

Loading Excel Data Securely into SAP[®] ERP Systems

SUMMARY

When organizations make the strategic decision to invest in an ERP system with the goal of making the business run better, data becomes paramount to leveraging the value of that investment. The challenge often becomes the speed and accuracy of turning that data into valuable information. Loading data into SAP[®] typically means either IT intervention or manual entry. This white paper focuses on a strategy to help the business win the battle against the complexities of custom data entry scripts and error-prone manual keying. Business units can securely load data into SAP using Microsoft[®] Excel[™] or Access[™] in a simple 3-step process, without the need for programming.

*“The discipline of strategic planning focuses
on developing strategies to help the business win.”*

Gartner Research

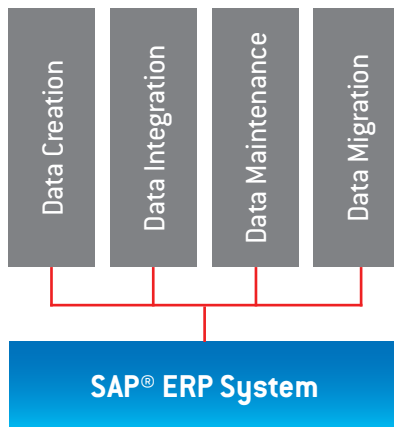
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Data Load Applications

Business users of SAP® have data management responsibilities that vary in complexity and scope. Using familiar Microsoft® tools removes delays and costs that exist when business units routinely rely on IT resources to create scripts, convert documents and research problems in order to accomplish routine data collection responsibilities. Both productivity and efficiency increase when the number of transactions between business users and IT staff are reduced for accomplishing everyday data loading activities. Business users simply use the tools they already know and trust.

Figure 1: Data Loading Applications



Data is a small word with huge impact. How the application of data is managed makes a significant difference on informational outcomes. Data uploading requirements can be categorized as follows:

Figure 2: Use Cases for Data Loading

| | |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Creation | <ul style="list-style-type: none">• Master Data: materials, vendors, customers, GL• Transactional Data: sales, invoices, journal, PO, etc. |
| Integration | Vendor invoices, bank statements, service entry sheets into SAP applications, etc. |
| Maintenance | Mass changes for payroll updates, price changes, plant change in the purchase order document, etc. |
| Migration | <ul style="list-style-type: none">• Initial SAP implementation from legacy systems• Mergers & acquisition legacy data into SAP |

Helping the Business Win

Strategic planning moves organizations forward. When organizations make the move to implement an SAP® ERP system, the IT strategy normally doesn't include IT resources taking responsibility for ongoing data entry applications. While they are more than capable, this added burden competes with other IT priorities. More importantly, IT resources are not the data owners and do not have the needed familiarity with the data details.

By removing the responsibility of data entry from IT resources and placing it back in the hands of business units, end users will be self-sufficient in managing their data. The business wins by harnessing the knowledge and familiarity they already have with Excel™ and Access™, allowing them to securely upload data into SAP on their own.

Having accurate and timely information available enterprise-wide is critical for the success of business decisions. This is achieved when implementing the simple, yet strategic 3-step process of **Quadrate's ERP²** data loading software. A simple 3-step process empowers business users to quickly turn their data into valuable information for every department. Because no programming or IT intervention is needed, SAP becomes easy to use for everyone loading data. This is the type of strategy Gartner Research refers to when they report; "strategic planning focuses on developing strategies to help the business win."

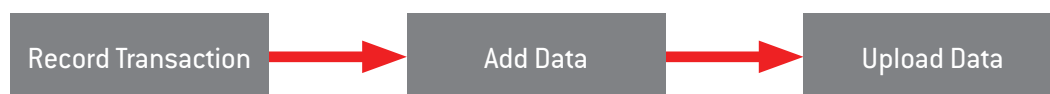
ERP² Application Answer

ERP² (pronounced **E R P Squared**) data loading software is the answer to data loading problems associated with technical intervention on business applications and error-prone manual entry.

ERP² allows business users to focus on their tasks without having to constantly rely on IT resources. It allows IT resources to manage infrastructure instead of spending time assisting business users with data management for the day to day running of the business. The ability to load Microsoft® Excel and Access files into SAP keeps business units current and on task to reach business objectives, as well as keeping IT focused on information technology planning and execution.

The simple 3-step process with ERP² improves productivity for managing master and transactional data in SAP. By stepping through a transaction and clicking in fields needed for data loading, the user completes **step one** – RECORD TRANSACTION. An Excel (or Access) file is automatically created and the user populates it with data, completing **step two** – ADD DATA. The file is then processed into SAP by selecting the upload button, completing **step 3** – UPLOAD DATA.

Figure 3: Simple 3-Step Process

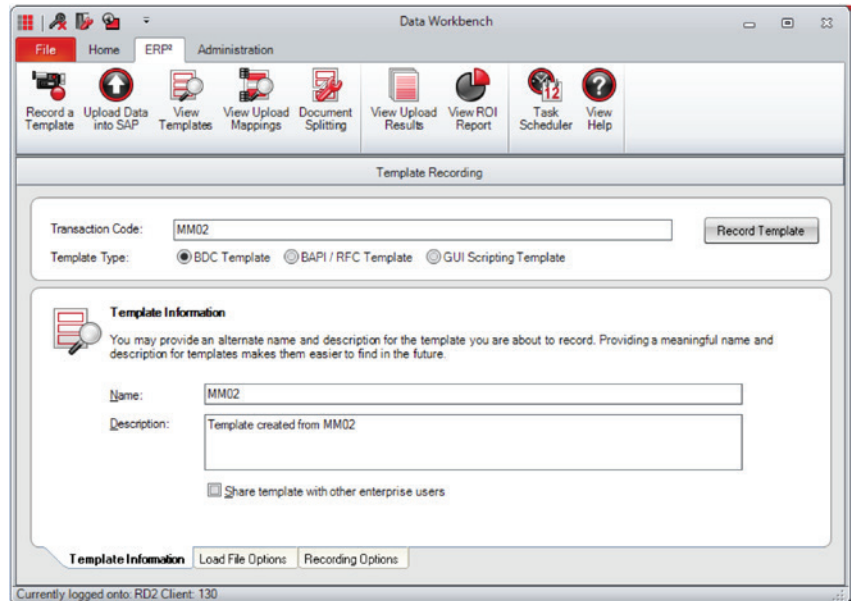


Simple 3-Step Process Explained

The ERP²® simple data loading process begins once the user logs into the SAP® GUI.

There is nothing installed on the SAP system. ERP² uses SAP's recommended and certified Remote Function Calls to securely manage the data loading process.

Recording a new template is easy; the user only needs to know their SAP transaction.

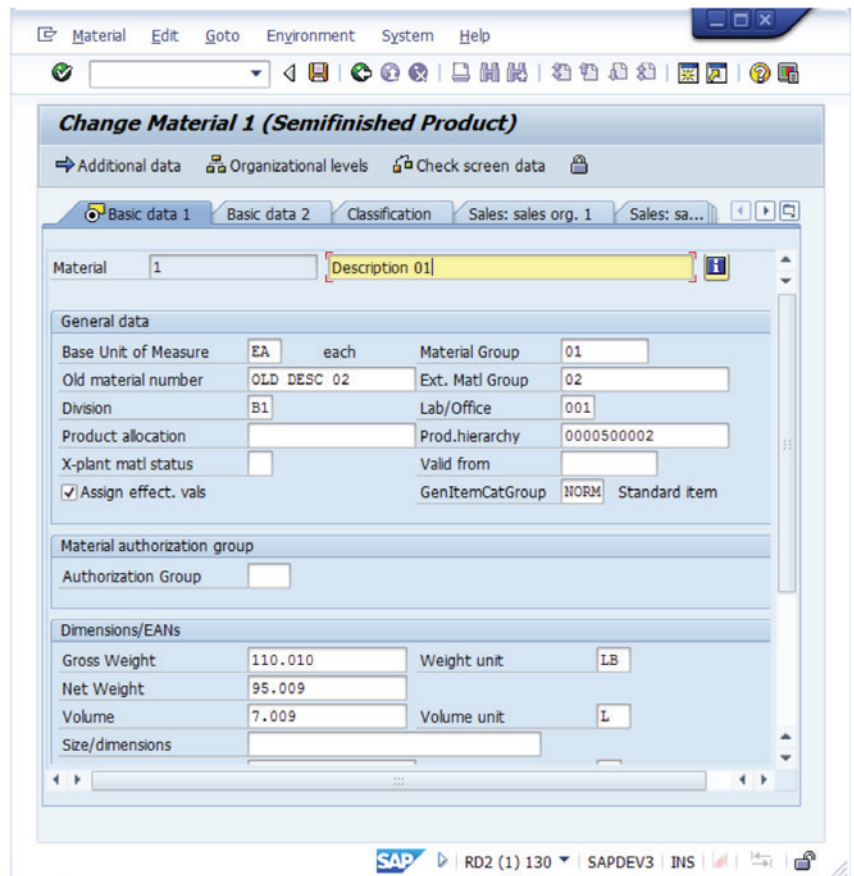


Step 1

Record a Transaction

The software flexibility allows users to work in any module of SAP with all standard, custom create, update and delete transactions. During the recording process, ERP² creates the template in the background.

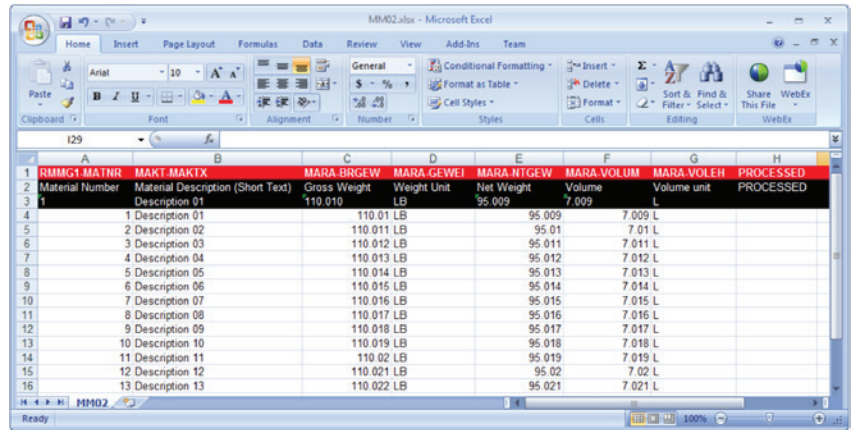
The user selects fields for the template by clicking them in the SAP GUI.



Step 2 — Add Data

The newly created ERP² template automatically presents the Excel™ (or Access™) load file for adding data. The template only needs to be recorded once because it can be re-used as often as needed.

Adding data to your Excel file is an easy and familiar task.

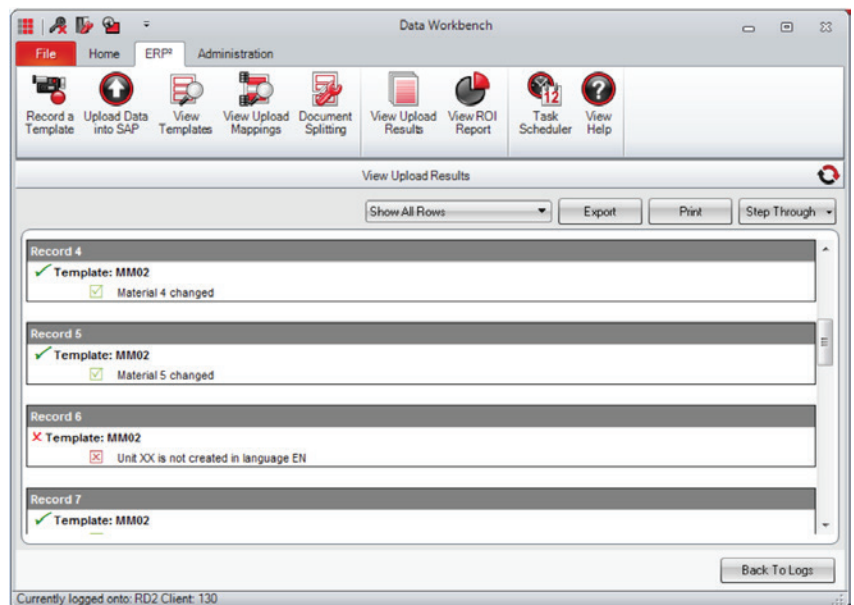


| 1 | RMMG1 | MATNR | MAKT | MAKTX | MARA | BRGEW | MARA | GEWEI | MARA | NTGEW | MARA | VOLUM | MARA | VOLEH | PROCESSED |
|----|-----------------|-----------------------------------|--------------|-------------|------------|---------|-------------|-------|------|-------|------|-------|------|-------|-----------|
| 2 | Material Number | Material Description (Short Text) | Gross Weight | Weight Unit | Net Weight | Volume | Volume unit | | | | | | | | |
| 3 | 1 | Description 01 | 110 010 | LB | 95 009 | 7.009 | L | | | | | | | | |
| 4 | | 2 Description 02 | | 110 011 LB | 95 011 | 7.011 L | | | | | | | | | |
| 5 | | 3 Description 03 | | 110 012 LB | 95 012 | 7.012 L | | | | | | | | | |
| 6 | | 4 Description 04 | | 110 013 LB | 95 013 | 7.013 L | | | | | | | | | |
| 7 | | 5 Description 05 | | 110 014 LB | 95 014 | 7.014 L | | | | | | | | | |
| 8 | | 6 Description 06 | | 110 015 LB | 95 015 | 7.015 L | | | | | | | | | |
| 9 | | 7 Description 07 | | 110 016 LB | 95 016 | 7.016 L | | | | | | | | | |
| 10 | | 8 Description 08 | | 110 017 LB | 95 017 | 7.017 L | | | | | | | | | |
| 11 | | 9 Description 09 | | 110 018 LB | 95 018 | 7.018 L | | | | | | | | | |
| 12 | | 10 Description 10 | | 110 019 LB | 95 019 | 7.019 L | | | | | | | | | |
| 13 | | 11 Description 11 | | 110 020 LB | 95 020 | 7.020 L | | | | | | | | | |
| 14 | | 12 Description 12 | | 110 021 LB | 95 021 | 7.021 L | | | | | | | | | |
| 15 | | 13 Description 13 | | 110 022 LB | 95 022 | 7.022 L | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | |

Step 3 — Upload Data

As the data uploads, ERP² logs all SAP® messages for each record. These messages are also logged directly on the Excel sheet.

Uploading data happens at the click of button.



The error-handling features make this process foolproof. Failed return records can be quickly uncovered with an easy step-through feature that makes the identification and correction process simple.

ERP²® Security and Administration

SAP® security is completely preserved with the use of ERP²®. The user can only access and automate data loading in transactions authorized under their unique SAP user profile. There is nothing a user can do with the software that they cannot already do manually.

ERP² also offers additional layers of security and authorizations beyond those provided by SAP. An assigned administrator can place limitations on a user's abilities, such as:

- Restricting times that data loads can be executed.
 - For example, if Friday afternoons are reserved for system updates, upload execution can be denied during that time.
- Assigning users to only a limited selection of SAP systems.
- Restricting certain users from performing uploads and/or edits, or from recording.
- Restricting users from advanced features such as transaction stringing.

Controlling user privileges.

The screenshot displays the 'Data Workbench' Administration window. The left sidebar shows a tree view of 'Groups' including Administrators, Users, Accounting, Purchasing, and Production. The main area is divided into 'Templates', 'Uploads', and 'Upload Mappings' sections, each with various checkboxes for permissions like 'Can Record', 'Can Upload', and 'Can String Transactions'. Below these is a 'System Instances' table with columns for 'Allowed', 'Name', and 'Time Restrictions'. The 'Cransoft' instance is highlighted with 'No Restrictions'. An 'Edit' button is visible next to it. A 'System Instance Time Restrictions' dialog box is open in the foreground, showing a calendar grid for days of the week and times (12, 4, 8, 12). Red shading indicates 'Access Allowed' and white indicates 'Access Prohibited'. The legend at the bottom shows a red square for 'Access Allowed' and a white square for 'Access Prohibited'.

| Day | 12 | 4 | 8 | 12 | 4 | 8 | 12 |
|-----------|----------------|----------------|----------------|----------------|-------------------|-------------------|----------------|
| Sunday | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed |
| Monday | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed |
| Tuesday | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed |
| Wednesday | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed |
| Thursday | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed |
| Friday | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Prohibited | Access Prohibited | Access Allowed |
| Saturday | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed | Access Allowed |

ERP² Core Features

If data needs to go into any area of your SAP® landscape, ERP²® will save time and resources. The features below highlight the most popular uses. However, these features can work in a number of different ways to support data needs within the various modules and transactions.

- **Broad Transaction Support**
Works with in every functional area, including custom transactions.
- **Quadrate Message Center**
Easy software updates, access to maintenance, support, tutorials and news.
- **Upload Mapping**
Upload data for multiple templates and data sources into one transaction with an easy mapping function.
- **Template Database**
This is an easy-to-navigate library for saving and sharing scripts.
- **Header/Detail Uploads**
Provisions for “multi-line” transactions are here. For instance, when creating an invoice, one row of header data (customer name) can be uploaded with multiple nested detail rows (individual invoice items).
- **Upload Simulation**
Validate data uploads by simulating before committing changes to SAP.
- **Backup and Restore**
Original data can be saved and restored to the original state, if required.
- **Template Editing**
Edit existing templates easily. Create header/detail templates or create a new template from scratch.
- **Read Values**
While uploading, data from the SAP screen can be captured and stored in the upload file. These values can be used to perform conditional uploads based on the response received from SAP.
- **Template Execution Scheduler**
Uploads can be scheduled to take place at a set or recurring time, even when the client computer is turned off. Error threshold settings and scheduled upload status emails are available.
- **User Ability Groups**
An administrator can create groups of users who share the same authorizations. This simplifies the management of rights assignment to individuals or groups of users.
- **ROI Report**
ERP² has a rapid return on investment. To prove it, there is an ROI report built into our application, showing a real-time report.
- **Document Splitting**
Uploads with more than 999 lines can be automatically uploaded into SAP transaction without the line limitation.
- **Error Logging**
A drilldown log of all successful and failed transactions includes a step-through feature to rapidly identify the cause of the errors. The ERP² logs supplement the SAP audit logs to provide a full, auditable trail of data changes, in compliance with SOX legislation.
- **Advanced Uploading Features**
 - Multi-transaction uploads
 - Mix multiple file sources
 - Upload data from a mix of multiple Excel™ or Access™ files
 - Multi-transaction uploads
 - Data returned from one upload is used in subsequent transactions (e.g. transaction stringing).
 - Conditional execution
 - Execution based on other fields in transactions (e.g. only upload a given field if value is greater than 100).
 - Formatting
 - Change formatting of field data before it is uploaded (e.g. removing trailing spaces or leading zeros).

Conclusion

Quadrate's ERP²® is powerful, yet very easy-to-use. Companies and users see increased productivity on the first day of implementation. The strategy of allowing SAP® users to securely load data into SAP using Excel™ or Access™ is a win for both IT and business units. Most organizations realize a return on investment within the first week.

Free trials are available to experience the impact first-hand. <http://quadrate.com/free-trial.aspx>

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 or email info@boaweb.com.



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About BackOffice Associates®

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