assets. Whether monitoring ongoing information quality, or executing the most complex migration and governance initiatives, BackOffice Associates is the clear choice for customers requiring "Business-Ready Data Every Day™". BackOffice Associates is a global corporation headquartered in Massachusetts with additional offices in the US, Europe, Asia, India, Australia and Mexico. Company information is available at [www.boaweb.com](http://www.boaweb.com).

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