

W H I T E P A P E R

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# Intelligent Invoicing Management

Advance Payments, Progress Billing, and  
Automated Posting Logic for Project-Based Companies

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Correct posting of complex billing scenarios with automatic account assignment

**Focus:** Posting Matrix | Advance Payment Dissolution | FIFO Method | Audit Compliance

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## 1. Introduction

Project-oriented service companies face a particular accounting challenge: their billing models are complex, variable, and often stretched over long periods. In addition to standard invoices, they use advance payments, progress billing (installments), partial final invoices, and final invoices – each with specific accounting requirements.

Correctly posting these different billing types requires not only deep accounting knowledge but also intelligent system support. In particular, the question of when a payment becomes revenue-effective and to which account it must be posted is error-prone without automation.

This whitepaper describes how integrated invoicing management makes this complexity manageable: through a configurable posting matrix, automatic account assignment, and intelligent KPIs that make the current status of every advance payment and installment transparent.

*Core thesis: Automating posting logic not only eliminates errors but creates real-time transparency over the actual invoicing status at project level for the first time.*

## 2. The Posting Matrix as the Core Engine

The central innovation of the solution is a configurable posting matrix that automatically determines the correct posting account based on four dimensions. This makes manual account assignment obsolete and drastically reduces the risk of errors.

### 2.1 The Four Dimensions

**Dimension 1 – Invoice Recipient Country:** The tax treatment of an invoice depends significantly on whether the recipient is located domestically, in the EU, or in a third country. The solution distinguishes four categories: Domestic, EU with domestic tax remittance, EU reverse charge, and third country.

**Dimension 2 – Invoice Type:** The type of invoice determines whether the posting is revenue-effective or posted to an interim account. Standard invoices, advance payment invoices, and installment invoices require different accounts.

**Dimension 3 – Tax Rate:** The applicable tax rate (e.g., 0%, 7%, 19%) influences the posting transaction key and can vary depending on the invoice recipient country.

**Dimension 4 – Cost Type:** The distinction between internal and external services as well as special cost types such as advance payments leads to different revenue accounts.

### 2.2 Automatic Account Assignment

The combination of these four dimensions yields a unique account key. The posting matrix is modeled as an independent, configurable object in the system. Each row defines an account, and each column provides the corresponding selection collections. Integrated plausibility checks prevent duplicates and faulty configurations.

The posting matrix is configured per tenant and automatically applied during invoicing. The matrix can be extended at any time as needed to map new billing scenarios.

### 3. Advance Payment Invoices in Detail

Advance payments are common practice in project-oriented companies: before project start, a portion of the contract value is invoiced as a prepayment. From an accounting perspective, advance payments are not revenue-effective – they merely represent a liability toward the customer until the service is rendered and the advance payment is dissolved.

#### 3.1 Lifecycle of an Advance Payment

The lifecycle of an advance payment comprises several phases. In the first phase, the advance payment invoice is created and finalized. The posting is made to a special interim account (e.g., account 1246) with VAT. In the second phase, successive dissolution occurs: with each follow-up invoice, individual line items can be marked as advance payment dissolution. These items are posted with transaction key 40 (without VAT), since the tax was already remitted with the original advance payment invoice. The third phase is complete settlement: once the entire advance payment amount has been dissolved, the advance payment is considered consumed.

#### 3.2 Practical Example

A concrete example illustrates the process:

Transaction	Amount	Account
Advance payment invoice (with VAT)	€100,000	1246 (Credit)
Follow-up invoice item 1: Internal services	€50,000	4405 (Credit)
Follow-up invoice item 2: AP dissolution	-€50,000	1246 (Debit), Key 40
Follow-up invoice item 3: AP dissolution	-€50,000	1246 (Debit), Key 40
Result: Advance payment fully dissolved	€0 remaining	–

During dissolution, the `accounting_transaction_key` is automatically set to 40, ensuring a posting without VAT. This prevents double taxation, as VAT was already remitted with the advance payment invoice.

#### 3.3 FIFO Method for Multiple Advance Payments

When multiple advance payment invoices exist within a project, the FIFO principle (First-In-First-Out) applies automatically: the chronologically oldest advance payment must be fully dissolved before the next one can be dissolved. An automatic counter numbers advance payment invoices sequentially per project and ensures the correct order.

Additional safeguards prevent errors: if the amount of a dissolution line item exceeds the remaining balance of the advance payment, saving is blocked and a warning is displayed.

## 4. Progress Billing and Final Invoices

Progress billing (installment invoices) represents another important billing pattern. Like advance payments, they are initially not revenue-effective. The key difference: installments only become revenue-effective through an explicit partial final or final invoice.

### 4.1 Process Flow

In a typical workflow, multiple installment invoices are issued first, each posted to an interim account. When the contract is completed or a milestone is reached, a final invoice is created. This contains the total amount as a positive line item and all previous installments as negative line items. Only when the final invoice is finalized do both the remaining amount and the previously issued installments count as revenue.

### 4.2 Practical Example

Transaction	Amount (Net)	Posting
Installment 1	€20,000	Account 1246 (Credit)
Installment 2	€40,000	Account 1246 (Credit)
Final invoice item 1: Internal	€100,000	Account 4405 (Credit)
Final invoice item 2: -Installment 1	-€20,000	Account 1246 (Debit), Key 40
Final invoice item 3: -Installment 2	-€40,000	Account 1246 (Debit), Key 40
Payable amount (final invoice)	€40,000 net	–

Here too, transaction key 40 is used for the dissolution items to ensure correct tax treatment. The installments are dissolved separately by cost type (internal/external services) and assigned to the corresponding revenue accounts.

## 5. Transparency through Intelligent KPIs

A central value-add of the solution are comprehensive KPIs that provide transparency at invoice and project level regarding the current status of all advance payments and installments.

### 5.1 Invoice-Level KPIs

For each advance payment invoice, KPIs are automatically calculated showing the amount already dissolved and the remaining balance – broken down by total, internal services, and external services. These KPIs automatically consider all follow-up invoices containing dissolution items for the respective advance payment.

### 5.2 Project-Level KPIs

At project level, values from all advance payment and installment invoices are aggregated. A dedicated tab shows at a glance the overall status of open advance payments and installments. It is ensured that non-revenue-effective amounts are correctly separated from revenue KPIs.

Existing KPIs such as actual fees, billed amounts, and invoice values are automatically extended with the logic that advance payment and installment invoices are only considered after their dissolution. This ensures that project reporting always reflects the actual economic situation.

KPI	Description
<b>AP total / internal / external</b>	Sum of all finalized advance payment invoices in the project
<b>AP dissolved total / int. / ext.</b>	Sum of all line items that have dissolved advance payments
<b>AP open total / internal / external</b>	Difference: advance payment amounts not yet dissolved
<b>INST total / internal / external</b>	Sum of all finalized installment invoices
<b>INST dissolved total / int. / ext.</b>	Installments dissolved through final invoices
<b>INST open total / int. / ext.</b>	Installments not yet dissolved through final invoices

## 6. Impact on Existing KPIs

The introduction of advance payment and installment invoices has direct implications for existing project KPIs. To ensure correct economic representation, the following KPIs are adjusted:

Actual fees, Billed, and Not billed (each total, internal, external) must not include advance payment and installment invoices, as these are not revenue-effective. The same applies to the Remaining Order-Actual KPIs. Only the dissolution through marked line items or final invoices flows into the calculations as actual revenue.

This logic ensures that project controllers and management always work with reliable figures that correctly reflect the economic reality – regardless of the complexity of the chosen billing model.

## 7. Visibility and Permissions

The extended invoicing KPIs are displayed on a dedicated project tab that is only visible to authorized user groups. This enables a clear separation between operational project information and financial detail data.

The action for manually triggering a DATEV export is also protected by an authorization concept. Only authorized users can restart a failed export – an important aspect for compliance and the internal control system.

## 8. Conclusion

Complex billing models such as advance payments and installments place high demands on system support. A configurable posting matrix with automatic account assignment, a FIFO-based dissolution procedure, and transparent real-time KPIs create the foundation for error-free, traceable accounting.

Through direct integration with the DATEV export, posting records are not only correctly generated but also immediately transferred to financial accounting. The result is an end-to-end process chain that minimizes manual interventions, maximizes data quality, and ensures compliance.

*The combination of an intelligent posting matrix, automated advance payment dissolution, and real-time KPIs makes complex billing scenarios manageable – for project managers, controllers, and accountants alike.*