UNIT4
In business for people

REFERENCE MANUAL

Project Costing and Billing

7.7

Last updated 24/11/2020

The documentation is designed to support Unit4 ERP.
This document is intended for Unit4 ERP Consultants and customer Super Users, and thus assumes in-depth knowledge of existing Unit4 ERP functionality.
Every effort has been made to supply complete and accurate information; however, the information in this document is subject to change without notice. UNIT4 N.V. and its group companies assume no responsibility or liability for any errors that may occur in the documentation.
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Introduction to PCB

Content description

This document lists relevant windows only. For information on the other windows, please refer to the online help. Likewise, prerequisites and menu commands are not listed here, except in certain cases. You will find information about the basic setup of Unit4 ERP and common functionality in the reference manuals Basic setup and System Administration. This document introduces Project Costing and Billing (PCB) and explains what this product family contains. It also describes links to other Unit4 ERP product families.

Parts of the document

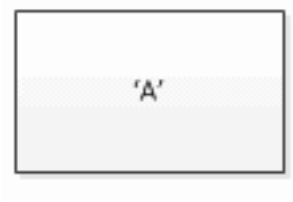
The first part of the document features the PCB functionality, some basic setup and the common functionality for the Desktop platform and the Unit4 ERP platform. The second part focuses on functionality exclusively found on Unit4 ERP and on timesheet entry and processing on this platform.

There is also an appendix with the PCB system parameters.

Diagrams

The diagrams used contain boxes illustrating windows, server processes and tables in the Unit4 ERP application. Some of these boxes are optional, and this is illustrated by this dash type:

You will also find boxes containing the letters 'A', 'B' or 'C':



These letters refer to the statuses of the rows (for example timesheet rows or invoice rows) sent to the tables. Normally, they would have the following meanings:

- **A** - Not validated.
- **B** - Open items
- **C** - Historical items

For further reading on these statuses, please refer to the Reporting reference manual

What can PCB do?

Introduction

Projects are the key operational focus of many organisations in Agresso's target market. A variety of organisations are required to manage jobs or projects, ranging from small internal projects to large contracts that may span several financial years, generate significant contributions to operation turnover and profitability, involve large numbers of resources, and incur high costs.

Project Costing and Billing is designed to be a tool creating the flexibility needed to perform the required project activities, adding to the organisation's profit, and reducing costs.

Essential needs

It is vital for project managers in such organisations to fulfil its customers' expectations while achieving maximum profitability and optimum cash flow. This means effective utilisation of resources and tight management control of all aspects of the project, including budgets and commitments. Flexible project structures are needed to support the requirements of different types of organisations whose projects can differ in nature. A project system must support the processes involved in executing a project, from cost capture to invoicing, by automating them where possible.

While giving full control and readily available information to project managers and administrators, powerful, flexible enquiries must exist to give the project manager excellent snapshots of the bigger picture, making it possible to anticipate problems as early as possible, in order to ensure the project targets can be achieved.

Unit4 ERP PCB

The Time/Project module delivers the core Project functionality and is where projects are defined, together with their structures and reporting parameters. The project concept is very flexible, with sub-projects grouped under main projects, made up of various activities and/or work orders. Linked with the flexibility around resource structures in Human Resources, PCB becomes a very versatile application, coping with the needs of different types of organisation.

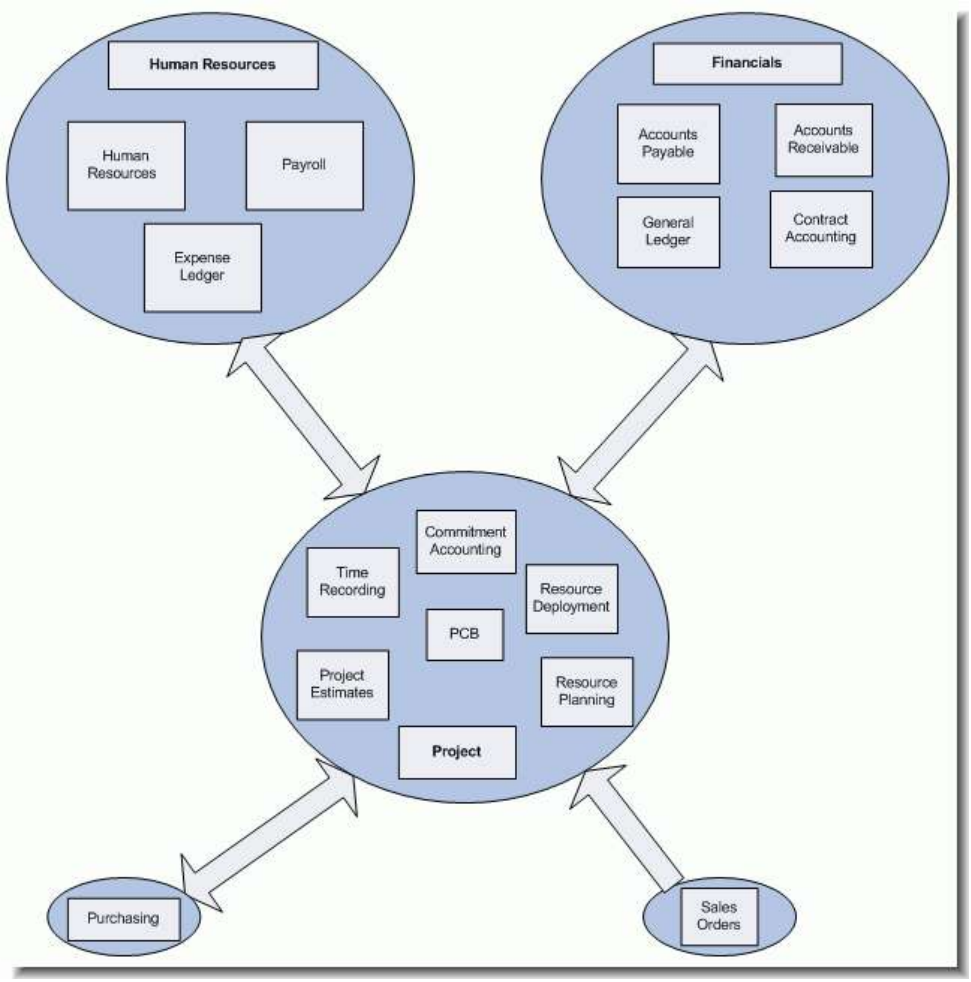
Features

The Time/Project module offers control over project costs, and automation of costing information. This is particularly true if timesheets are used, as the project managers can control who can post time to projects, activities and work orders within projects; for example by designating specific people, or certain types of people (engineers as opposed to salesmen etc). Follow-up authorisation and control procedures are available to trap time and costs that may not be recoverable, or which are inappropriately analysed.

PCB in Unit4 ERP

Links

The PCB module links to a number of other Unit4 ERP modules:



Financials

PCB can:

- Pick up costs and expenses from the General Ledger for billing.
- Post the cost of time incurred.
- Post the revenue from the sales of goods and services.
- Post income accruals.
- Use the common customer master file.

Purchasing

PCB can link purchase orders to specific projects.

Sales orders

Sales orders can be invoiced in PCB. Sales products will be transferred to the Invoice base, where the due date will be taken from the sales order details.

Human Resources

PCB can:

- Use the common Resource Master file
- Link time booked on timesheets to the Absence module.
- Generate personal work schedules.
- Import absence

Payroll

PCB can:

- Derive hourly cost rates for employees from Payroll
- Link overtime recorded to payments to be made through Payroll

Contract accounting

PCB can:

- Derive hourly cost rates for contractors from Contract Accounting

And elsewhere

In addition, any module that uses GL postings may well also use the project, work order or activity attributes.

Planner

Through Planner, PCB has a direct link to project budgets.

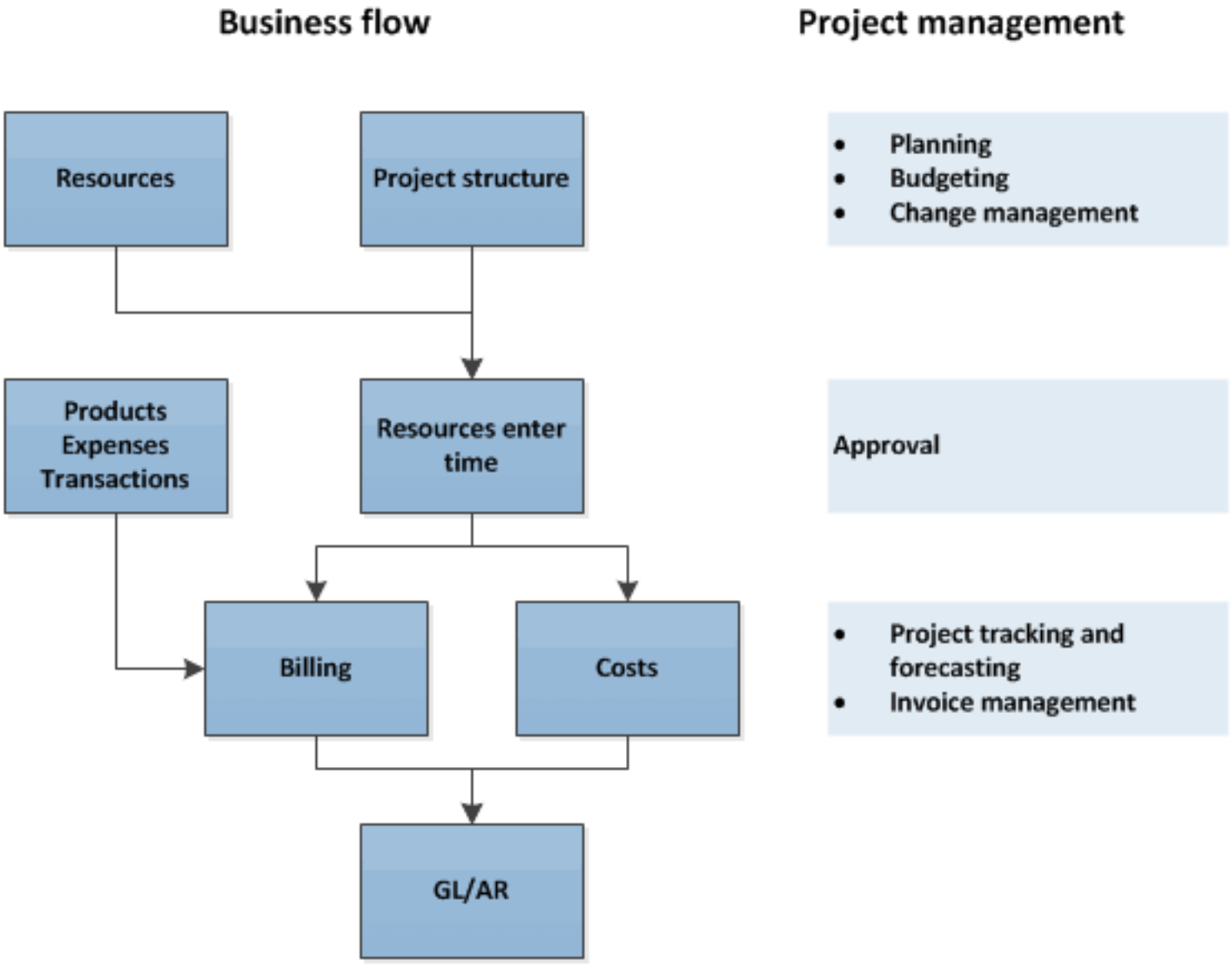
Field Force

Field Force registers service projects and service orders sent to the master files in PCB, and also do their billing through PCB.

General Business Flow of PCB

Business Flow

This figure is a rough overview of the way data is entered and processed in PCB. Time is either a source for billing or project costs:



Setup Projects

Common setup

Introduction

The first step in the implementation of any of the modules in the Unit4 ERP family is to review the requirements related to Common.

This chapter describes the necessary setup in modules outside of the PCB module itself, mainly Common.

Important

Both the required setup for the specific module and the business requirements of the specific organization must be taken into consideration. At the start of any module implementation it is important to revisit the Business and Transaction plans and re-analyse the functional and reporting needs of the organization.

Attributes

Introduction

The Attributes cornerstone in Unit4 ERP is an important key to understand how this solution can be so flexible and easily adapted to individual user needs, even in the post-implementation phase.

Project attribute IDs

Attribute IDs starting with a **B** are project attributes required by Unit4 ERP. In this section, some of the key attributes are mentioned.

Project attributes

This figure shows a listing of attributes directly related to PCB:

Attributes

	ID	Attribute	Description	Owner	Descr	Type	Field	Len	Mnt	DC	P	A	M	W	MF	Form	S
?	B*									☐	☐	☐	☐	☐	☐	☐	
1	B0	PROJECT	Project code	COSTC		A	Cat2	12	A	☐	☐	☐	☒	☒	☐	☐	N
2	B1	ACTIVITY	Activity code			A	Cat5	12	M	☐	☐	☐	☒	☐	☐	☐	N
3	B2	INC.CAT	Income categories			A	Free	12	M	☐	☐	☐	☒	☐	☐	☐	N
4	B3	COST.CAT	Cost categories			A	Free	12	M	☐	☐	☐	☒	☐	☐	☐	N
5	B4	PRO.TYPE	Project type			A	Free	12	M	☐	☐	☐	☒	☒	☐	☐	N
6	B5	DISCIP	Discipline			A	Free	12	M	☐	☐	☐	☒	☐	☐	☐	N
7	B6	PRI.ELMN	Price element			A	Free	2	A	☐	☐	☐	☒	☐	☐	☐	N
8	B7	TIMECODE	Time code			A	Cat4	12	A	☐	☐	☐	☒	☐	☐	☐	N
9	B8	INV.SPEC	Invoice specification type			A	Free	1	A	☐	☐	☐	☒	☐	☐	☐	N
10	B9	LEAVE	Leave			A	Free	1	M	☐	☐	☐	☒	☐	☐	☐	N
11	BA	INV.STAT	Invoice status expenses			A	Cat7	1	M	☐	☐	☐	☒	☐	☐	☐	N
12	BC	CONNECT	Resource connection			A	Free	12	M	☐	☐	☐	☒	☐	☐	☐	N
13	BE	TS.PER	Time period			N	Free	6	A	☐	☐	☐	☒	☐	☐	☐	N
14	BF	WORKORD	Work order code			A	Cat4	12	A	☐	☐	☐	☒	☒	☐	☐	N
15	BG	INV.RULE	Invoice rule			A	Cat3	12	A	☐	☐	☐	☒	☐	☐	☐	N
16	BH	JOBTYPE	Job type			A	Cat6	12	M	☐	☐	☐	☒	☐	☐	☐	N
17	BI	DOCTYPTS	Document type project/work order	IMAGE		A	Free	2	M	☐	☐	☐	☒	☐	☐	☐	T
18	BJ	INV.ELMT	Invoice element			A	Cat7	1	A	☐	☐	☐	☒	☐	☐	☐	N
19	BK	UNIT	Unit			A	Free	12	M	☐	☐	☐	☒	☐	☐	☐	N
20	BL	ACE	Additional cost/income element			A	Free	12	A	☐	☐	☐	☒	☐	☐	☐	N
21	BM	EXPTYPE	Expense type			A	Free	12	A	☐	☐	☐	☒	☐	☐	☐	N
22	BN	SITE	Site			A	Free	12	M	☐	☐	☒	☒	☐	☐	☐	N
23	BO	SHIFT	Shift			A	Free	12	M	☐	☐	☐	☒	☐	☐	☐	N
24	BP	RATE	Rate code		RATE	A	Free	12	M	☐	☐	☐	☒	☐	☐	☐	N
25	BQ	FUNCTION	Function		ON/OFF	A	Free	12	M	☐	☐	☐	☒	☐	☐	☐	N
26	BR	FUNCTYPE	Function type			A	Free	12	M	☐	☐	☐	☒	☐	☐	☐	N
27	BU	MAINPROJ	Main project			A	Free	12	A	☐	☐	☐	☒	☒	☐	☐	N
28	BV	MILEST	Milstone code			A	Free	12	A	☐	☐	☐	☒	☐	☐	☐	N
29	BW	PRICELIST	General project price list			A	Free	12	A	☐	☐	☐	☒	☐	☐	☐	N

Important attributes

This table features some important attributes when using PCB:

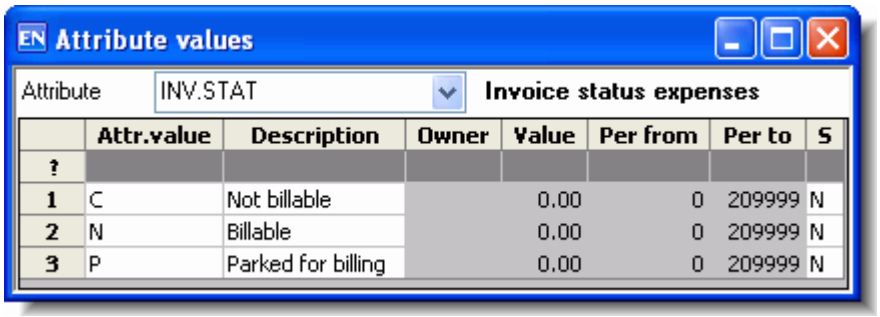
Attribute	Function and options
PROJECT (B0)	Project. The central posting attribute in PCB. Set in category 2, this attribute is a defining component in account rules, timesheets, and a number of PCB server processes. The structure definition for projects is an important part of the implementation of PCB.
PRO.TYPE (B4)	Project type. This attribute groups projects for various GL analysis. An example is which accounts to use for external and internal projects.
WORKORD (BF)	Work order. This is a subdivision of a project that may or may not have separate characteristics. Set in category 4, this attribute is a posting attribute of its own.
ACTIVITY (B1)	Activity. This is a crosscutting subdivision of projects or work orders that may or may not be unique for a given project. Set in category 5, this is also a posting attribute.
ACE (BL)	Additional cost or income element. This attribute groups various cost and income components into one price or cost per unit.
INV.RULE (BG)	Invoice rule. This attribute defines what can be invoiced, and how, per project.
INC.CAT (B2)	Income category. This attribute groups resources with the same income rate.
COST CAT. (B3)	Cost category. This attribute groups resources with the same cost rate.
TIMECODE (B7)	Time code. This attribute links time with Payroll.
INV.STAT (BA)	Invoice status expenses. This attribute defines values for posting of billable transactions to General Ledger, Accounts Payable or Expense Ledger. It is set in category 7. It must not be confused with attribute INVSTAT (AA) from Accounts Payable.

Note on INV.STAT

The attribute INV.STAT (BA) is an important point of connection between PCB and Travel expenses.

Values

INV.STAT needs values defining whether or not something is billable. The following attribute values are commonly used:



	Attr.value	Description	Owner	Value	Per from	Per to	S
?							
1	C	Not billable		0.00	0	209999	N
2	N	Billable		0.00	0	209999	N
3	P	Parked for billing		0.00	0	209999	N

Default value in account rules

In account rules using this attribute's category, a default value of **N** or **P** is recommended. If not, the account rule will never be applied to expenses in PCB. If left blank or with value of **C**, the transaction table will not be picked up by the EXPENSES (*atsexpences*) balance table's standard SQL criteria, as this searches for a status of **N** or **P** in category 7.

Other attributes

This table features some important attributes from other modules that are used in PCB.

Attribute	Function and options
RESNO (C0)	Resource. This attribute identifies resources.
COSTC (C1)	Cost centre. This attribute defines cost centres.

Account rules

Introduction

Account rules relating to implementation of the Financials family, are assumed to have been set up previously. At this point, additional account rules for use with the PCB module and the project accounts must be defined.

Additional rules

The additional rule types listed below are frequently needed in PCB implementations:

- Project expenses
- Hourly costs
- Additional hourly costs
- Recovery
- Project revenue

Account rules are company-specific, but we have included some setup examples below.

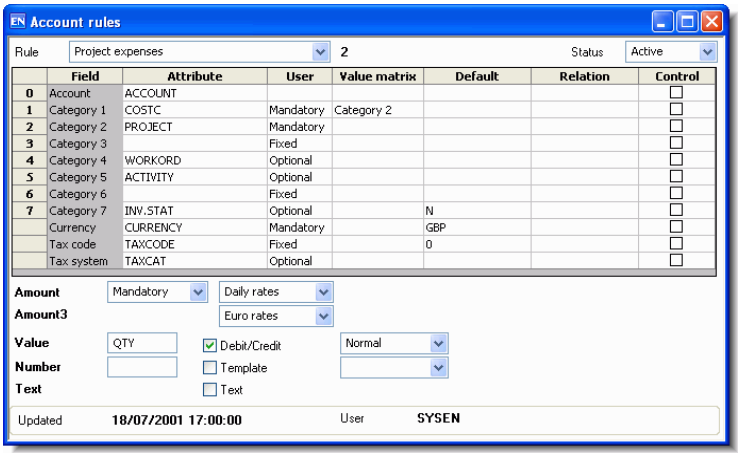
Project expenses account rule

Function

This type of account rule allows for the recording of project-related expenses through the General Ledger or AP. The attribute INV.STAT is included in category 7, activating transfer of all transactions using this account rule to the *atsexpences* balance table. Please refer to the PCB data entry chapter for more detail on how expenses are moved through the modules toward eventual invoicing to customers.

Example

This figure shows a project expenses account rule. Category 7 is highlighted to emphasise the setting of this category:



Note

- Work order and activity are set up in this rule with *User* column value set to **Optional** as some projects may be only activity-based and others only work order-based.
- Unit4 ERP requires the attribute INV.STAT in category 7 for billable project expenses. A default attribute value **N** has been included in the account rule to ensure that all transactions posted are transferred to PCB for billing.
- The **Currency** attribute has been set to mandatory instead of fixed. This makes posting in other currencies than the company currency possible. It is, however, important to be sure that currencies used are set up in the **Exchange rate entry** window.
- Unit4 ERP does not perform project/work order/activity validation outside of the PCB module, so in order to control user input in the GL or AP either direct relations, that is, either a work order or value matrix relation on **Project** must be used. You will find an example of this later in the document.

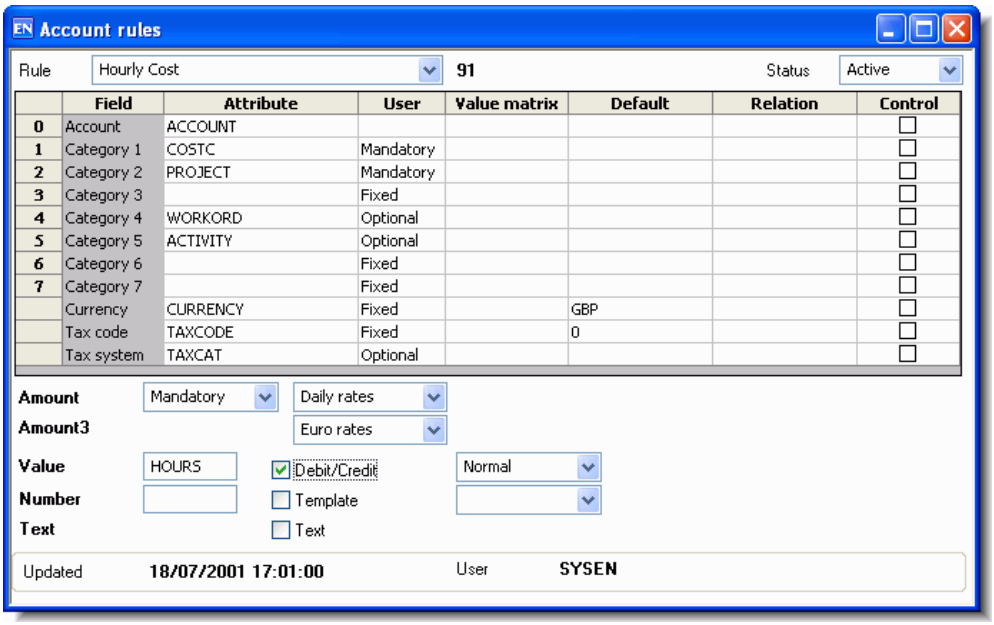
Hourly costs account rule

Function

This type of account rule is for accounts used in project time costing with base pay as basis. All calculated time costs will use this rule to post the hours when posting to the General Ledger. A value of hours has been added, where the number of hours on each transaction will be counted.

Example

This figure shows an account rule for hourly costs:



Direct relation on cost centre

- There is a direct relation of COSTC on PROJECT, as shown previously. An example of this setup is provided later in this document. Each project is assigned to a cost centre in the Project master file. The cost centre will be automatically filled in when a project code is selected.
- To enable reporting on hours worked from the aggregated balance tables, a value of **HOURS** is set up in the account rule.

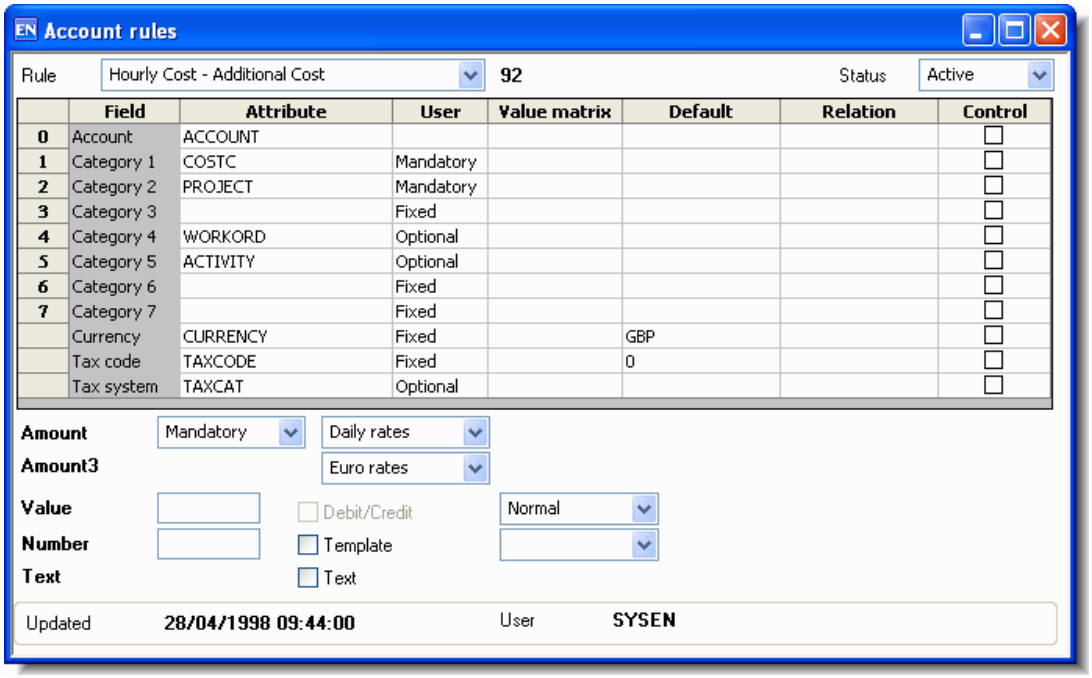
Additional hourly costs account rule

Function

This rule is used on the account for Additional hourly costs calculated on top of base pay.

Example

This figure shows an Additional hourly costs rule. The value field is not used here, as hours have already been counted in the Hourly costs rule:



Note

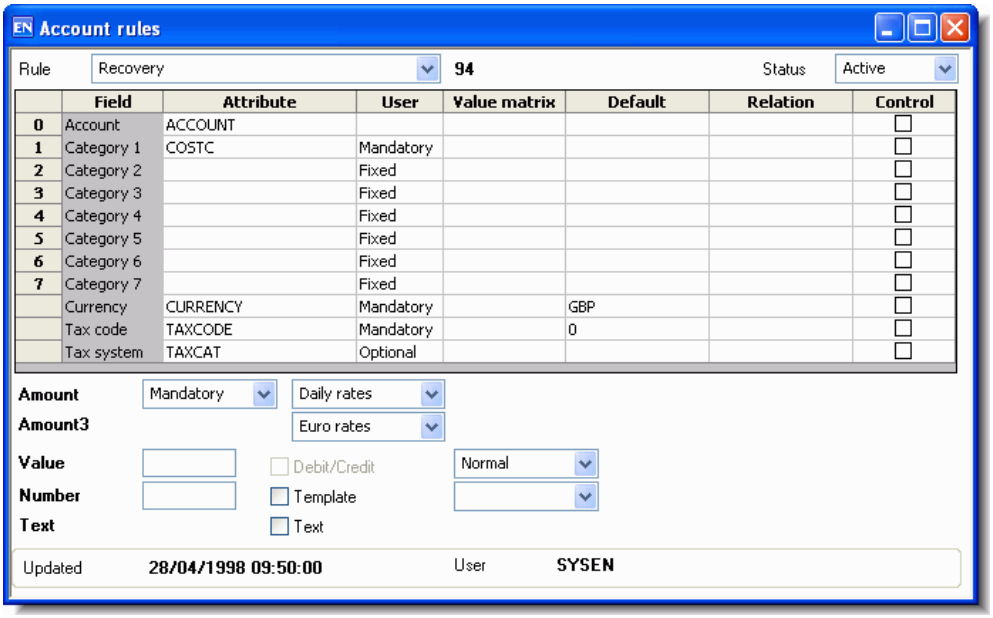
The *Value* field has no **HOUR** value here, as hours have already been accounted for on the Hourly costs rule.

Recovery account rule

Function

This rule is used with the account for the credit side of time transactions to balance the costing entries. Only COSTC is tracked here, in order to do labour recovery analysis by cost centre.

Example



Notes

Depending on the type of analysis required, more categories may be used, and additional account rules may be needed.

Project revenue account rule

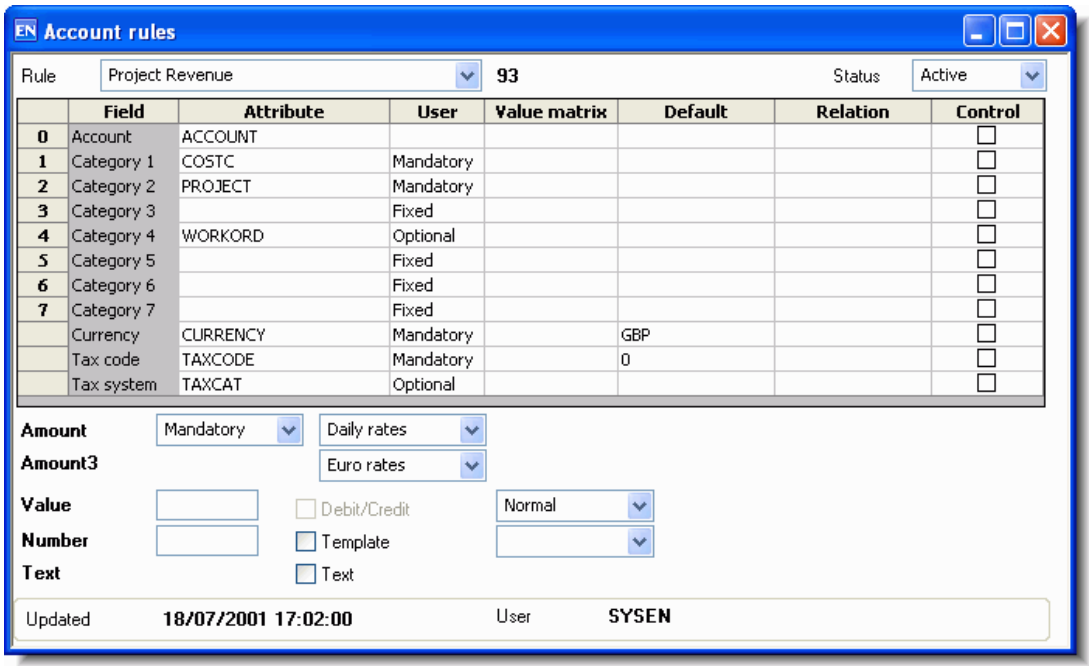
Function

This account rule is used for accounts placing the actual project revenue through the project billing process. The setup is determined by the reporting needs of the customer.

In this example, the company tracks revenue both on cost centre and on project. However, both work order and activity can be added, if such a level of detail is necessary for the client.

Example

This figure shows an account rule tracking only cost centre and project:



Note

The **TAXCODE** attribute is set to **Mandatory** as the actual tax code defined in the **Project** master file will over-ride the default value.

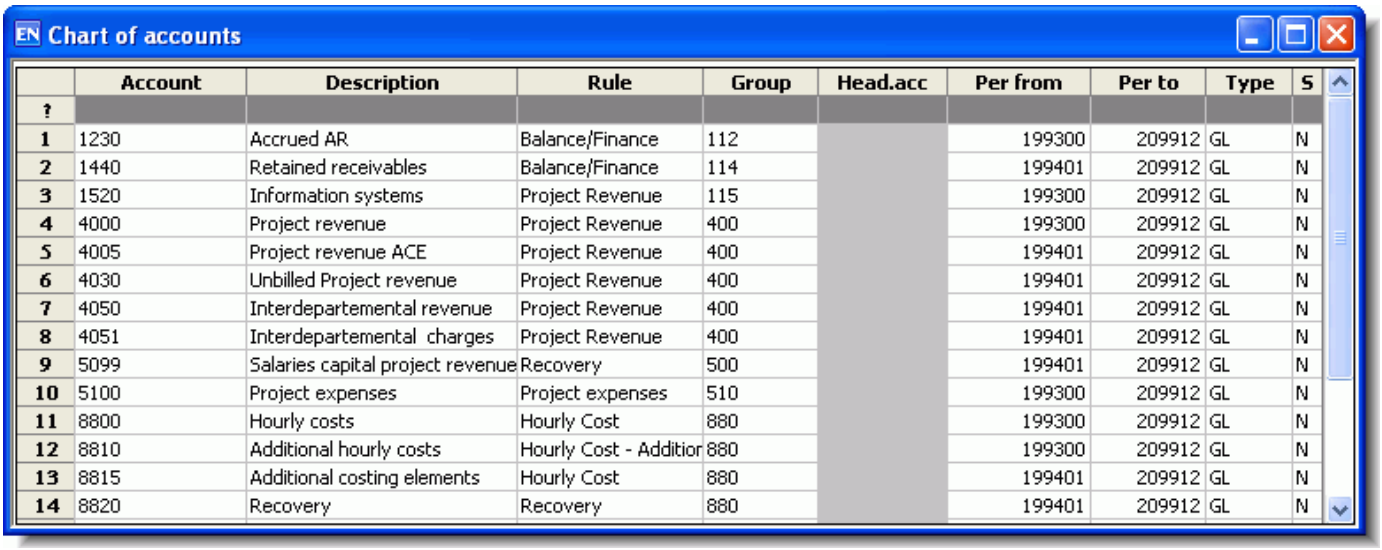
Chart of accounts

Introduction

In addition to the chart of accounts set up as a part of the Financials implementation, a set of accounts to handle the costing and billing of projects must be defined. Below you will find some examples listed.

Chart of accounts

This is an example of a set of accounts for time/project:



	Account	Description	Rule	Group	Head.acc	Per from	Per to	Type	S
?									
1	1230	Accrued AR	Balance/Finance	112		199300	209912	GL	N
2	1440	Retained receivables	Balance/Finance	114		199401	209912	GL	N
3	1520	Information systems	Project Revenue	115		199300	209912	GL	N
4	4000	Project revenue	Project Revenue	400		199300	209912	GL	N
5	4005	Project revenue ACE	Project Revenue	400		199401	209912	GL	N
6	4030	Unbilled Project revenue	Project Revenue	400		199401	209912	GL	N
7	4050	Interdepartemental revenue	Project Revenue	400		199401	209912	GL	N
8	4051	Interdepartemental charges	Project Revenue	400		199401	209912	GL	N
9	5099	Salaries capital project revenue	Recovery	500		199401	209912	GL	N
10	5100	Project expenses	Project expenses	510		199300	209912	GL	N
11	8800	Hourly costs	Hourly Cost	880		199300	209912	GL	N
12	8810	Additional hourly costs	Hourly Cost - Additior	880		199300	209912	GL	N
13	8815	Additional costing elements	Hourly Cost	880		199401	209912	GL	N
14	8820	Recovery	Recovery	880		199401	209912	GL	N

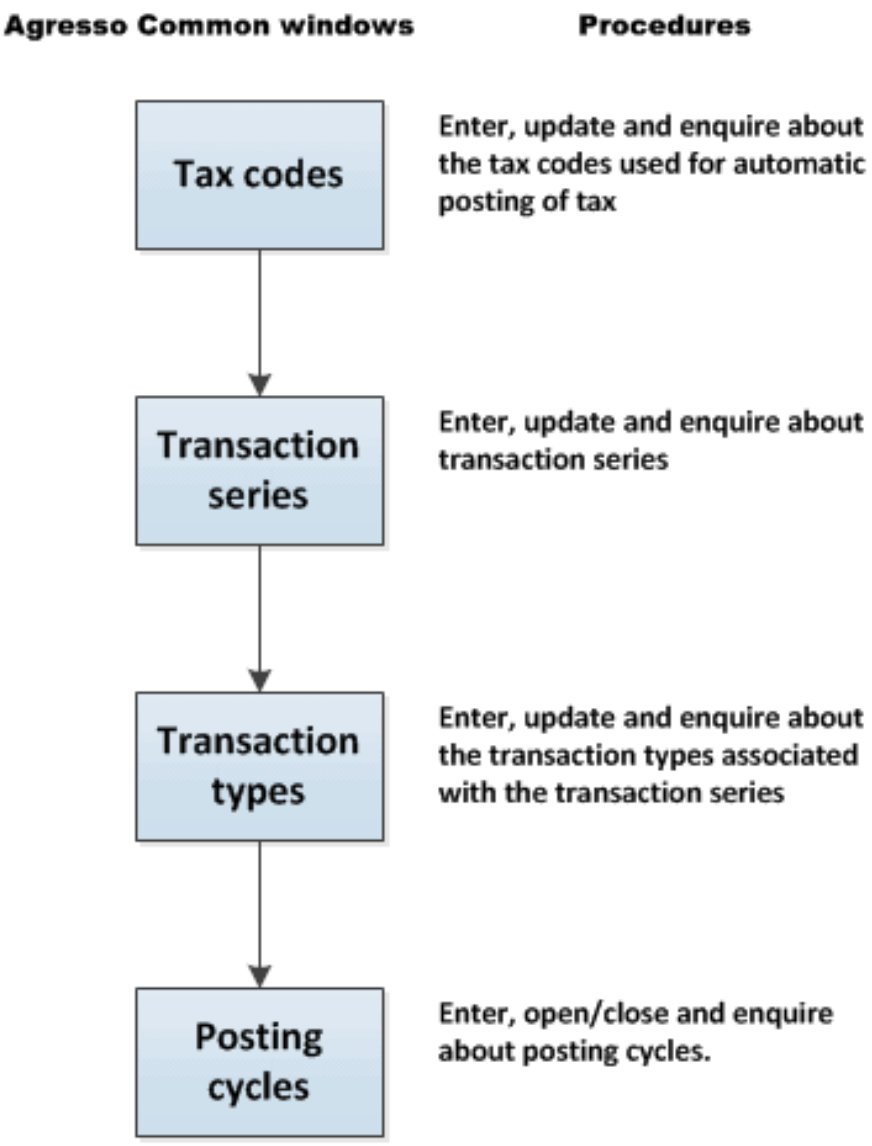
Fixed registers

Introduction

In this section, the setup of tax codes, transaction series, transaction types and posting cycles is explained.

Process diagram

This diagram shows the setup process for the fixed registers items:



Additional transaction series

Introduction

Standard TS period is the period linked to the attribute TS.PER and can be either a week or month (depending on setup of system parameter PERIOD). **TS13 Transfer timesheets** transfers time entered on other period types used in time entry to the standard TS periods. All timesheets can then be maintained in **Timesheet –maintenance** using the same period type – the standard TS- period.

New series of transaction numbers

When you enter a timesheet in, for example **Timesheets - standard**, the system assigns a transaction number to this timesheet. If you run **TS13 Transfer timesheets**, the timesheet will have a new transaction number based on regular TS periods. This means that a timesheet will have two transaction numbers, one from the timesheet entry process and one given by TS13. The transaction number from the timesheet entry will make it easier to trace the original timesheet. This may be helpful, for example, when reversing timesheets.

REG_VOUCHER_NO

The REG_VOUCHER_NO system parameter tells the system from which transaction type it should get the transaction numbers for timesheet entries. Please refer to the section on system parameters for further details.

Note

To make this transaction series, you must take care to create the following items for timesheet entry:

- Transaction types, made in **Transaction types**, Common.
- Transaction series, made in **Transaction series**, Common.
- Posting cycles, made in **Posting cycles**, Common.

PCB setup resources and workflow

Overview

Required steps for resources and workflow are discussed in the following PCB Setup chapters. It is assumed that Financials is already implemented.

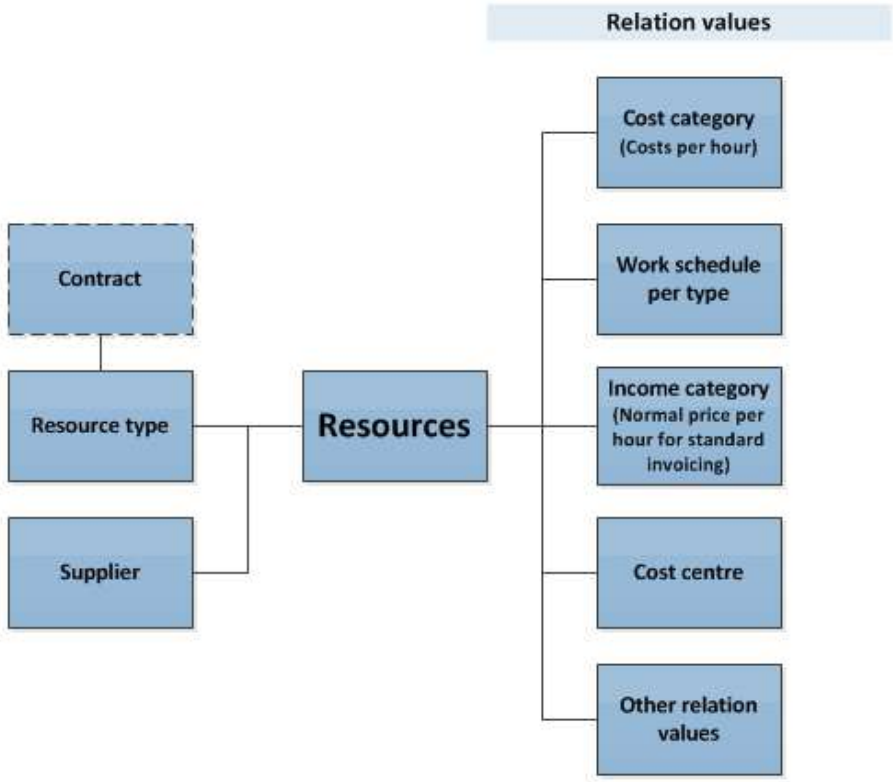
PCB setup Resources

What are resources?

Resources are normally thought of as people. This need not be the case in PCB. In PCB, a resource is an entity for which time is recorded and monitored, almost certainly costed and sometimes charged out. Clearly a person fits this definition, but so do a forklift truck, a tower crane, a video conferencing facility, a computer and a training room.

Resource links

The various connections that can be made to a resource in the PCB module:



PCB and resources

Resources who are people are not all the same. People may be employees or contractors. Employees may be split into different categories, e.g. fixed-term contracts, full-time and part-time. All can have different procedures for

costing their time. These resource types can be reflected in the costing structures within Unit4 ERP.

Resource setup in HS01 (THS005)

Unit4 ERP offers a range of setup possibilities for resources. This part will focus on setup related to persons. A key window in Unit4 ERP is **Personnel** (HS01/THS005), where you define settings and relations on a person.

Apart from the personal information, the *Part-time%* and *Resource type* fields contain important values for billing:

- *Part-time%*. This field is used to control how large a part of a normal working period the resource should work in a given pay period. Part-time percentage is stored as an ordinary rate in Unit4 ERP, in the **Value references** window.
- *Resource type*. A person that is an employee may have other payment terms than, for example a consultant on a contract. Resource type is also an attribute, and can also be defined as a relation on the person, on the **Relation** tab.

Relations

On the **Relations** tab, you set up important information as relations on the person, so that Unit4 ERP easily can retrieve information about this person in PCB, for example how to calculate cost or income connected with the person's engagement in projects.

Important relations on a person

This is an overview of some of the most important Unit4 ERP relations on a person (resource) for PCB:

Relations	Usage
Cost category	Cost categories are used to group people so that time costs can be defined for each cost category instead of each individual person.
Income category	Income categories are used to group people so that hour prices can be defined for each income category instead of each individual person.
Work schedule	A work schedule defines the day type for a particular day in the work cycle (For example, if Saturday is a work day or a day off). All employees that need to register timesheets must have a personal work schedule, which will be the relation on the person. A personal work schedule is generated from the work schedule setup, but adapted to the employee when it comes to part-time percentage.
Resource type	Resource types are used to group resources for reporting purposes and to define the cost rates and posting rules you use when posting time costs.

PCB Workflow

Introduction

The PCB workflow functionality is designed as a means to help a project manager to monitor his or her projects. Approval steps may be put on various items, like timesheets, invoices and changes in the project master file fields.

This part of the document presents some of the workflow possibilities in Project Costing and Billing. For a detailed description of the workflow setup process, please refer to the Workflow reference manual.

Required setup

The general setup of a workflow process is described in this table:

Action	Window	Part of Agresso
Define workflow users.	User master file	System Administration
Define workflow roles and add workflow users to these roles	Role master file	System Administration
Create distribution rules and groups	Distribution rules	Common
Define business process	Process definition	Common

This setup is normally done by an administrator.

Master file approval

Introduction

You can set up approval of changes done in the master file fields as a workflow process.

> **Note:** Changes are only sent on approval from the **Project** master file (TTS001) on Unit4 ERP Web. The **Project** master file (TS01) on the Desktop will not send changes on workflow, only display what is on workflow already.

Setup details

Master files have their own details setup in System Administration.

Element types, Master file details setup

In **Master file details setup**, define which fields that will trigger approval by selecting Master file workflow for those fields.

Process definition

Upgraded versions from Unit4 ERP 5.5 should park their existing workflow for draft projects and create one for master file approval on the **Project** master file element type in **Process definition**.

Master file approval window

Create a new project and it will be sent on approval. All fields that have been marked for master file workflow will be displayed on a new entry in **Master file approval** (TTS121).

Warning message on project

Making a change to a project will show a message to other users if it is on workflow.

Approval of change

And the user will only approve the change that was made.

Setup Timesheets

Timesheets - look-and-feel options

Introduction

The timesheet window can be set up according to an organisation's need for a flexible and time-saving timesheet procedure.

The list below shows Unit4 ERP windows allowing you to create your own settings for the timesheet windows:

Window options

Window options allows you in Desktop and Web to set up timesheet windows to contain only relevant fields and, if required, default information.

Distributed information access

Distributed information access(AG74) in Desktop allows you to grant people access to windows, for example timesheet entry windows, to register information on behalf of other people.

Timesheet setup

Timesheet setup allows you to make the desired settings for **Timesheets - standard**. This window is useful, for example to enhance performance of the standard timesheet window. The list below shows some examples:

- Performance
- Set startup default values
- Control appearance

> **Note:** Take into account that **Timesheet setup** is not relevant for X2 Timesheet.

For example, the Balances section in **Timesheets - standard** (TTS025) is displayed if you tick off the *Load balance at start-up* check box. The flexi saldo will be calculated when you enter hours when you tick off *Calculate flexi in timesheets*.

> **Note:** The colour codes can only be used on Desktop and is set up in**Timesheet setup** (TS11) on this platform.

Other options

Introduction

In order to enhance flexibility, an organisation may also set various default values for timesheet entry. Below is a listing of some such settings:

- Work schedules
- Time codes
- Limit control
- Connection control

Work schedules

A work schedule defines the number of hours and when a person should work. Work schedules may be personal or general for all resources. The work schedule is set up in **Work schedule**on Desktop.

This table shows the procedure for connecting people to a personal work schedule:

Step	Personal work schedule
1	Open the **Resources** window.
2	Enter the relevant resource ID.
3	Open the **Relations** tab.
4	Enter the work schedule code as a relation value on the relation attribute **WORKSCH**.
5	Choose **Save**.

To generate work schedules for people, you must use the server process **HS04 Generate personal work schedule.**

The normal hours are calculated from the work schedule registered on the person, and can also define the limit for when flexi hours or overtime should be calculated. In order to calculate flexi hours and overtime, you will need to set up time codes.

Time codes

When a person registers work hours, *Time code* is a mandatory field. Thus, a standard time code for administration of normal hours should be defined. Time codes can be registered in the **Time codes** window.

Time codes features

Time codes in Project Costing and Billing have these features:

- They can be connected to payment and deduction codes.
- They can be connected to absence codes.
- They can default project, work order, activity and job type. The posting information can be fixed. Thus, when you use a specific time code in timesheet entry, the system will enter the project, work order et cetera by default. The employee will be unable to change these values if fixed (see check box *Fixed* in illustration above).
- They are connected to registration units.
- They can be connected to balances.
- One absence code can be connected to only one time code.

Limit control

Limit controls are entered in **Limit controls** on Desktop. This control may be used to monitor that resources do not enter more hours than allowed on different time codes, for example, overtime or flexi-time codes per work week. Limit control may trigger warnings to the resource (still possible to save a timesheet), or cause the timesheet registration process to stop.

This is a listing of limit control features in Project Costing and Billing:

Checks against the work schedule (normal time)

- Checks against the work schedule (overtime)
- Checks on individual time codes
- Checks on individual balances
- Checks on individual resources or groups of resources

Connection control

Connection controls are entered in the **Project** master file, for either projects, work orders or activities connected to the project.

Connection control can be used mainly in two ways:

1. To set up default values for the combination Resource position plus income category plus additional cost and income elements (ACE). This means, for example, that if a resource enters time on a specific activity, the system will insert default values for income category and ACEs.
2. To define who are allowed to enter hours on certain combinations of the project values. This is done by ticking off the *Connection control* check box in the **Project** master file, the **Connections** tab.

> **Note:** You can use **Timesheet setup** to disable the limit control functionality for performance reasons.

Charge codes

Introduction

This chapter describes the steps necessary to:

- define charge codes for yourself (Personal charge codes (TTS074A)),
- define charge codes for others (Charge code administration (TTS074B)),
- distribute charge codes (Distribution of charge codes (TTS077)).

You can find the windows under **Time and Expenses** > **Time** > **Charge codes**.

Prerequisites

You may add fields to the windows by giving values to the **TS_FLD_x_ID** system parameters. Use **Window options** to decide whether or not to display these fields.

Personal charge codes (TTS074A)

Use this window to make your personal charge codes.

Explanation of fields

The section **Charge code details** shows the fields below, possibly with some optional fields inserted with the **TS_FLD_x_ID** system parameters.

Charge code
The name of the charge code.

Work order
The work order for the charge code.

Project
The project for the charge code.

Activity
The activity for the charge code.

Status
The status of the charge code.

Favourite
Read-only field which displays the favourite order number defined for the charge code in the Favourite field in the Details section.

Personal
A charge code entered in this window will always be personal. A charge code that has been distributed to you is not. If the check box is selected, it is a personal charge code. If the check box is cleared, the charge code is cleared.

What would you like to do?

Make a new personal charge code

This is how you make a new personal charge code:

1. Click on **Add**.
2. Type the name of the charge code.
3. Type, if desired, the work order for the charge code.
4. Type, if desired, the project for the charge code.
5. Type, if desired, the activity for the charge code.
6. Select the status of the charge code.
7. Click on **Save**.

Open existing charge codes

Click the line to open existing charge codes.

Change personal charge codes

You are not allowed to change charge codes, as you may already have used them on timesheets in the past. However, you are allowed to change their names. Then you are actually making a new charge code, just with the same data included. You may also change the status of the charge codes to **Parked**.

This is how you change the status or the name:

1. Click **Load** to open the table.
2. Select the row containing the charge code for which you wish to change status or name.
3. Use the **Details field** to type the new name or select the new status.
4. Click **Save**.

Delete personal charge codes

You cannot delete distributed charge codes.

Charge code administration (TTS074B)

Use this window to make charge codes for other employees. Only administrators are allowed to do this.

Explanation of fields

The table shows the following fields, with possibly more fields inserted with the **TS_FLD_x_ID** system parameters.

Charge code
The charge code name.

Work order
The work order for which you are making a charge code.

Project
The project for which you are making a charge code.

Activity
The activity for which you are making a charge code.

Job type
The work type for which you are making a charge code.

Global
All charge codes are shown in this window, but this field shows whether the charge code is global or private. If the charge code is global, the field is marked. Otherwise, it is blank.

- Global charge codes = distributed to you from an administrator.
- Private charge codes = made by yourself.

Status
The status of the charge code.

What would you like to do?

See existing charge codes

To see existing charge codes, click **Load**.

Search for charge codes

1. If you want to search for charge codes for specific columns, click on the arrow next to the column name and choose a value.
2. Click **Load**.

Add new charge codes

1. To add new charge codes, click **Add**.
2. Fill in the required values.
3. Click **Save**.

Distribution of charge codes (TTS077)

Use this window to distribute charge codes to attributes. A valid attribute may be, for example, **RESNO** (Resource), if you want to distribute charge codes to other employees.

Explanation of fields

Charge code
The charge code name.

Relation
The attribute to which you choose to distribute the charge code. Only relations on the resource are displayed in the list.

Relation value
The attribute value to which you choose to distribute the charge code.

Available
The available resources to which you distribute the charge code.

Selected
The selected resources or roles to which you distribute the charge code.

What would you like to do?

Distribute charge codes

1. Select the charge code you want to distribute.
2. Select an attribute in *Relation*.
3. Select an attribute value in *Relation value* which has charge codes.
4. Click on **Filter**.
5. Select the Resources to which you want to send the charge codes by using the arrow buttons.
6. Click on **Save**.

Time balance setup

General time balance setup

Time balances can be used on any time code to enable you to keep track of what types of time units have been worked. They are particularly useful in any company or organisation where people are allowed to add overtime-hours to their time balance instead of taking it out in pay. PCB can be used to register and enquire on time unit balances. You will have access to the time unit balances using the Tools menu in the various timesheet entry windows.

Balance codes

In PCB, you set up the required balance codes in the **Balance codes** (PR21) window:.

Prerequisites

To use the Balance functionality, you must do the following:

Step	Window	Procedure
1	Balance codes	Create balances.
2	Time code	Create a time code and connect it to a balance code.

Balance states

There are three balance states values you can set when you use this functionality. These are:

Proposed - the time units you have entered
Confirmed - the confirmed number of time units
Approved - the approved number of time units.

In the **Balance states** window, you can set where to view the balance states values in the balance handling process, by simply selecting the appropriate column for each process.

Balance variants

The balances changes status as they go through the flow from timesheets to payroll/absence. In the *ahsbalance* table, different variants are set as the balance changes status. This table shows the variants in *ahsbalance*:

Variant	Description	Processed by
100	Timesheet entry	TTS025, TTS054, TTS080, TTS081, TS55
110	Timesheet transferral and amendment	TS13, TS04
120	Validation of timesheets and expenses	TS03
210	Transfer of hours to payroll	TS20
400	Variable payment and deduction transactions	PR06, PR28, PS09

Variant	Description	Processed by
0	Completed	TS03, PR02

Use balances in PCB only

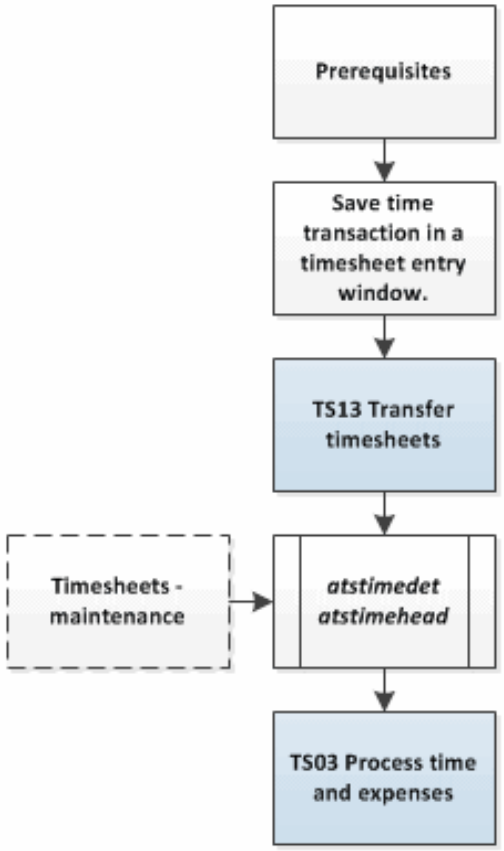
Prerequisites

In order to use balances in PCB, the following prerequisites must be met:

Step	Window	Procedure
1	Timesheet setup	Select the *Calculate balances* check box.
2	Balance codes	Create balances.
3	Balance codes	Select the check box *Complete in TS* for the balance code. Balances are completed with the TS03 Process time and expenses server process, and cannot be transferred to absence and/or payroll.

Process illustration

This illustrates the process you must run to get the correct balance:



How to use the balance functionality:

This table explains how to use the balance functionality in PCB:

Step	Window	Procedure
1	Any timesheet entry window	Enter time on the relevant time code. Balances are saved when you save the timesheet with header status **Ready**.
2	TS13 Transfer timesheets	Run the TS13 server process
3	Timesheets - maintenance	Make any adjustments in the timesheet.
4	TS03 Process time and expenses	Run the TS03 server process.

Transfer balances to Payroll

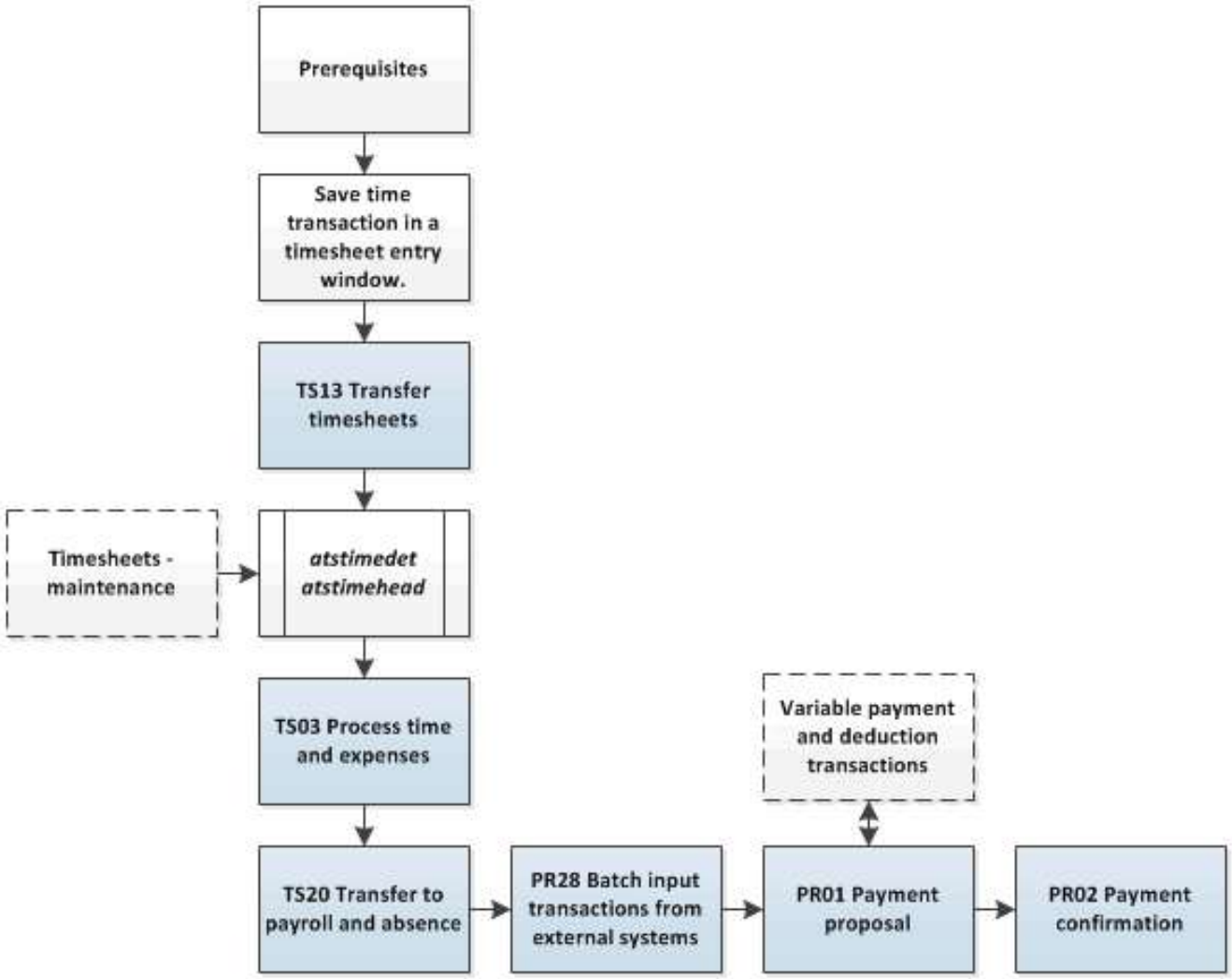
Prerequisites

In order to transfer balances into Agressso HRMS Payroll, the following prerequisites must be met:

Step	Window	Procedure
1	Timesheet setup	Select the *Calculate balances* check box.
2	Balance codes	Clear the check box *Complete in TS* for the balance code.
3	Time codes	Connect the time code used in timesheet entry to a valid P&D code (defined in **Transfer P&D**).
4	Time codes	Define the time code and the P&D code with the same balance code.
5	P&D register	Connect the P&D code to the balance on the **Limits** tab.
6	Value reference, the HS variant of Balance codes	Define the balance code to be used with the check boxes *TS* and *PR* selected. Make sure the *Balance* check box is selected.

Process illustration

This illustrates the process you must run to transfer a balance from timesheet to payroll:



How to use the balance functionality:

This table explains how to transfer balances entered in a timesheet to payroll:

Step	Window	Procedure
1	Any timesheet entry window	Enter time on the relevant time code. Balances are saved when you save the timesheet with header status **Ready**.
2	TS13 Transfer timesheets	Run the TS13 server process
3	Timesheets - maintenance	Make any adjustments in the timesheet.
4	TS03 Process time and expenses	Run the TS03 server process. Make sure the *Payroll* parameter is defined with either **Hours** or **Hours and expenses**.
5	TS20 Transfer to payroll and absence	Make sure the *Unit* parameter is defined with **Hours**.
6	PR28 Batch input transactions from external systems	Run the PR28 server process.
7	PR01 Payment proposal	Run the PR01 server process.
8	Variable payment and deduction transactions and PR01	Make any adjustments in **Variable payment and deduction transactions**, and rerun PR01.
9	PR02 Payment confirmation	Run the PR02 server process

Transfer balances to Absence and complete in Payroll

Prerequisites

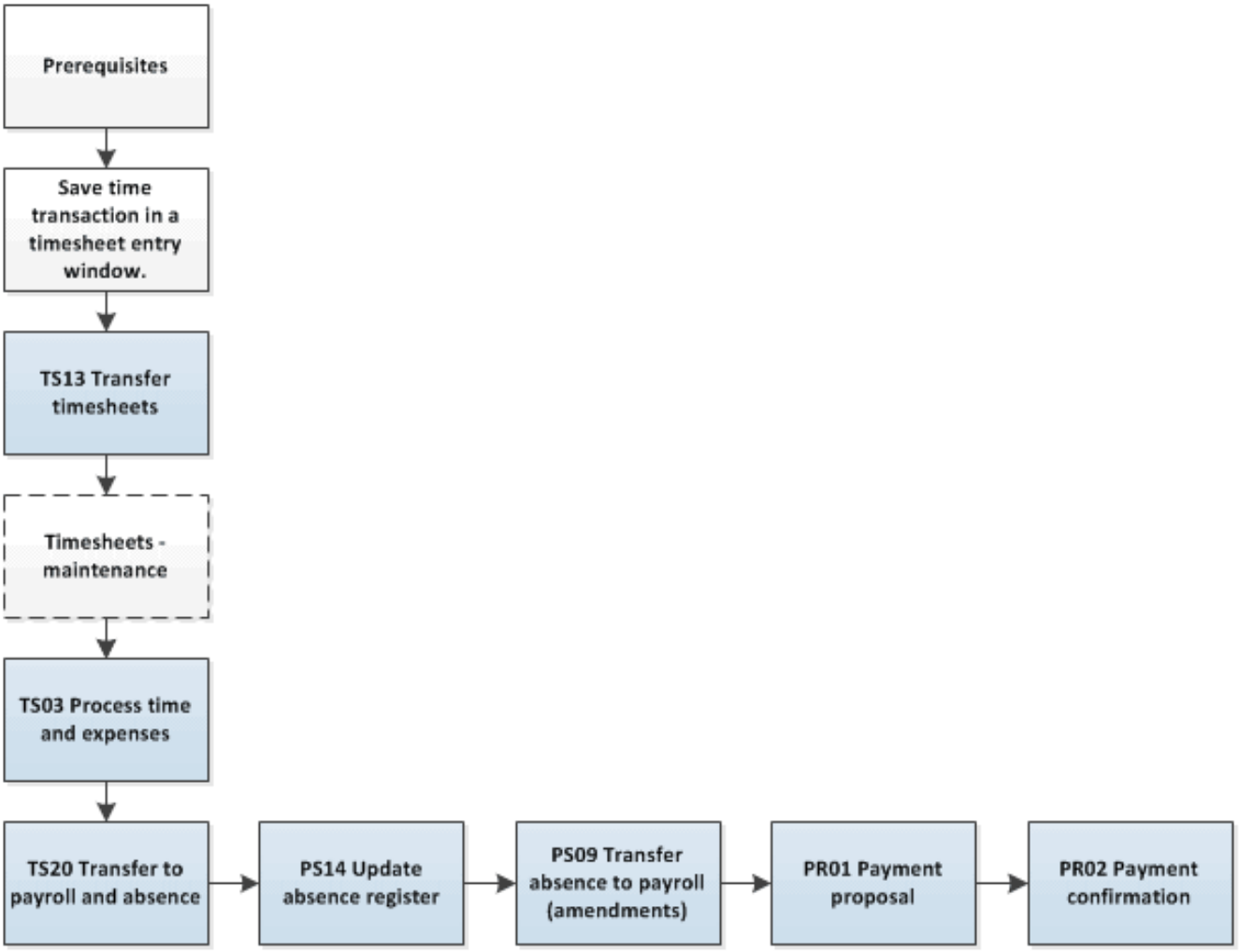
In order to transfer balances into Agressso HRMS Payroll, the following prerequisites must be met:

Step	Window	Procedure
1	Timesheet setup	Select the *Calculate balances* check box.
2	Balance codes	Clear the check box *Complete in TS* for the balance code.
3	Time codes	Connect the time code used in timesheet entry to a valid absence code in the *Absence code* field.
4	Time codes	Connect the time code to the balance code. Connect the balance code to a valid absence code.
5	Connection of absence codes and P&Ds	Connect the absence code to a P&D.
6	P&D register	Connect the P&D code to the balance on the **Limits** tab.

Step	Window	Procedure
7	Value reference, the HS variant of Balance codes	Define the balance code to be used with the check boxes *TS* and *PR* selected. Make sure the *Balance* check box is selected.

Process illustration

This illustrates the process you must run to transfer a balance from timesheet via absence to payroll:



How to use the balance functionality

This table explains how to transfer balances entered in a timesheet via absence to payroll:

Step	Window	Procedure
1	Any timesheet entry window	Enter time on the relevant time code. Balances are saved when you save the timesheet with header status **Ready**.
2	TS13 Transfer timesheets	Run the TS13 server process
3	Timesheets - maintenance	Make any adjustments in the timesheet.
4	TS03 Process time and expenses	Run the TS03 server process. Make sure the *Payroll* parameter is defined with either **Hours** or **Hours and expenses**.
5	TS20 Transfer to payroll and absence	Make sure the *Absence* and *Payroll* parameters are cleared in order to avoid absences being transferred twice to Payroll.
6	PS14 Update absence register	Run the PS14 server process.
7	PS09 Transfer absence to payroll	Run the PS09 server process.
8	PR01 Payment proposal	Run the PR01 Payment proposal server process.
9	PR02 Payment confirmation	Run the PR02 server process

Time costs setup

Introduction

This chapter describes the steps necessary to define costing of time used by resources, and the mechanisms that will post the costs to the General Ledger.

> **Note:** The invoicing of time used by resources are included in the chapter on invoice setup.

Project analysis framework

Before building projects and using the PCB module, it is important to understand the company's needs:

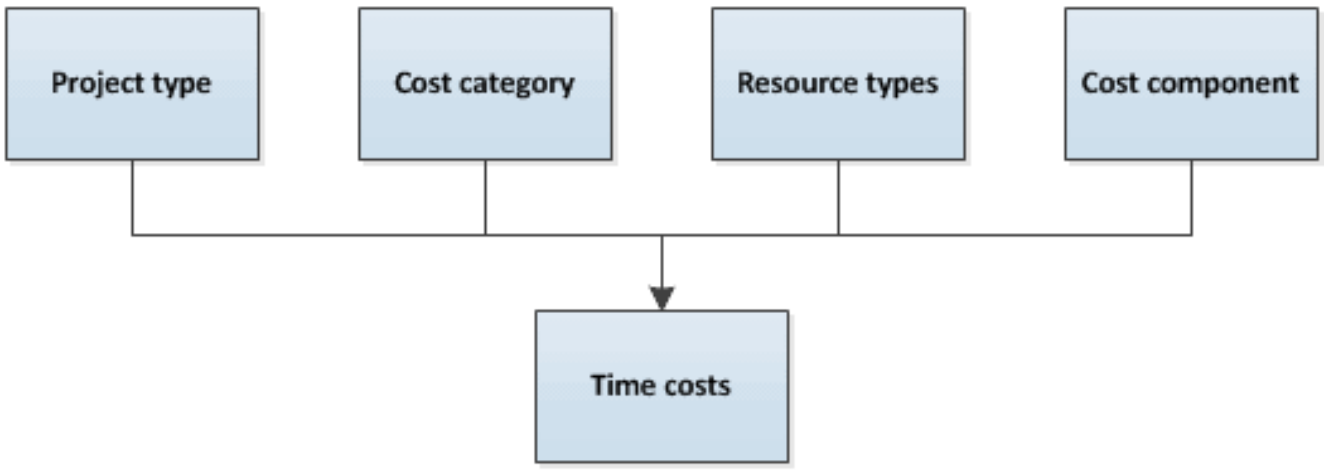
- How does the organisation want to register its standard costs?
- How does the organisation want to account for its costs?

Hourly costs

Project costs generated through a resource's time and engagement in the project, may be defined as either costs or income. Hourly costs are costs that have been set up per hours for combinations of project type, cost component, cost category, resource type and the relevant project periods.

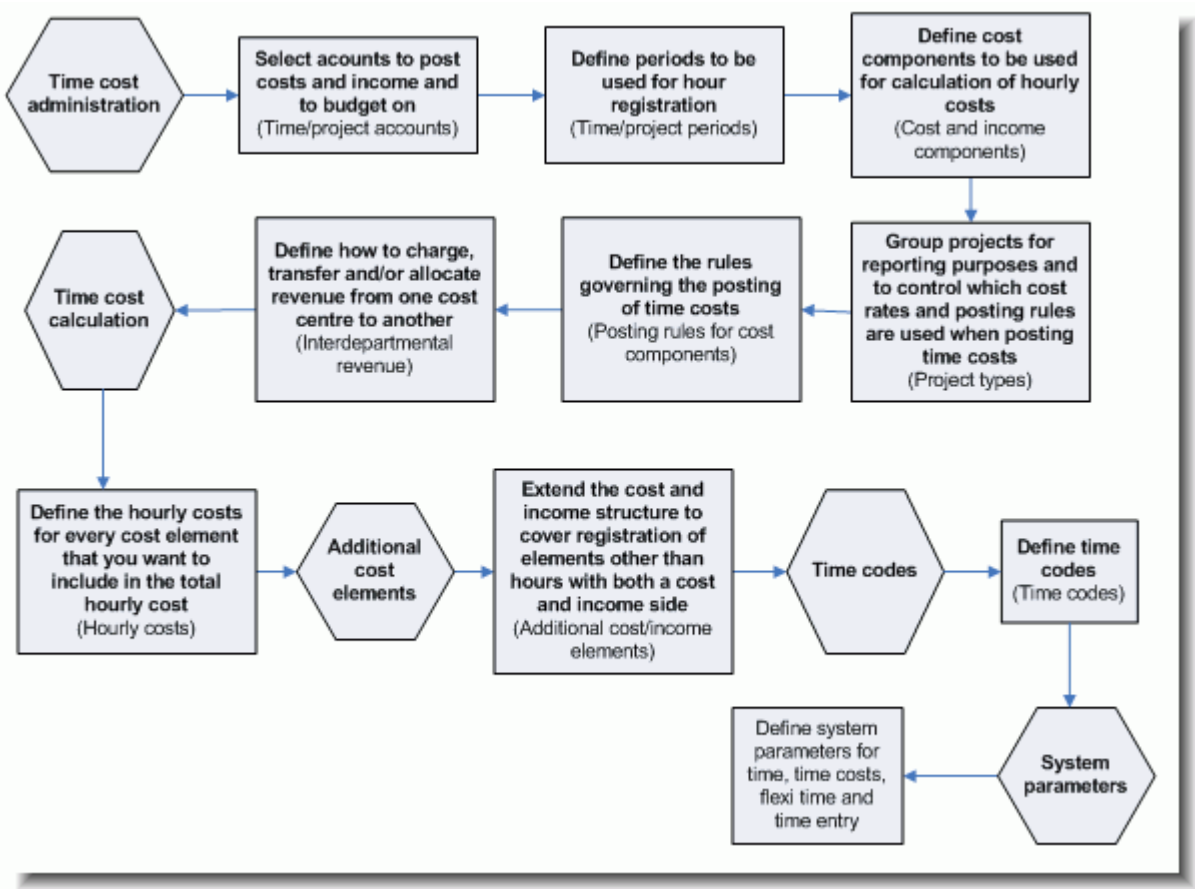
Time costs

Elements working together to define time costs:



Process overview

This diagram illustrates the various steps in time cost setup:



Time cost administration

Before doing the actual pricing of different costs, Unit4 ERP needs to know how costs are categorised, how they are separated in time and how different costs will be posted to the GL.

Additional cost elements

This function extends the cost and income structure to cover registration of elements other than hours with both a cost and income side. Additional cost element (ACE) codes may be used to invoice transactions that consist of a predefined set of raw materials and/or units of labour or to bill fixed additional pay, such as hazard pay. As opposed to other building blocks of PCB, ACE contains both the cost and the income side in one registration window. This means that ACE may be included:

- Only in the cost of an hour or a project.
- In both the cost and income side of a project.

Time codes

Time codes are used to vary cost and sales rates, define overtime transactions for reporting and approval and provide links to HR modules including Payroll.

All hours registered in PCB must be matched to valid time code.

System parameters

System setup parameters and report variants control how Unit4 ERP behaves/functions within each separate Unit4 ERP module. The EN system setup has different values from the NO system setup. Consequently, companies belonging to each separate system setup may function differently in similar processes.

There are a number of system parameters available for the Project product family. Only the more important ones are reviewed here.

A complete list and description of parameters is available in online help and in the Appendix.

Timesheet approval setup

Introduction

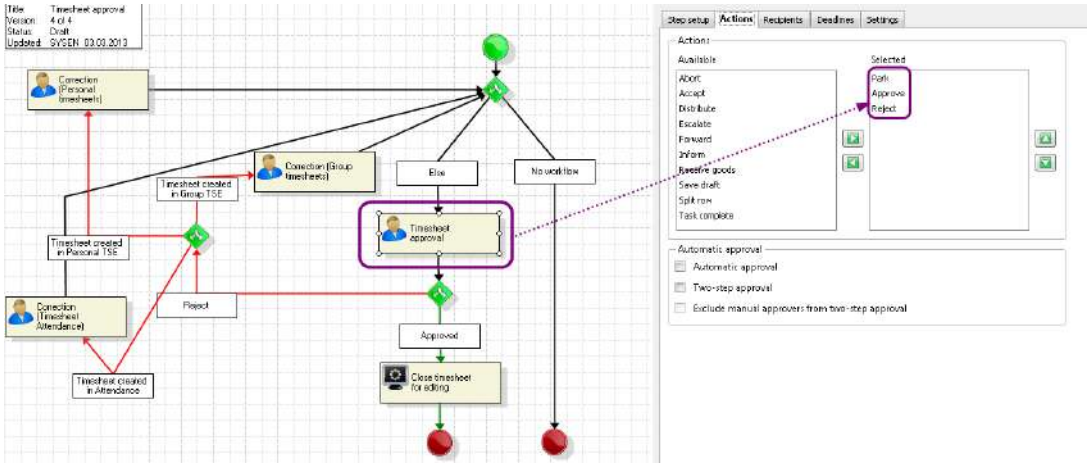
A timesheet may be submitted to approval by the project manager, for example to check that the person has registered the correct time for activities. The available actions above are to park, approve or reject the timesheet. You may also enter comments to explain the various actions done, as illustrated in the Workflow log section.

Window options

Settings for the **Timesheet approval**window can be added in System administration>Users and access>**Window options** (TAG100), for example to which columns to display or default values in a column.

Available actions

Above, the available actions in **Timesheet approval** were to either park, approve or reject the timesheet.



There are, however, as you can see in the picture above, many more actions available in Common>Workflow>**Process definition**, where you set up the available actions for a particular system step in timesheet approval:

Available element types

The element type used for timesheet approval is **Timesheets**, as defined in System administration>System setup>**Element types** (WF16).

Distribution rule

You will also need a distribution rule - who should receive the timesheet for approval. The timesheet approval distribution is set up in Common>Workflow>**Distribution rules** (WF09).

Attach documents to Timesheets

A new document key called **Timesheet** has been added to Unit4 ERP, for use in the **Timesheets - standard** (TTS025) and **Timesheet approval** (TTS080) screens.

Users can attach a document such as a doctor's note to their timesheet which can then be viewed in the Timesheet approval screen.

Setup Invoicing

PCB Invoice setup

Introduction

Unit4 ERP needs to be told how customers are to be invoiced, at what price, at what level of detail, and under what main headings. The system also needs to define how revenue will be posted to the General Ledger, towards projects and resources, and towards the AR.

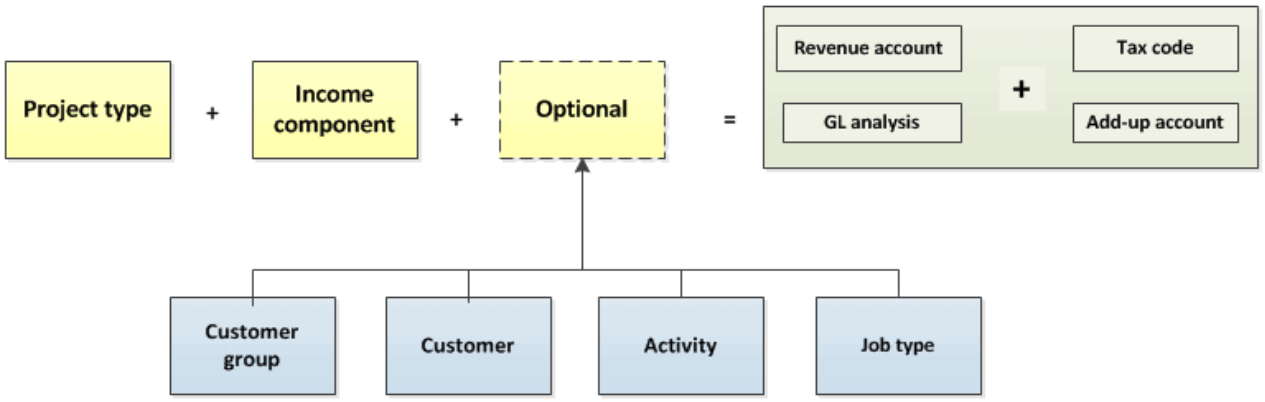
Invoicing methods

Invoicing can be done in various ways. Unit4 ERP supports most of them:

Invoicing method	Description
Advances	Customer pays certain fees before work actually starts. This may or may not be deducted later
Fixed fee	A fixed fee has been agreed with the customer.
Milestone billing	Fixed fee at defined due dates.
Progress billing	Fixed fee contract - change the percentage to be billed every time you invoice.
Time and materials	Hours and expenses are invoiced.
Stepped prices	Price per hour changes according to the total number of hours invoiced to the customer for one job.
Cost plus	The customer is billed for time at standard cost plus a mark-up.
Minimums	The customer is billed at minimum time increments.

Income to GL - overview figure

This figure shows how PCB uses different pieces of information to decide how income moves to the General Ledger:



Invoice setup process

This tableshows how to set up the invoicing setup:

Step	Action	Window
1	Define additional detail levels for all invoice types.	Invoice elements (
2	Set up standard GL analysis for each project type that may involve invoicing.	GL analysis of income items
3	Set factors on time codes.	Income factors
4	Set up rules for invoicing more than the actual hours recorded/booked on a particular time transaction	Invoice increments
5	Define the attribute JOBTYPE (BH) to allow multiple price rates per resource/person and/or income category on the same project	Job types
6	Set up standard invoice type values for use with the standard invoice reports.	Details - Invoice
7	Define price lists which give the price for one or several members of an income category when invoicing.	Price lists

Invoice rules

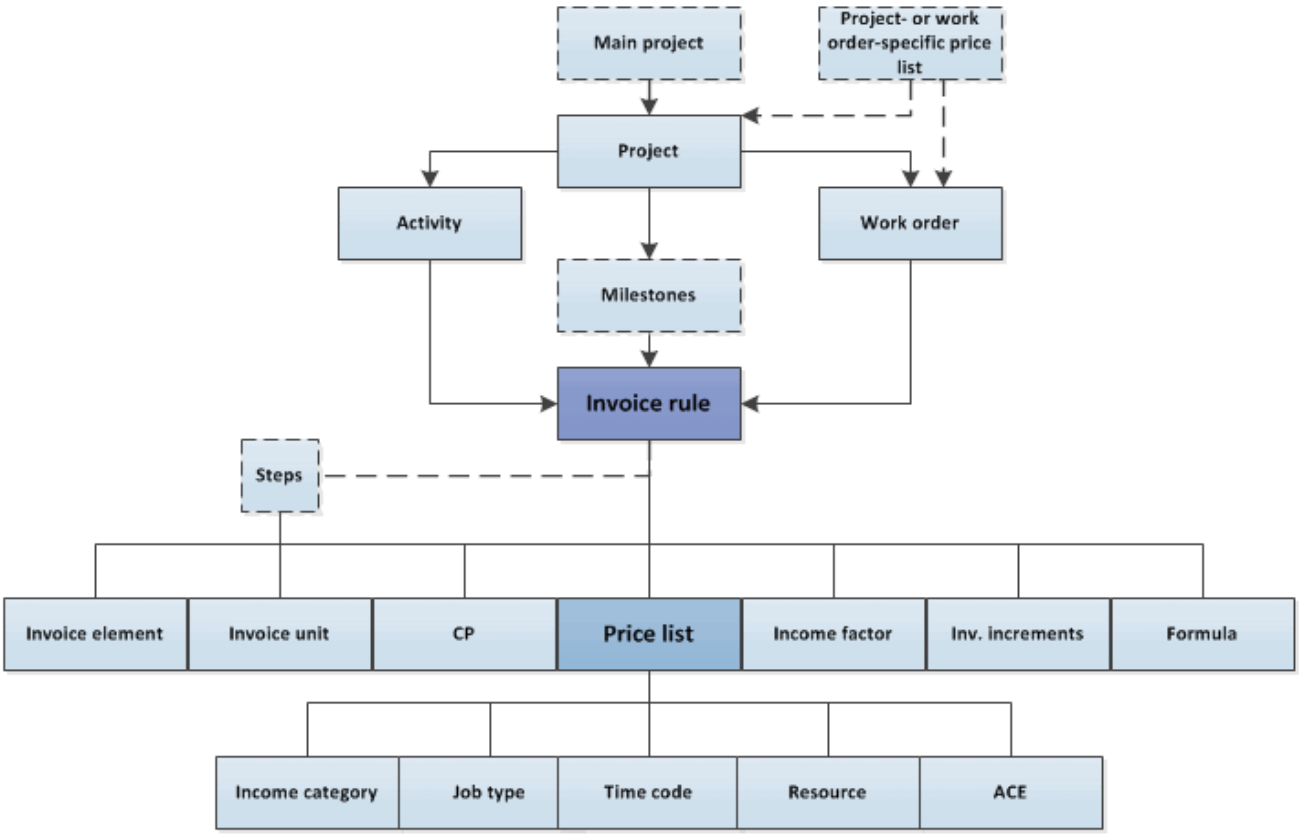
Definition

An invoice rule determines what invoice elements can be invoiced and how those elements are treated for billing. There are two main categories of invoice rules in PCB:

- A standard invoice rule is an invoice rule that can be shared by several projects and work orders. Any number of standard rules can be set up to be used on projects, work orders and activities.
- A specific invoice rule is defined for a project or a work order specifically, and can only be attached to the project or work order for which it was defined originally. This facility is used when very special conditions apply for the billing of a specific project.
- Apart from this distinction, the two categories of invoice rules share nearly all characteristics.

Invoice rule links

The figure below shows links possible to use in an invoice rule to specify how a given project is to be billed:



Invoice proposal approval

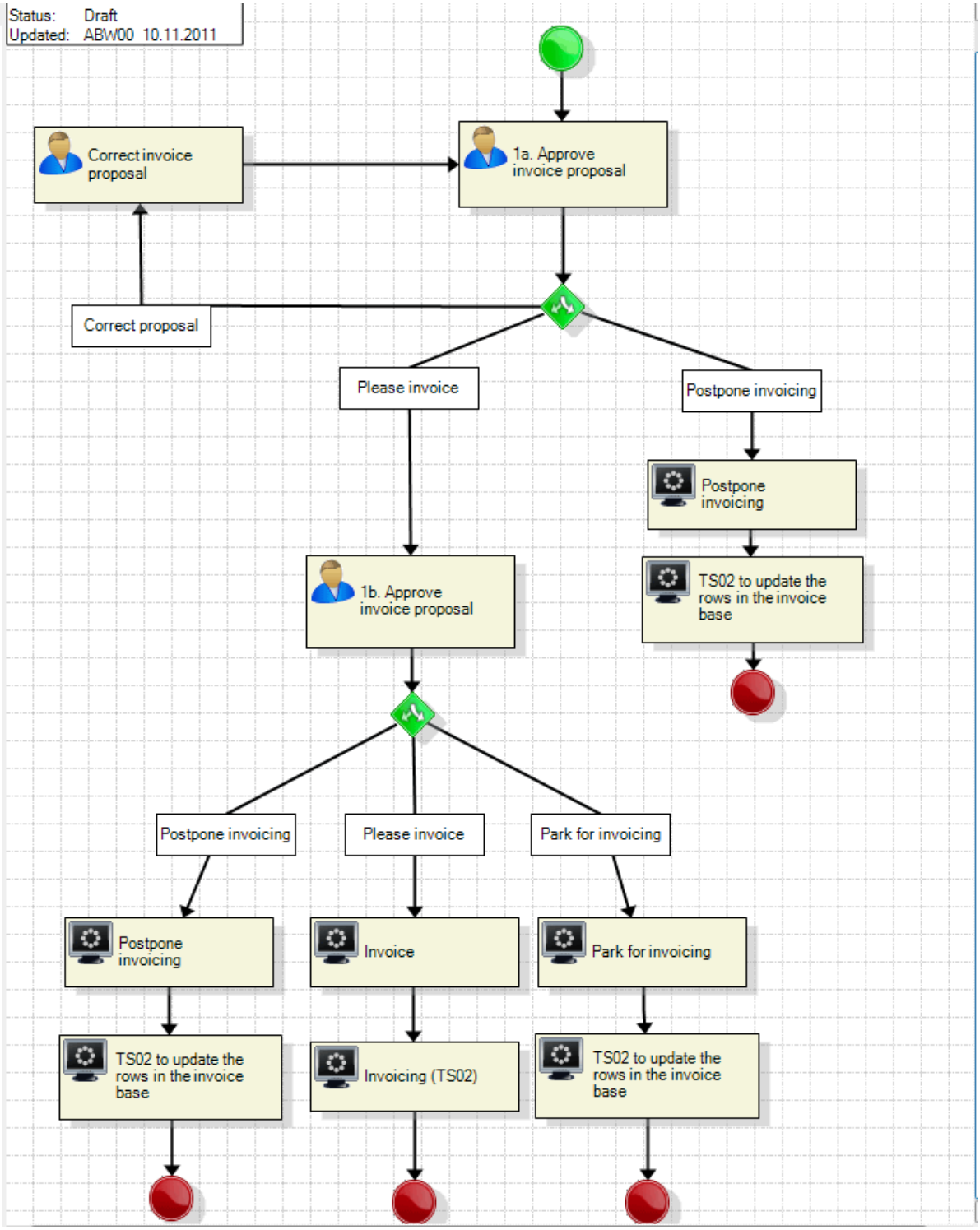
Introduction

The **Invoice proposal approval** (TTS008) window is a means to check at a early stage that the invoice rows sent to customers are correct, as these invoice rows are taken from the Invoice proposal maintenance window.

> **Note:** There are two ways to handle the invoice proposals:
>
> - At a row level (where you can amend the invoice details),
> - At a header level (to improve the performance).
>
> See Invoice approval processes for more information.

Process definition example

The diagram below, also shown under the Invoicing part of this document, shows one possible setup for invoice proposal approval, taken from the **Process definition** window in Common:

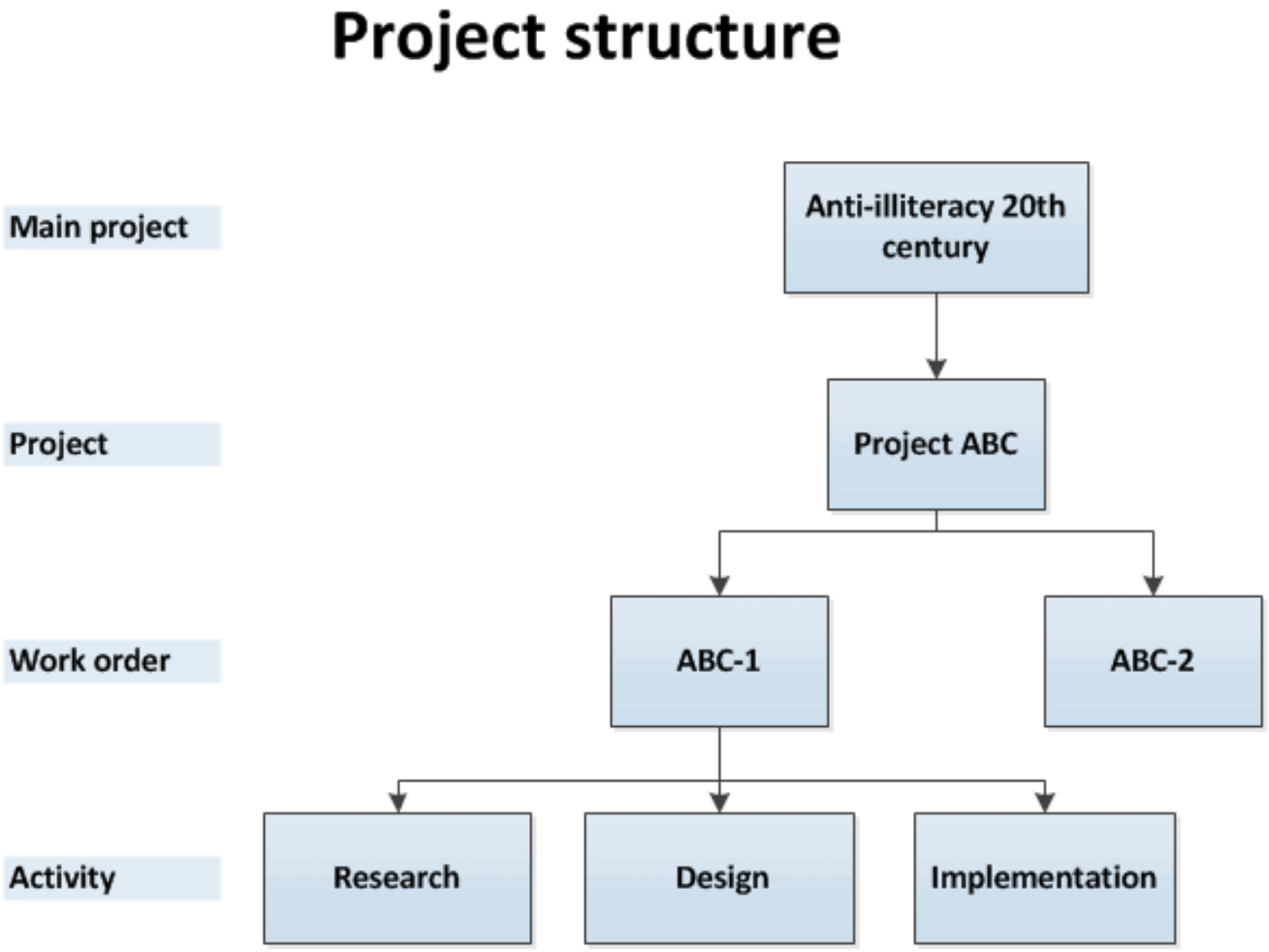


Projects in PCB

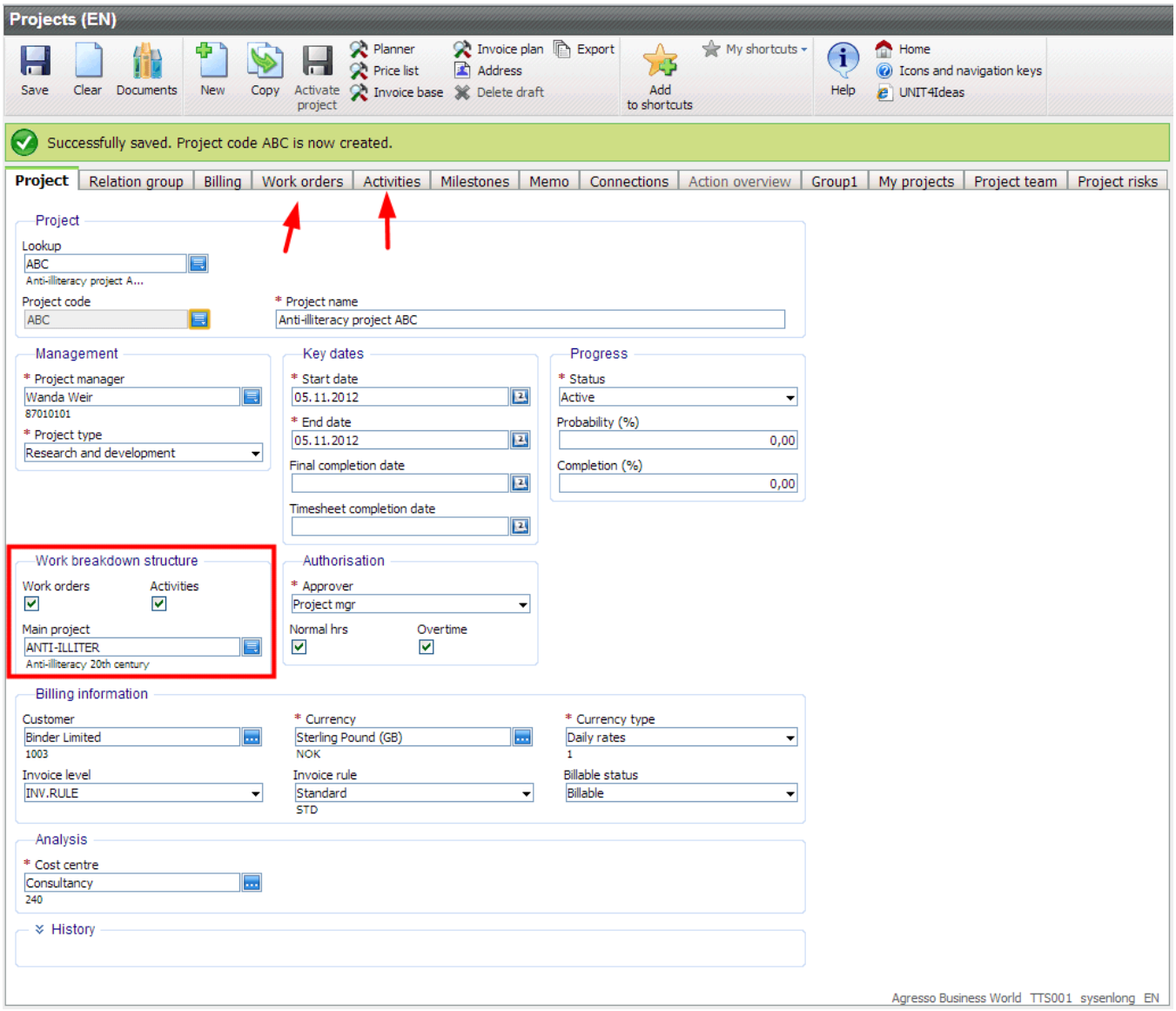
Structure and master files windows

Introduction

In Project Costing and Billing, a project is broken down into work orders and/or activities as to create controllable work tasks. The Project structure figure below illustrates how this can be done:



In the **Projects** master file menu item in Project Costing and Billing, you create your projects and set their work breakdown structure (WBS) with work orders and/or activities on the first tab. This setup corresponds to the figure above:



When ticking off the check boxes for work orders and activities, you open the relevant tabs for registration all work orders and/or activities relevant for your project.

> **Note:** As you break down your project into smaller tasks you can specify invoice rules and addresses for all levels.

Projects (TTS001)

Window usage

Use this master file window to set up new projects and to amend or enquire about existing projects and their details. Each project can be connected to a customer for the invoicing of hours, expenses, products from Purchasing/Inventory Management and fixed prices. You can either invoice a single customer, or distribute the invoice amount among several customers (financing).

Example

This is an example of how to use the **Projects** master file window (TTS001). Apart from the system-defined tabs, you may also define your own tabs:

Project type

The project is connected to a project type that can be used to group projects for reporting purposes. The project type controls the cost rates and posting rules used for the posting of time costs and the GL analysis of income items. Activities, work orders and invoice rules can be defined for each individual project.

Registration of work hours and project statuses

Note that work hours can only be registered on timesheets for active projects. The available project statuses are:

Active (N). Open for time registration and for processing.
Draft (D). The project can be deleted.
Parked (P). The project is closed for registration, open for processing.
Closed (C). The project is closed for registration and for processing.
Terminated. (T) The project is permanently terminated and cannot be re-activated, re-parked or amended.

In addition, you cannot register work hours on the project after date limits set in the *Timesheet completion date* field (*TS compl* in the Desktop).

> **Note:** You can also add, review or carry out actions on the Action overview pane.

> **Note:** This is a master file window and you can send individual fields for approval in the Master file approval window.

Set up a new project

1. Type a unique code for the project in *Project* . Then type the project's name in the following field. You can use a previously registered project as a template (see Use of existing projects as templates under **Related topics**).
2. If the new project is to be connected to a main project, select this project in the *Main project* field. If you define a main project, the system will use default values from this project in the other tabs of this window.
3. For external projects that are billable you must type in the relevant customer number in the *CustID* field on the **Project** tab. If it is an internal project then leave the *CustID* set to **0**.
4. External projects must be connected to an invoice rule. This rule determines, among other things, what can be invoiced and which prices are to be used. Choose an alternative in the drop-down list for the invoice rule.

5. INVRULE (**BG**) allows you to choose a standard invoice rule. Standard rules can be used by several projects simultaneously and are defined in Standard invoice rule.
6. If you select PROJECT (**B0**), project-specific invoice rules will be used. You can choose whether you wish to use the main project's invoice rule or define new rules for the project. New invoice rules can be set up on the **InvRule** tab.
7. Cost centre is mandatory for both draft projects and active projects.
8. On the **Activity** and **Work order** tabs, activities and/or work orders connected to the project are registered. Select the desired project elements from the check box on the **Project** tab. You must choose at least one of the two.
9. The **Relation** tab is used to enter relational values for the project. Relations must be defined previously in Relations on project. A number of attributes are displayed as relational values if the relation is defined.
10. If the project has connection control defined, relevant connections can be defined on the **Connection** tab.
11. If individual resources are to have a special position in this project you can register this by choosing the **Positions** command on the Tools menu.
12. You can also register budgets for the project, maintain the project's relations and register other additional information via commands on the Tools menu.
13. If steps are used to get different prices on hours, the intervals of the fields *From value* and *To value* on the **InvRule** tab must be defined so that the *To value* on the first row is the same as the *From value* on the next row.
14. To over-ride a standard price list with a project specific price list, the *OP* (Own price list) field must be selected.

Set invoice status

On the **Billing** tab (**InvInfo** tab on the Desktop), you can set the invoice status for the project and define whether or not the project should be on a separate invoice.

Auto-numbering

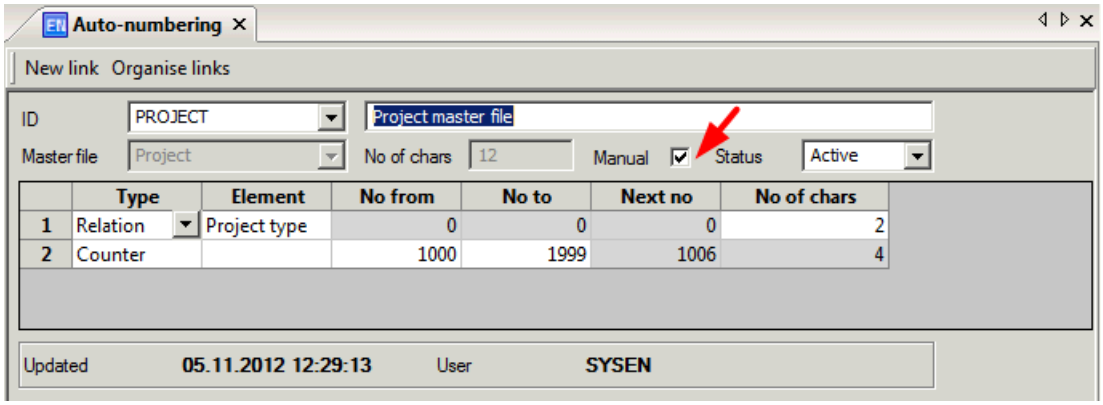
When you create a project, the system requires a project ID. Your options for a project ID will depend on your setup in Auto-numbering in Common, on the Desktop platform:

1. No auto-numbering; you create project IDs manually
2. Auto-numbering with a combination of relation values, fixed text plus a counter
3. Auto-numbering which allows manual over-ride (the *Manual* check box is ticked off in **Auto-numbering**).

> **Note:** Only one auto-numbering series can be active at a time.

> **Note:** If any of the entities work with **Global projects**, it is advised to use a unique Project ID across entities. See Global projects - Abouts Project IDs for more information.

Below auto-numbering with a relation on project type is set up with a counter between 1000-1999, plus manual numbering allowed:



Copy a project

You can copy an existing project to re-use its data in a new project.

1. Open an existing project.
2. Click the **Copy** button.
3. If auto-numbering is activated, the system can generate the project code for you, but you still have to write in a project description.
4. Click **Save**: your new project is saved with all data from the existing project intact.

> **Note: Reference projects** is a new Experience pack that allows users to use an existing project as the basis of a new project. This allows you to use similar projects to assist and speed up the project creation and the estimation phase. Therefore we recommend to start using **Reference projects** instead of copying projects. In principle no new development will be done about copying project.

Saving the project

- Upon saving, the project is set up as an attribute value for the project attribute (PROJECT (**B0**)) if the attribute has automatic maintenance (*Mnt*. = **A**).
- The project manager will be set up as a relational value to the project if the relation between project (PROJECT (**B0**) as attribute) and resource (RESNO (**C0)** as relation) is defined.
- The cost centre will be set up as a relational value to the project if the relation between project (PROJECT (**B0**) as attribute) and cost centre (COSTC (**C1**) as relation) is defined.
- The project type will be set up as a relational value to the project if the relation between project (PROJECT (**B0**) as attribute) and project type (PRO.TYPE (**B4**) as relation) is defined.
- Any values entered in the four free choice attribute fields (determined by the system parameter TS_FLD_1_ID - TS_FLD_4_ID will also be saved as relational values to the project if the relation between project and the attribute is defined.
- Main project is set up as a BU (MAINPROJ attribute) relation on PROJECT on the **Relations** tab.

Relation values

On the **Relation** tab you can register, enquire about and amend relation values for the project. In addition to pure information, relations can be used in enquiries and reports so that all projects with the same relation value are grouped together. The relations can be used when invoicing. When you order the TS01 Invoice proposal server process, you can define a relation and its value as selection criteria for the projects you are invoicing.

Billable projects

If the project is billable, the invoice rules which apply to the project is displayed on the **Billing** tab for Unit4 ERP Web and on the **InvRule** tab for Desktop. If the project has separate invoice rules and uses neither the invoice rule of the main project nor the standard rules, you can change the invoice rule here.

This tab is also used to set the invoice status for the project and to defined whether or not the project is to be printed out on separate invoices.

Activity

On the **Activity** tab, you can define an unlimited number of activities for the project. You can easily copy all activities from an existing project to the project you are working with.

The activities can be used on timesheet registration and on posting/invoicing of costs and fixed price. An activity code can be shared by several projects and you can choose to validate the activity against a register of valid activity codes.

> **Note:** This tab can only be used if the *Activity* check box is selected.

Work order

The **Work order** tab is used to register and enquire about work orders that belong to the project. Work orders can either be entered directly in this window tab or via the **Work order** command on the Tools menu. Orders entered directly inherit all the values from the project and the Work order master file window must be opened if you wish to over-ride these values.

> **Note:** You will only be granted access to register new orders if the *Work order*check box on the **Project** tab is selected.

Registration of new work orders

It is possible to enter new work orders directly in this window. The order inherits all the information such as invoice rule, attribute values, work order responsible and customer identifier from the project.

1. Open the **Work order** tab. Note that you must have ticked off the *Work order* check box in the Work breakdown structure section to have access to this tab.
2. On the **Work order** tab, add a new work order with a work order ID and a description.
3. Click **Save**.
4. Re-open your project, and the **Work order** tab.
5. Click the *Zoom* icon in the beginning of your work order row to open the work order details window.
6. Write in the required work order information.
7. Click **Save**.

Global project

This tab is enabled when the **Global project** check box is selected in the **Project** tab.

In this tab, the users can select the supporting companies related to that specific project. When the changes are saved, it triggers the server process **TS77 - Update supporting projects** so the project is made available in those supporting companies. Users can see as well the status of this copy and the date when it was performed.

You can add the supporting companies manually to the list or use the system parameter GP_DEFAULT_COMPANIES to define a list of Supporting companies to be defaulted in the tab when a project is marked as Global in **Projects** (TTS001).

Additionally, a **Refresh** button is available so the *Update status* column can show the most up-to-date results of the server process.

> **Note:** You can delete supporting companies from the list as long as any of these conditions are met: **TS77** has not run, and the project has still the status **Draft**.

Connection

On the **Connection** tab you can set up and amend connections between projects and resources and groups of resources. The aim of setting up connections is to limit which resources or groups of resources can register hours against a specified project. Connections are set up for individual activities, work orders or for the project in general. You can specify connections directly for a resource or by using the cost centre, discipline code or special connections groups. You can define an income category and an additional charge for each individual connection. These values over-ride the resource's income category and any additional charge defined for the activity.

> **Note:** If you make connections for projects, but do not select the *Conn.control* check box in this tab, the connections will be only default values in timesheet entry.

Saving milestones

You can enter milestones in the **Proj.info** tab. When you insert a milestone for the first time, the field Origin.date is updated with the same value as for the field *Date*. If you afterwards update an existing milestone, only *Date* is changed.

Deleting milestones

It is possible to delete a milestone, but a check will be performed first to control whether the value typed in the *Milestone* field is already in use in the project (in *Invoice base* or *Invoiced details*). If that is the case, you will get an error message, and it will not be possible to delete the milestone.

Related topics

Connections to the Project planner module

The **Project** master file has ties to the AGR Project planner module, where project plans are defined. This is an overview of these ties.

WBS

If a project has project plans on it (defined in Project planner), you will get a warning if you try to change the work breakdown structure (WBS) of the project. For example, if you decide to no longer have activities on a project and the activity in question is part of a project plan.

Delete a work order

You cannot delete a work order that is a work task in a project plan.

Prerequisites

- Data control is carried out on the project if the project attribute (PROJECT, ID = **B0**) has data control switched on.
- If the project should be connected to a customer (for invoicing), this must be set up in Customer in Accounts Receivable.
- Project managers must be defined as valid resources in Resource.
- The cost centre to which the project belongs must be defined as a valid attribute value for the cost centre attribute (ID = **C1**) in Attribute values in Common.
- The project type must be defined in Project types.
- The invoice's detail level must be defined in Invoice specification.
- The currency code must be defined in Currency codes in Common.
- The tax system must be defined in Tax system in Common.
- The tax code must be defined in Tax codes in Common.
- To use the financing function (invoice several customers on one project) the value for the system parameter ATTR_ID_INV_SPLIT must be set to **A4**.
    1. The factor selection hierarchy must be set up in Income factor.
    2. The check box for cost plus (*CP* field) must be selected and the desired income factor (*IncFac* field) must be selected in Standard invoice rule.
    3. If the project has a project specific invoice rule, the *CP* flag should be activated on the **InvRule** tab in **Project master file**.
    4. If you wish to use the minimums functionality, set up the increment reference lists in Invoice increments.
    5. If Additional cost/income elements (ACEs) are to be invoiced, they must be defined as invoice elements on the **InvRule** tab.
    6. If you use formulae, they must be defined in Formula register.
    7. In order to retrieve values in the table on the **Relation** tab, relations between the project attribute (PROJECT, *ID* = **B0**) and the attributes to which you wish to connect the project, must have been previously defined. These relations are defined in Relations on project.
    8. The relation to cost centre (COSTC, *ID* = **C1**) should always be defined.

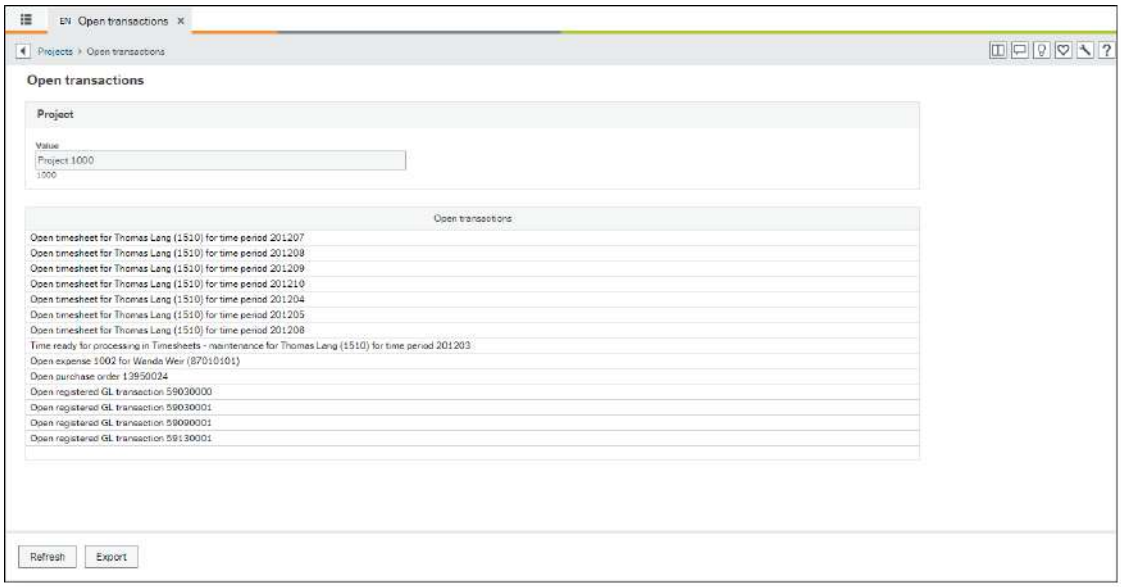
In order to use the **Connection** tab:

- The cost plus functionality can be used for the *Hours* element where the unit is defined as **Hours**. To use the cost plus (multiply hourly cost rates by a user-defined factor) functionality, please follow this procedure:
    1. Activities and work orders to be used in this tab must have been previously defined.
    2. If the connection is to be specified per resource, the resources must be set up in Resource.

3. If the connection is to be specified per cost centre, the relevant attribute values for cost centre (COSTC, (**C1**) must be defined in Attribute values in Common.
4. If the connection is to be specified per connection group, the relevant attribute values for connection (CONNECT (**BC**)) must be defined in Resource connection.
5. If the connection is to be specified per discipline, the relevant attribute values for discipline (DISCIP (**B5**)) must be defined in Discipline.
6. If a special income category is to be linked to the connection, this must be defined in Income categories.

About Open transactions

Open transactions (TTS010) is a functionality that allows you to know, for any specific project in Unit4 ERP, the transactions currently open in the system. Therefore, it provides useful information to help you understand the situation of the project.



For example, with this information you can decide if it is suitable for you to close that project, or if you prefer to close those open transactions first.

Prerequisites

User must have access to the window **Open transactions** (TTS010).

Open transactions context

Open transactions consists of a set of rules that define the existing open transactions for a project in Unit4 ERP. Every rule defines a query that returns the open transactions of a project according to these specific types:

Time and Expenses

- Open timesheets
- Open timesheets in Timesheet maintenance
- Time costs not posted on the GL

- Project expenses
- Travel expenses

Project Costing and Billing

- Invoice base
- Invoice proposal

Revenue recognition

- Revenues not posted on the GL

Project and People planner

- Future assignments

Procurement

- Contracts
- Requisitions
- Purchase orders

Commitment accounting

- Manual commitents

Sales orders

- Sales orders

Financials

- Customer and supplier invoices
- Registered transactions
- Transactions from external system

Field service management

- Service orders
- Asset objects

> **Note:** These rules cannot be modified from within Unit4 ERP.

Open transactions process

1. Open the **Projects** (TTS001) window.
2. Select the project.
3. At the bottom of the window, click **More actions**, and then click **Open transactions**.
4. The **Open transactions** window opens in breadcrumb, with a read-only list of the transactions currently open for the selected project.

Work orders (TTS047)

Window usage

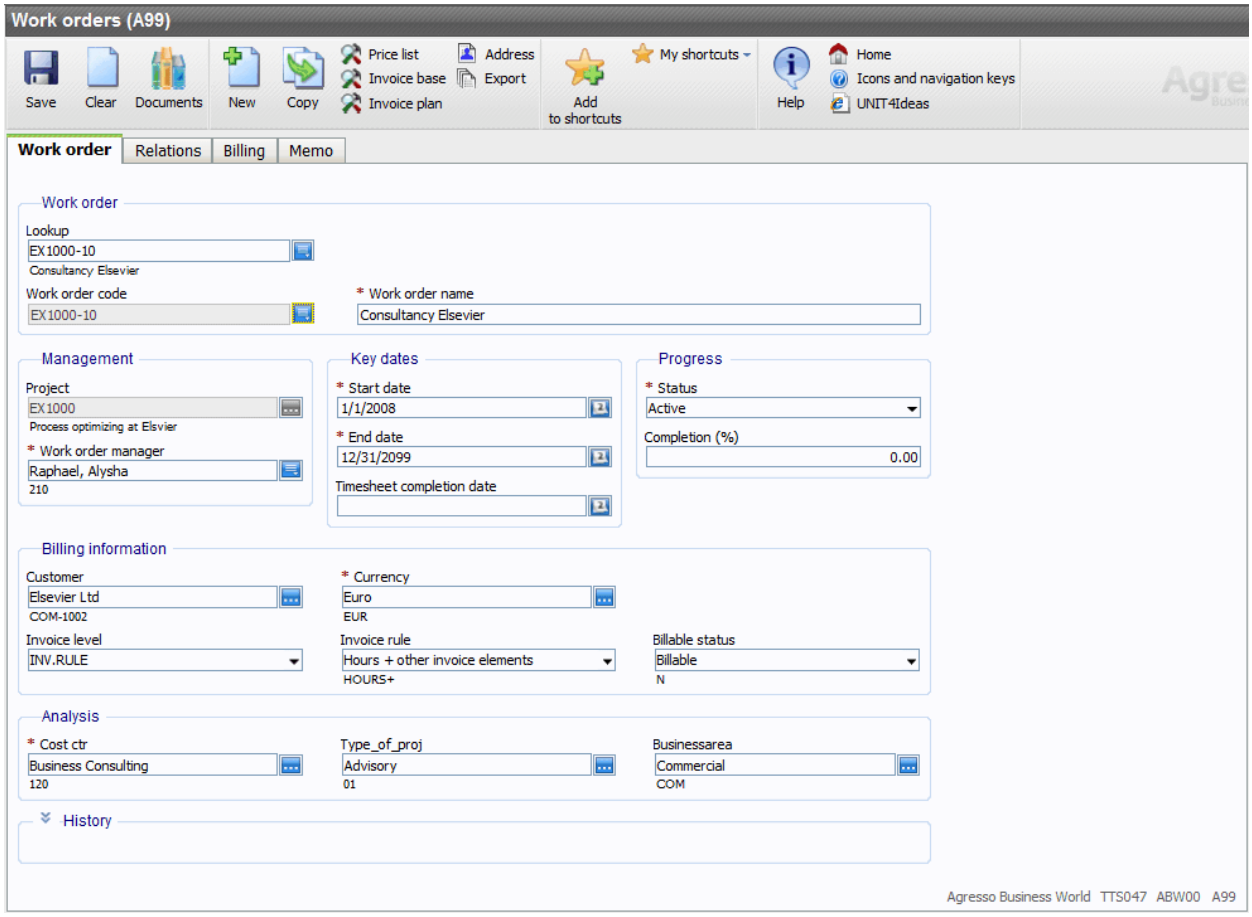
Use this master file window to define new work orders for the project or change an order that has previously been registered.

Default values

The majority of project information can be overridden at work order level. When you enter a work order, default values will be retrieved from the project to which the work order belongs, however new values can be entered which override those defined for the project.

Example

This illustrates the work order master file:



Work order ID

The work order code must be unique for the company (several projects cannot share the same order). This means that you only need to enter the work order code (not both the project and the work order code) on registration of hours - the project code will be filled out automatically when the work order code is entered. Whenever you register a new

work order in this window, the system will check if the code has already been used on a draft work order. If that is the case, you cannot continue without changing to another work order code.

Registration of work hours and work order statuses

Note that work hours can only be registered on timesheets for active work orders and projects. The available work order statuses are:

- **Active** (N). Open for time registration and for processing.
- **Draft** (D). The work order can be deleted.
- **Parked** (P). The work order is closed for registration, open for processing.
- **Closed** (C). The work order is closed for registration and for processing.
- **Terminated** (T). The work order is permanently terminated and cannot be re-activated, re-parked or amended.

In addition, you cannot register work hours on the work order after date limits set in the *Timesheet completion date* field (*TS compl*. on the Desktop client).

Invoice status and separate invoices

Set the invoice status for the work order and define whether or not the work order is to be printed on a separate invoice on the **Billing** tab on Unit4 ERP Web and on the **InvInfo** tab in the Desktop.

> **Note:** This is a master file window and you can send individual fields for approval in the Master file approval window, according to the settings done for connected projects in Project master file.

Register a new work order

1. Enter a unique code for the work order in the *Work order* list. Then type the work order's name in the following field. You can use a previously registered work order as a template.
2. Connect the work order to a project in the *Project* list.
3. For external work orders that are billable you must enter the relevant customer number in the *CustID* field on the **Work order** tab. If it is an internal work order then leave the *CustID* set to blank. Default value will be retrieved from the project.
4. External billable work orders must be connected to an invoice rule. Default value will be retrieved from the project.
5. The **Relation** tab is used to type relational values for the work order. Relations must have been defined previously in Relations on project. A number of attributes will automatically be entered as relational values if the relation is defined (see the Explanation of fields section). Default values will also be retrieved from the project. This happens after you have saved the work order. If you do not want the work order to automatically inherit project relation values, you may have to first register the project and its work orders without any relation values; rather filling in the relation values after first saving of project and work order.
6. If steps are used to get different prices on hours, the different intervals of the fields *To value* and *From value* on the **InvRule** tab must be specified so that the *To value* on the first row is the same as the *From value* on the next row.
7. To over-ride a standard price list with a work order specific price list, the *OP* (separate price list) check box must be selected.

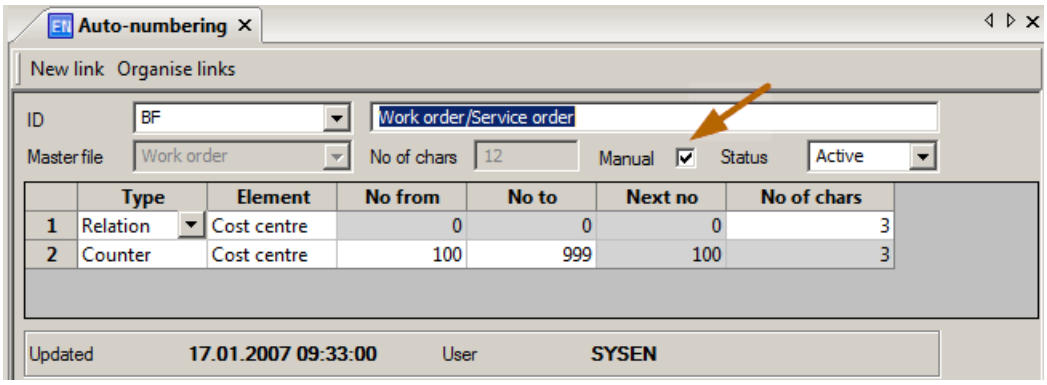
Auto-numbering

When you create a work order, the system requires a work order ID. Your options for a work order ID will depend on your setup in Auto-numbering in Common, the Desktop platform:

1. No auto-numbering; you create work order IDs manually
2. Auto-numbering with a combination of relation values, fixed text and counter
3. Auto-numbering which allows manual over-ride (the *Manual* check box is ticked off in **Auto-numbering**).

> **Note:** Only one auto-numbering series can be active at a time.

Below auto-numbering is set up for work orders with a relation on cost centre with the counting set between **100-999**, plus manual numbering is allowed:



Copy a work order inside Work order master file

You can copy an existing project to re-use its data in a new project.

1. Open an existing project.
2. Click the **Copy** button in the top ribbon.
3. If auto-numbering is activated, the system can generate the project code for you, but you still have to write in a project description.
4. Click **Save**. Your new project is saved with all data from the existing project intact.

Relation values

On the **Relation** tab you can register, amend and enquire against relational values for the order. In addition to pure information, relations can be used in enquiries and reports so that all orders with the same relational value are grouped together.

Invoicing

The relations can be used when invoicing. When you order the TS01 Invoice proposal server process, you can define a relation and relational value as selection criteria for the work orders to be invoiced.

Relations to attributes

If there are any relations to the attributes for cost centre (COSTC (**C1**)), project manager (RESNO (**C0**)) and the four user defined attributes, these will be entered automatically on the **Relations** tab when you save if any of these values are changed on the **Work order** window tab (this is only valid if the value in the *Percent* field is **100**).

Billable work orders

If the work order is billable, the invoice rules which apply to the order is displayed on the **Billing** tab on Web (the **InvRule** tab in the Desktop). If the work order has separate invoice rules and does not use the project's or the standard rules, you can change the invoice rule in this window.

Prerequisites

- If the attribute for work order (WORKORD, *ID* = **BF**) has data control, this control will be carried out on the work order.
- If the work order is to be connected to a customer (for invoicing), this must be defined in Customer in Accounts Receivable.
- The work order responsible person must be defined as a valid resource in Resource.
- The cost centre to which the work order belongs must be defined as a valid attribute value for the attribute for cost centre (*ID* = **C1**) in Attribute values in Common.
- The invoice's level of detail must be defined in Invoice specification.
- The currency code must be defined in Currency codes in Common.
- The tax system that is to be used must be defined in Tax system in Common.
- The tax code that is to be used must be defined in Tax codes in Common.
- If additional cost/income elements (ACEs) are to be invoiced, they must be defined as invoice elements on the **InvRule** tab in the **Work order master file** window.
- In order to retrieve values in the table on the **Relation** tab, relations between the work order attribute (WORKORD (**B0**)) and the attributes to which you wish to connect the project, must have been previously defined. These relations are defined in the Relations on work orders window.
- The relation to cost centre (COSTC, *ID* = **C1**) should always be defined.
- If you want to use the cost plus (multiply hourly cost rates by a user-defined factor) functionality, the prerequisites are as follows:
    - The factor selection hierarchy must have been set up in Income factor.
    - The check box for cost plus (*CP* field) must be selected and the desired income factor (*IncFac*) field must be selected in Standard invoice rule.
    - If the work order has a work order specific invoice rule, the *CP* flag should be activated on the **InvRule** tab in the **Work order master file**.

This functionality can be used for the *Hours element* where the unit is defined as **Hours**.

- If you wish to use the minimums functionality you must set up the increment reference lists in Invoice increments.
- If formulas are used, they first have to be defined in Formula register.

Project management and maintenance

Plan a project

Introduction

The **Project** master file is a natural starting point to plan a project. The window is also a launching page for other Unit4 ERP windows through its commands which give you access to planning activities apart from the project entry itself.

Project planning

The **Planner** command will take you to the **Project planning** window connected to Planner.

Project plan setup

First, however, the **Project planning setup** window in the Planner module should be defined as to choose what type of project budgets that should be available to the different projects or project types.

When a project manager opens the **Project** master file and clicks the **Planner** button, he or she is presented with the budgets available for the current project. There is also a link back to the project from the **Project planning** window.

When you click the **Load** button, you are taken to the **Transaction entry** window in Planner, where you may enter budgets for your project.

For further explanations on budgeting in Planner, please refer to the relevant online help and reference manual for this module.

Price list

The **Price list** command allows you to enter price lists that may be specific for projects, or standard price lists.

Invoice base

The invoice base for a project is where you find rows ready for billing.

Invoice plan

The **Invoice plan** command allows you to plan the invoicing process. Below is a billable project containing both the **Fixed price** invoice element in its invoice rule, and some milestones:

Fixed price

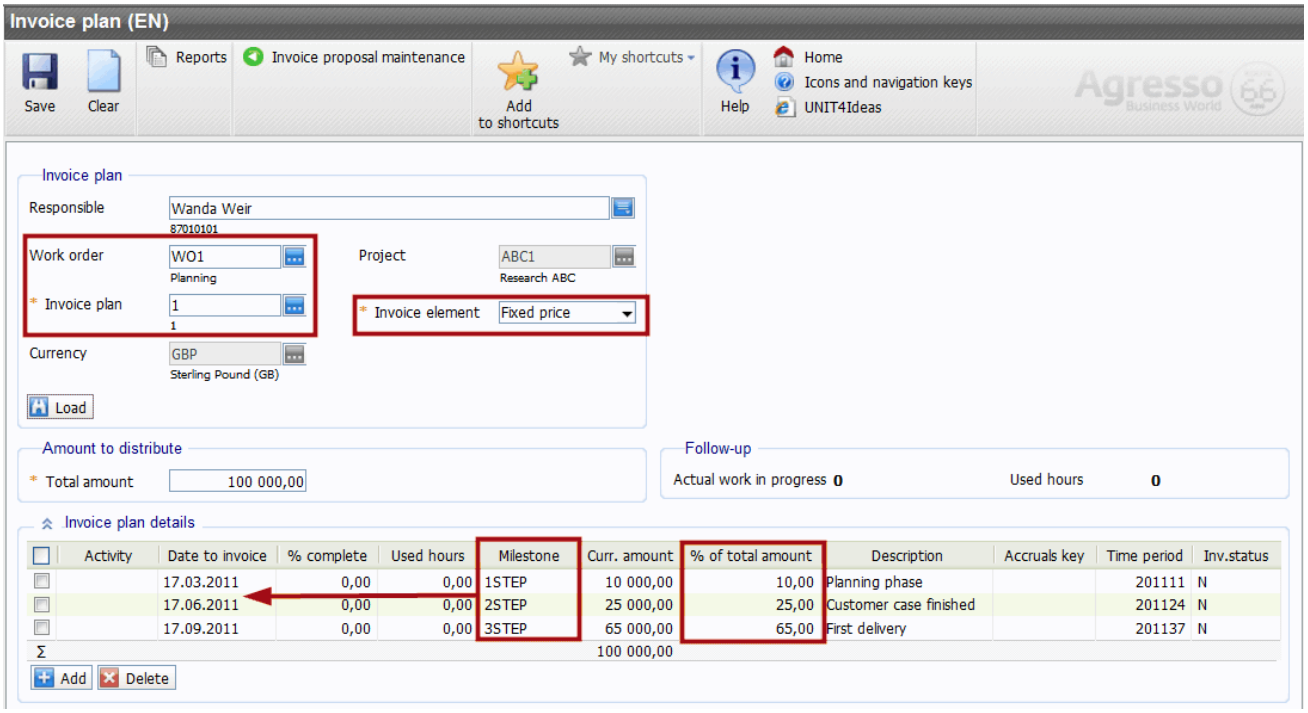
To see the project-specific invoice rule, go to the **Billing** tab, **Invoice rule** sub-tab.

Milestones

To see the project's milestones, go to the **Milestones** tab.

Invoice plan

The invoice plan can be defined:



Address

The **Address** command takes you to a window where you may enter all addresses relevant to a project.

Note that in Unit4 ERP there is an address hierarchy. When invoicing a project/work order, the system will look for the invoice address in different places. This list shows the order of this search:

1. Work order invoice-specific address
2. Work order general address

3. Project invoice-specific address
4. Project general address
5. Customer invoice-specific address
6. Customer general address

Delete draft

The **Delete draft** command is described in the chapter about Draft projects on the following pages.

Create a draft project

Introduction

In Unit4 ERP Web a project manager may save projects as a draft, as a first step to planning and maintaining projects.

Since the project in the example above has status **Draft**, the only mandatory fields in this entry are *Project code*, *Description*, *Project type*, *Project manager* and *Cost centre*.

> **Note:** All work orders and activities connected to a draft project will also have status as drafts, and the fields are read-only. Milestones do not use any drafts.

Activate a draft project

When a draft project gets the green light, the project manager can activate it.

To activate a project, click the **Activate project** button:

Normally, a change of project status will trigger an approval process, where the person responsible approves the activated project in **Project entry approval**. Once the project entry is approved, these points apply:

- The project status is changed to **Active**.
- The project status cannot be reset to **Draft**.
- Work order and activity statuses are also changed to **Active**.

Mandatory fields in an active project

In addition to the fields required to enter a draft project, these fields must be filled in:

- Cost centre
- Currency type
- Currency
- Work order or Activity
- Project manager

A draft project on the Desktop client

After saving, you may choose to open the draft project in the **Project** master file on the Desktop. From this window, you may choose to save the project as an active project, or without changing its draft status. The message below will appear, but note that you may also save the project with its **Draft** status intact:

Deleting a draft project

A draft project may come to nothing, and thus should be deleted from Unit4 ERP. You may delete draft projects, you cannot delete active projects. When deleting a draft project, you will also delete all connected data. This includes all data from the project and work order registers, activities, all Planner data and all attribute values.

> **Note:** A draft project can be opened and activated on Desktop. It cannot be deleted in the Desktop.

To delete a draft project, you use the **Delete draft** button:

Deletion of work orders

Draft work orders are deleted when you delete the draft project. If only the draft work order should be deleted, you can use the **Delete draft** button in the **Work orders** window.

Workflow functionality

When the draft project is ready to be saved as an ordinary active project, various fields (changes in fields) may be sent on workflow to other employees in the organisation to allow them to approve changes on the **Master file approval** page. This may for example be a change in project dates. Other possible changes are listed below:

- Billing information
- Work orders and activities
- Other

Apply project updates to the work orders

Overview

Two common parameters enable you to propagate the changes done to a project's fields or relations to its work orders, rather than have to manually update each one of them.

Please note that changes in **Projects** (TTS001) are applied to work order only for existing projects - i.e. projects that have been saved at least once. The functionality is not available for any new projects - i.e. any projects that have never been saved yet, even if they are created with the button **Copy**.

> **Note:** With standard workflows, the changes are applied to the work orders when the users save in the **Projects** (TTS001) window. If you have configured **Master file approval**, then the changes are applied only when the task is approved. NB: The functionality is equally unavailable for any new projects through a master file approval.

Apply a project update on the work order fields

Prerequisites

- Set common parameter **TRANSFER_CHANGE_FIELDS** as *Active*.
- Add the valid values to the parameter:
  - *resource_id* (for Project manager);
  - *department* (for Cost centre);
  - *invoice_code* (for Invoice rule[1]);
  - *dim1*; *dim2*; *dim3*; *dim4* (for additional dim values).

Example

1. Make sure that *Cost centre* is a value of **TRANSFER_CHANGE_FIELDS**.
2. Go to **Projects** (TTS001) and select the project to update.
3. Modify the value of the field *Cost centre*.
4. Click **Save**.
5. Go to the tab **Work orders**.
6. Click the icon *Zoom* to open one of the work orders.
7. Observe that the cost centre of the work order is the same as the project.

---

[1] Changes on *Invoice rule* will be propagated only to work orders sharing also the same *Invoice level* value with the project. If you have configured **Master file approval**, the changes will be propagated only if both fields have the same Master file workflow configuration on the element type (i.e. either both fields or none of them are sent to workflow).

> **Note:** NB: Only work orders with the same original field value as the project will be updated with the new value.

Apply a project update on the work orders relations

Prerequisites

- Set common parameter **TRANSFER_CHANGE_RELATIONS** as *Active*.
- Add the valid values to the parameter:
  - *C1* (for Cost centre);
  - *B4* (for Project type);
  - *C0* (for Resource);
  - *AO* (for Market).
- The project and work orders' relations setup are the same.
- If project and work orders are configured with date on relations then the work orders to be updated are those with the same relation value on today's date.
- Relations do not allow duplicates, neither on project nor on work orders.

Example

1. Make sure that the attribute *Market* is a value of **TRANSFER_CHANGE_RELATIONS**.
2. Go to **Projects** (TTS001) and select the project to update.
3. Go to the tab **Relation group**.
4. Modify the *Market* value.
5. Click **Save**.
6. Go to the tab **Work orders**.
7. Click the icon *Zoom* to open one of the work orders.
8. Go to **Relation group**: the *Market* relation value is the same as in the project.

> **Note:** NB: Only work orders with the same original relation value as the project will be updated with the new relation value.

Finance a project

Introduction

Click the button **Financing** in the **Projects** master file's tool bar to open the **Financing** (TTS042) window, where you can state which customers are to finance the project and the rules for the invoicing of these customers. The invoice amounts will be distributed to the relevant customers based on the rules given in this window. You can limit what can be invoiced, when the customer can be invoiced, and how much can be invoiced.

Before you start

- The system parameter ATTR_ID_INV_SPLIT must be activated and have the value **A4** (Attribute ID for the customer's attribute).
- Make sure that the system parameter TS_INV_ROUNDING is deactivated. In case of project financing invoices, the rounding correction procedure is controlled by the system parameter TS_FINANCING_INV_ROUNDING. If the TS_INV_ROUNDING is set to *On* when running the server process **TS01 Create invoice proposals**, the report will stop.
- Customers who are financing the project must be set up in the **Customer** (TCU002) window in **Accounts Receivable**.
- Only customers different from the main customer will be used in the split of the invoice defined in the **Financing** window. If the split percentage is less than 100% or if the amount is larger than the amount limit, the main customer defined on the project will be used for the remaining amount.

What would you like to do?

Set up financing

1. Select the project in **Projects** master file window.
2. Click the **Financing** button: the **Financing** window opens.
3. In **Funding**, create as many date intervals as needed and give a title to each. NB: no gaps are allowed between dates.
4. In **Funding details**, click **Add** and fill in the required fields.
5. The check boxes *Hours*, *Expenses*, and *Fixed price* check boxes are selected by default when creating a new row. Unselect the ones you don't need.
6. If you want to assign a specific address to an invoice, click the goggles icon in the column *Address* and choose one of the available addresses in the list.
7. Click **Save**.

Amend financing

1. In **Funding**, click on the row you want to update.
2. Change the row description or the dates. NB: you can only change values if there are no invoice or invoice proposals for the funding dates.

3. In **Funding details**, change the values in the fields *Currency amount*, *Hours*, *Expenses*, *Fixed price*, *Priority* , *Percent* or *Address*. NB: you can only change values if there are no invoice or invoice proposals for the respective funding header dates.
4. Click **Save**.

Enquire about financing

1. In **Funding details**, place the cursor in the field upon which you wish to enquire.
2. Enter your search criteria.
3. Click **Filter**.

Explanation of fields

Project

Value
The project code and its description are displayed automatically and cannot be changed.

Funding

Funding
The funding description.

Date from
By default, the start date of the project for the first interval. When adding a new interval, the previous interval *Date to* will be dynamically changed to fill in any gap.

Date to
By default, the end date of the project. When adding a new interval, the previous interval *Date to* will be dynamically changed to fill in any gap.

Funding Details

Customer
The customer ID for the customer that is to finance the project. The customer must have been set up in in Accounts Receivable. You are not allowed to enter a customer registered in Unit4 ERP with a fixed currency different from the project's currency.

External reference
The external reference for the customer.

Currency
Currency (will always be the project's currency).

Currency amount
The limit on the amount this customer can be invoiced for. If this limit is exceeded, the main customer will be invoiced for any new transactions. The amount must be stated in the project's currency. If there is no ceiling on the financing this amount must be set so high that nothing will limit the invoicing.

Percentage
This field states the percentage of the total amount that this customer is to be invoiced for. This field is only accessible if you left the *Priority* field blank. You cannot use both priority and percentage distribution in the same project.

Priority
States the customer's priority in relation to the other sources of finance. The customer with the highest priority will be invoiced for the total amount before any of the others are invoiced. 1 is the highest priority. This field is only

accessible if you enter 0 in the % field. The amount must be entered in the Currency amount field. NB: The lines with priority values will take precedence over the lines with percentage values when generating invoices.

Invoiced
The previous amount that the customer has been invoiced for. The value is updated by each invoicing.

Rest amount
The amount still left for invoicing (= *Currency amount* - **Invoiced**).

Hours
Determines whether the financing includes hours and ACEs. Settings are:
- ☒ The hours and ACEs can be invoiced.
- ☐ The hours and ACEs cannot be invoiced.

Expenses
Determines whether the financing includes expenses and products. Settings are:
- ☒ Expenses and products can be invoiced.
- ☐ Expenses and products cannot be invoiced.

Fixed price
Determines whether financing includes fixed price, advance payment, deduction advance payment, rate and retentions. Settings are:
- ☒ Fixed price, advance payment, deduction advance payment, rate and retentions can be invoiced.
- ☐ Fixed price, advance payment, deduction advance payment, rate and retentions cannot be invoiced.

Address
Click the icon in this column to display the available addresses of the customer master file. If necessary, select among those the address which is going to be used as the invoicing address of the project. Not mandatory.

Address details
Shows the formatted address that was assigned to the financing detail line when clicking *Address*.

Related topics

Enquire on project financing

1. Open the **Create new report** (XRA005) window.
2. Go to the tab **Project management**.
3. Click the object *Project financing*.
4. Select columns and criteria.
5. Click **View result**.

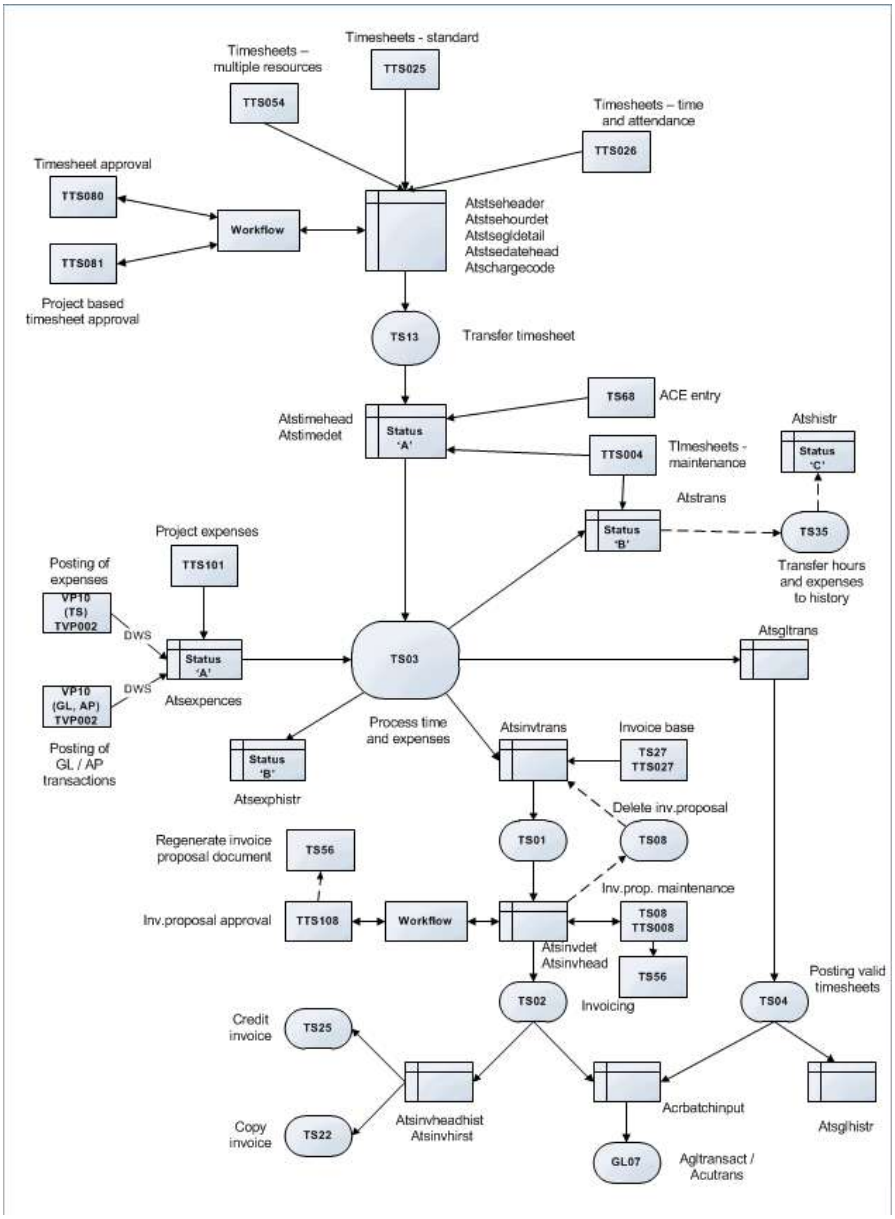
Time and expenses in PCB

Time and expense entry

In this part, you will find descriptions of the time and entry routines.

Time entry

This chapter describes the various ways of entering time in Project Costing and Billing (PCB), as well as the follow-up needed to prepare data for processing. Both Desktop and Web solutions are described. It is assumed that all setup necessary to run PCB has been completed. This diagram shows the overall process in Timesheet entry:



Desktop and Web platforms work in parallel

The Desktop timesheet entry and Web timesheet entry are as one system that uses the same database tables and the same workflow routine for entry and approval of hours. The user can choose whether to enter time in the Desktop or the Web platform at any time, whichever is most opportune in a given moment. Updates done in one platform are immediately available in the other.

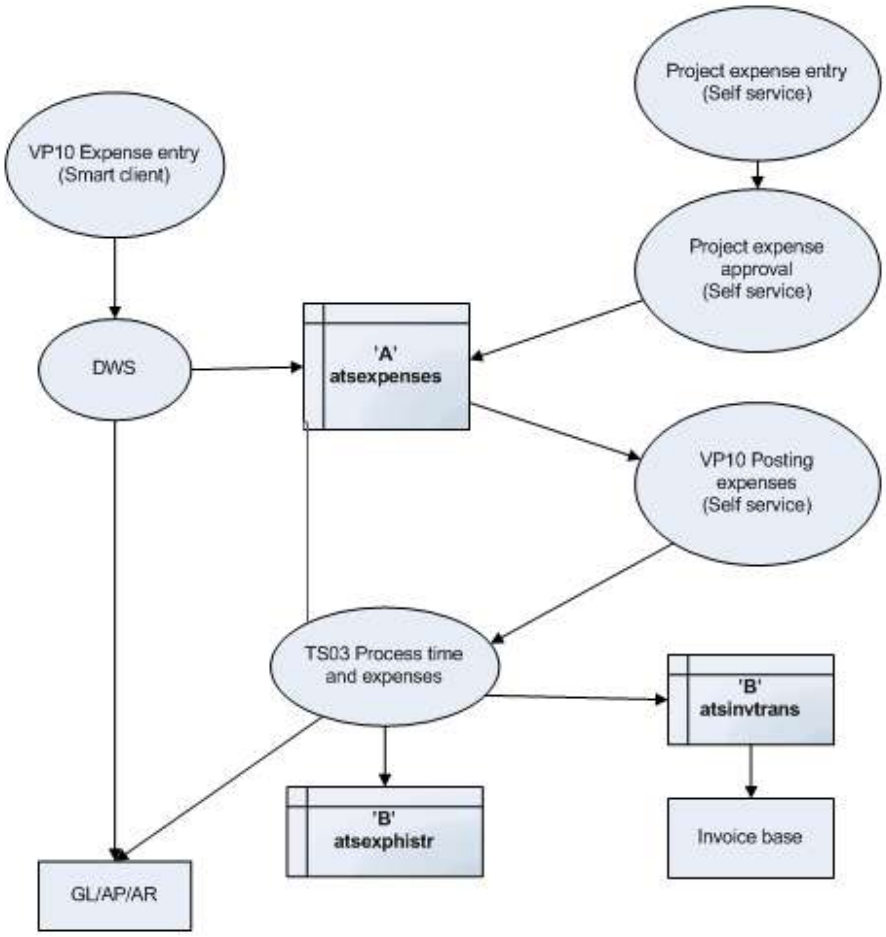
Expense entry

Introduction

Expenses may be registered in General Ledger expense accounts by means of supplier invoices, employee expense claims or journals. The **Expenses** balance table can pick up any GL/AP transaction fulfilling certain rules. Anything on this balance table can be billed through PCB, given that an invoice element of type **Expenses** is present in the invoice rule of the relevant project or work order. The **TS03 Process time and expenses** server process values the expenses for use in the invoicing processes.

Expense entry data flow

The flow of expense data can be described as below. Expenses are registered either through the **VP10 Posting** window after they have been approved, or in the **Project expenses** window on Unit4 ERP Web. The AGRDWS process updates the GL and AP/AR and the *atsexpences* table, which populates the **Expenses** balance table:



Expenses balance table

Introduction

Once these transactions are updated by AGRDWS from the General Ledger, they are also updated to the EXPENSES balance table (*atsexpences*). This can be verified in the **Expenses** window on Desktop.

EXPENSES balance table

The EXPENSES balance table is the vehicle through which expense transactions reach Project Costing and Billing. It uses all posting attributes (ACCOUNT, PROJECT, RESNO, SUPP.ID, ACTIVITY, COSTC, INV.STAT, and WORKORD) available.

The balance table **SQL** determines how the table is updated. The Unit4 ERP default (**SQL set 0**) requires a resource ID or supplier ID as well as project and activity or work order information, but if a client wishes to invoice commitment invoices for example then the SQL may be rewritten to select WBS instead of activity.

SQL

Any transaction to be posted to the EXPENSES Balance Table by the AGRDWS must conform to criteria set up in the SQL. The system is supplied with SQL that conforms to a Norwegian standard setup, which should be amended in consultation with Unit4 ERP implementation consultants.

There are three active sets of SQL supplied. Please ensure that the one relevant for a given setup is active. The criteria that each uses for picking up transactions are shown below:

Criteria	SQL 0	SQL 1	SQl 2
Account begins with 4, 5, 6 or 7	Y	Y	Y
Posting category 2 contains a project	Y	Y	Y
Posting category 3	Any	RESNO	Blank
Posting category 4 contains a work order OR category 5 contains an activity	Y	Y	Y
Posting category 7 contains an invoice status of N or P	Y	Y	Y
Transaction type is not TI (i.e. not an invoice transaction)	Y	Y	Y
Transaction type does not begin with P (i.e. not a payroll transaction)	Y	Y	Y
Transaction has a supplier on it	Y	N	N

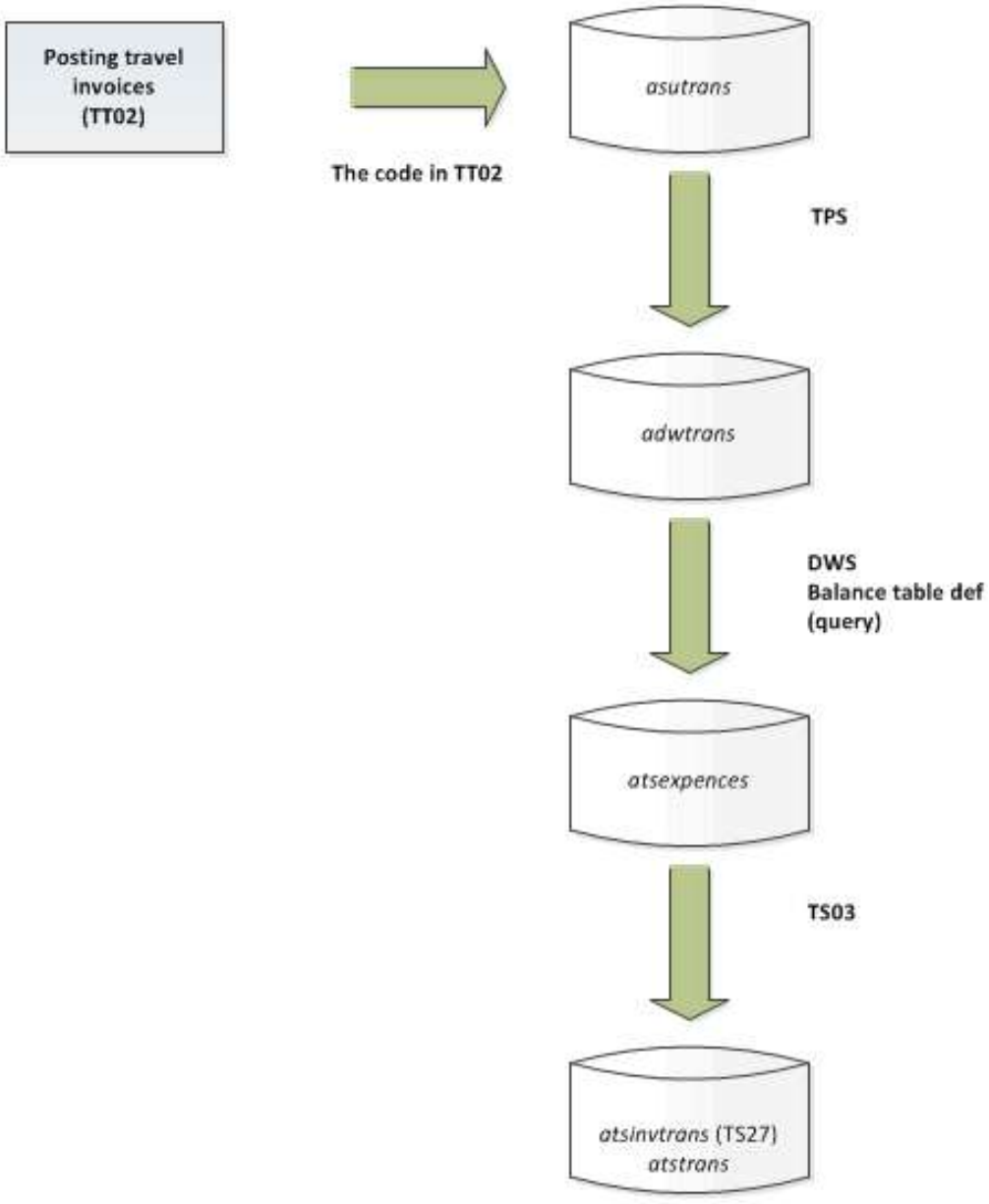
Expense entry on Desktop

Follow this procedure to enter expenses on Desktop:

Step	Action
1	Open the **VP10 Posting** window for relevant transaction type.
2	Post each expense entry as a transaction line, using GL accounts that have an account rule serving project expenses.
3	Offset entries to the appropriate balance account
4	Save. When the DWS has run, check in the **Expenses** window that the atsexpences table has been updated

HRMS travel transaction transferred to PCB for invoicing

The figure below is an example of expenses transferred from another module into Project for invoicing. The expenses are posted in Human Resources.

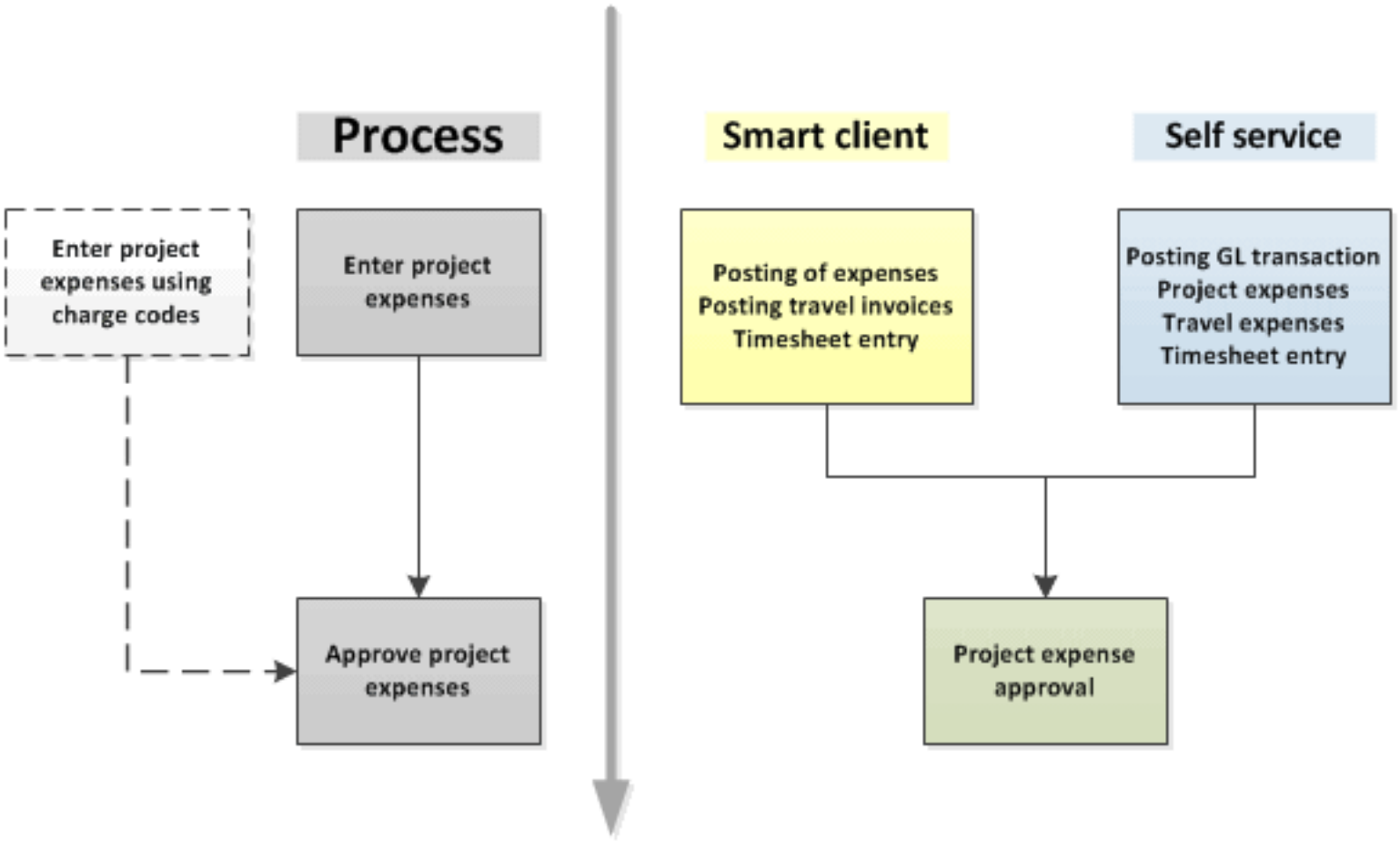


Expense entry on Unit4 ERP Web

Unit4 ERP Web project expense entry provides users with a quick and easy way to get project expense claims into Project Costing and Billing and enables companies to invoice the expenses much faster than before. This means recovering money from their customers quicker. Both Expense types and Charge codes can be used.

Process diagram

This diagram shows the project expense process in Unit4 ERP Web, compared to the Desktop:



Note

There are some important points not shown in the diagram above:

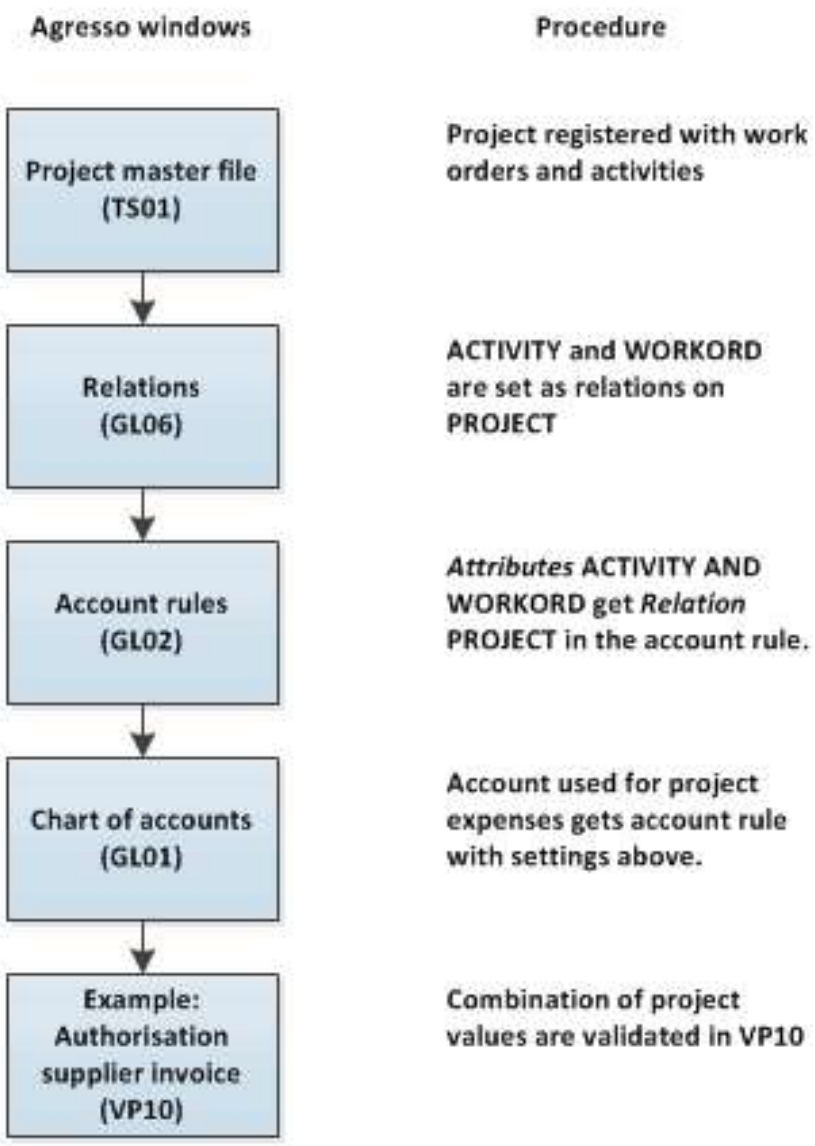
- Project and work order information is not entered by default, if expenses are posted in another module than Project. Validation on project values, however, can be set up by using relations and account rules (see diagram below for explanation).
- The main difference between project expense entry and travel expense entry is that in **Project expenses**, only expenses are registered. In **Travel expenses**, allowances are also included.
- The TS03_ONLY_POSTED_EXP system parameter sets if **TS03 Process timesheets and expenses** should transfer all authorised and registered project expenses to the invoice base, or only posted expenses .

- In **Project expenses** (TTS101), you cannot specify VAT on your expenses. This is possible in, for example, **Posting of expenses** (VP10) and **Posting GL transaction** (TVP001).

Validation on project values when posting expenses from other modules

By using relations and account rules, you may have validation on project values when you post expenses from other modules into Project.

Example



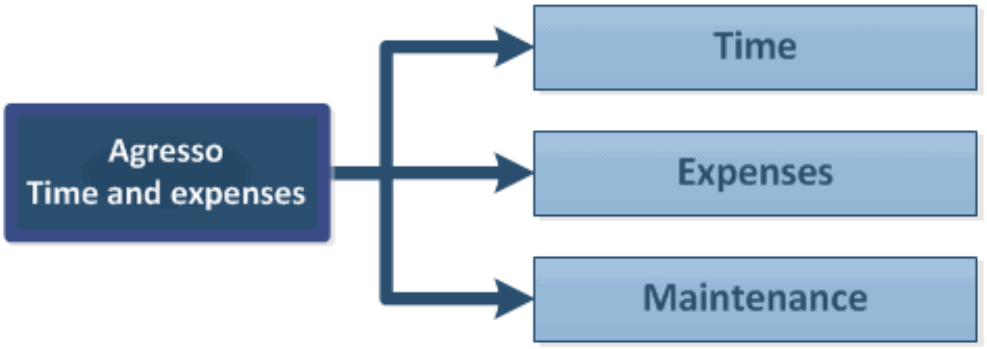
Time entry on Unit4 ERP Web

Introduction

As time entry and how to report time spent on a project may be a quite important part of the project manager's work load, the flexibility issue arises when it comes to how to enter time, and how to monitor time entered by resources connected to a project.

The Web platform contains slightly more functionality for time entry on projects than the Desktop.

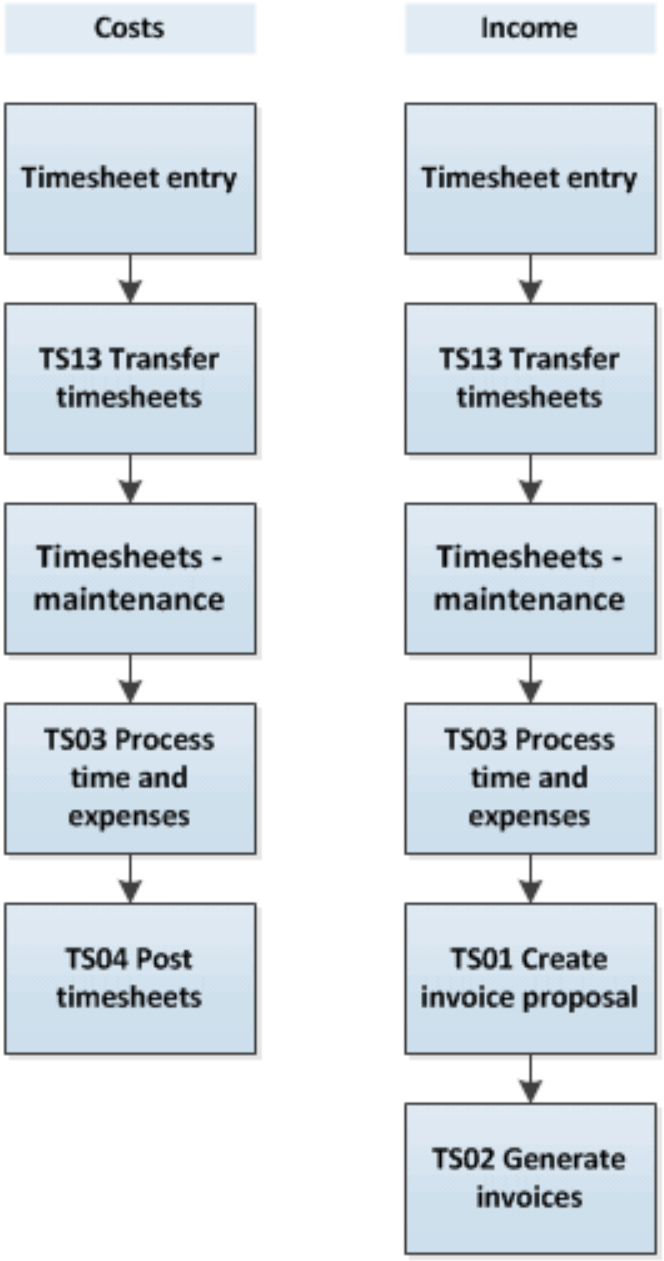
The figure below shows the main menu items for Time and expenses:



We will focus mostly on the Time and Maintenance parts here.

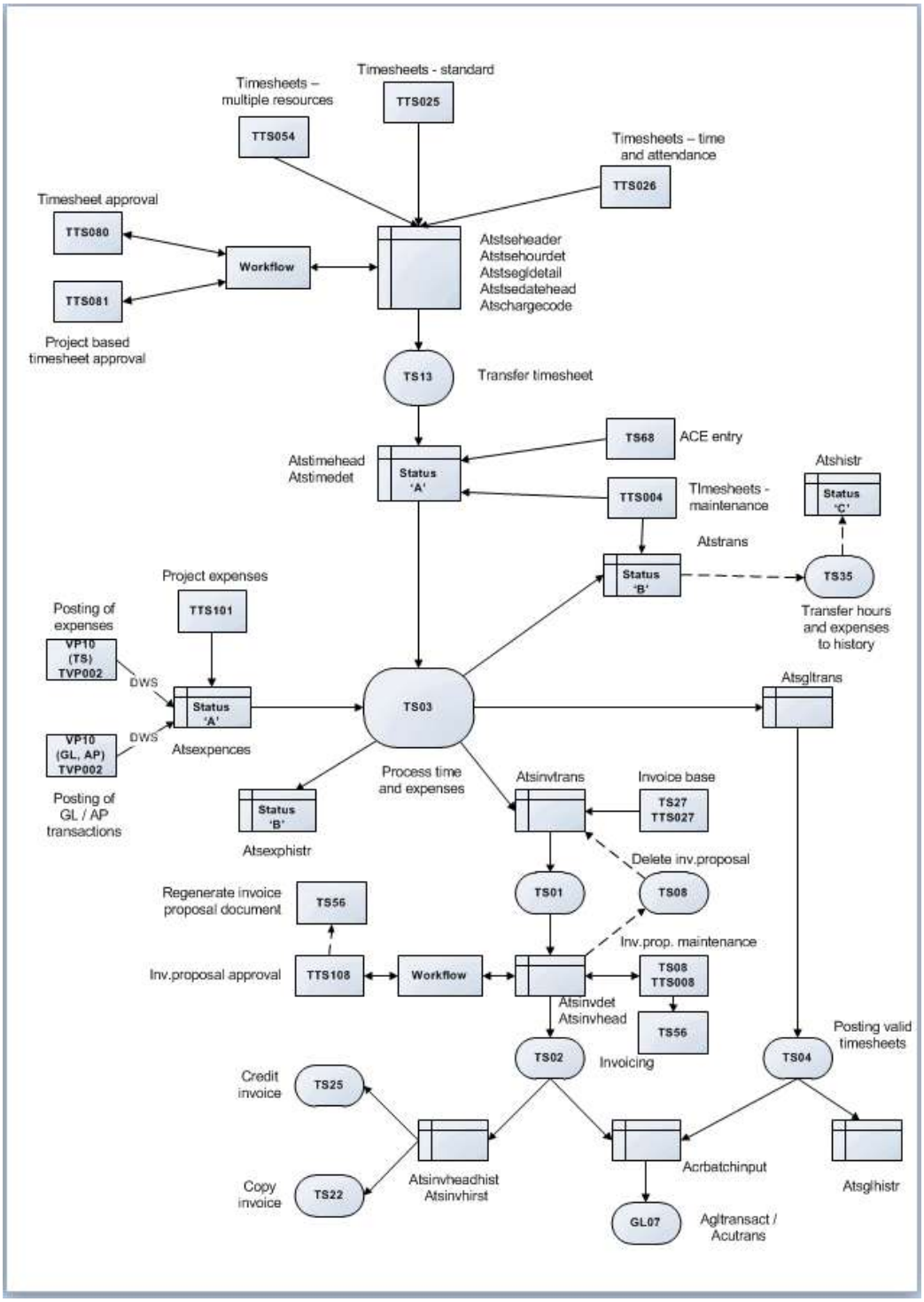
Timesheets flow

Time may be a source for both income and for costs. The figure below shows the two flows in Unit4 ERP, not including workflow steps for approval:



Unit4 ERP timesheets windows

Timesheets are the link between the resource and the cost or income his or her involvement in projects will generate. The diagram below shows flow of data starting with timesheets:



Costs

The table below is a simplified overview of the Unit4 ERP Web windows used to enter timesheets and process costs:

Window/Server process	Purpose
Timesheets - standard Timesheets - multiple resources Timesheets - time and attendance	Timesheet entry, by resource or by person entitled to do so on behalf of other resources. The timesheets may be sent on workflow for approval.
TS13 Transfer timesheets	Timesheets are prepared for calculation of costs, and time periods used are synchronized into the same TS period. No longer possible to change timesheets from timesheet entry windows. Flexi-time is calculated.
Timesheets - maintenance	Manual changes can be made on transferred time.
TS03 Process time and expenses	Hourly costs are calculated Timesheets are validated on the following: Valid time costs? Valid posting rules? Valid additional cost elements? Valid period?
TS04 Post timesheets	Calculated time costs are posted to the General Ledger

Income

The table below is a simplified overview of the Unit4 ERP Web windows used to enter timesheets and process income:

Window/Server process	Purpose
Timesheets - standard Timesheets - multiple resources Timesheets - time and attendance	Timesheet entry, by resource or by person entitled to do so on behalf of other resources. The timesheets may be sent on workflow for approval
TS13 Transfer timesheets	Timesheets are prepared for calculation of costs, and time periods used are synchronized into the same TS period. No longer possible to change timesheets from timesheet entry windows. Flexi-time is calculated.
Timesheets - maintenance	Manual changes can be made on transferred time.
TS03 Process time and	Hourly income is calculated

Window/Server process	Purpose
expenses	Income is transferred to the invoice base Timesheets are validated on the following: Valid time costs? Valid posting rules? Valid additional cost elements? Valid period?
TS01 Create invoice proposals	Hours, expenses, fixed prices, ACEs and other rows to be invoiced are retrieved from the invoice base. An invoice proposal is generated based on the relevant invoice rule.
TS02 Generate invoices	Invoice rows are sent for posting.

Time entry windows in detail

In the following, you will get a detailed presentation of some of the windows listed above. The window description will include field explanations and some commands. For prerequisites, please refer to online help. The following windows will be presented:

Timesheet entry

- Timesheets - standard
- Timesheets - multiple resources

Timesheet maintenance and processing

- TS13 Transfer timesheets
- Timesheets - maintenance
- TS03 Process time and expenses
- TS04 Post timesheets

Timesheets - standard

Use this window to register your own or other people's work time. Choose the relevant period, add one row per work task (work order and/or activity) and either save your timesheet as a draft or submit it for further processing. The normal work hours from your work schedule (work hours due for the period) are displayed so that you can compare actual time worked with your work schedule.

Dates on relations

This window will use default values from project or work order master file, except when using the resource's cost centre (which will use transaction date).

> **Note:** Timesheets must be completed within a project's time interval, according to the value in the *Timesheet completion date* field in the **Project** master file.

What would you like to do?

Register work time

1. Specify the time period for which you want to register a timesheet.
2. Your personal work schedule is displayed automatically with the dates for the period.
3. Click on **Add** to open an empty row.
4. Register the required values.
5. To see more details, click on the Details section.
6. Register the required values.
7. To see your balances, click **Refresh** in the Balances section.
8. Optionally, if distribution is set up you can distribute time units like overtime by selecting the wanted row and clicking **Distribute**.
9. Optionally, register the required values on the **Distribute** tab.
10. Click on **Save** and use the following status:
11. Save a row as **Ready** when it is ready for approval or timesheet transfer.
12. Save a timesheet as **Ready** when it is ready for approval or timesheet transfer.

> **Note:** Note that the transaction type **TS Timesheet entry** must be set to **N** in **Transaction types** to save a timesheet as a draft, or to set its status to **Ready**.

Change rejected rows

1. Open the timesheet with rejected rows from your tasks list.
2. In the Workflow comments section which is opened automatically for rejected rows, you correct the red rows.
3. Enter comments to the approver and any comments from the approver are displayed in the Workflow section.
4. Click on **Save** and save the row as **Ready**.

Enter parts of the day

To enter part of a day:

1. Set the registration unit to **Days**.
2. Define number of decimals to be used in the *Number of digits after decimals point* field in the **Timesheet setup** window.

> **Note:** Use limit control functionality to avoid entering more than 24 hours a day.

View and print timesheet information

1. Click the **Print preview** button on the toolbar to get a timesheet print preview.
2. To enhance the printout format, select the Landscape orientation in the print setup.
3. To see a preview of the printout, choose **Print Preview** on the File menu in the browser.
4. Select **Print** on the File menu.

> **Note:** You must activate the **TTS025_VIEW_FILE** system parameter to display the **Print preview** button.

Related topics

TS periods vs Payroll periods

You can have different Payroll and TS periods in the same time interval for one employee. The TS period is used for timesheet entry. However, as you can use periods that do not correspond to standard TS periods in the timesheet itself, **TS13 Transfer timesheets** will recalculate the period you have used in the timesheet to ordinary TS periods (for invoicing and GL Analysis). **Timesheets - maintenance** will have the standard TS periods.

Show/Hide fields on printouts

You can determine which fields to show/hide on printouts.

- The value in the system parameter TTS025_VIEW_FILE points to the *.xsl file which holds the design and which type of data to be displayed on the printout.
- The *.xsl file must exist in the *asysvisualizerfile* table and must be of the type XSLT. It is possible to edit this file. Use the BlobViewer in the Management Console and the *aagvisualizerfile* table to edit existing files and to add new files.

The tailored version which is saved in the *asysvisualizerfile* table will be overwritten when you update Unit4 ERP. Tailored version which are saved in the *aagvisualizerfile* table are not overwritten.

Default *.xsl file

Unit4 ERP is shipped with two standard *.xsl files:

xxx_EU This file uses the comma sign (,) as decimal separator.

Xxx_US This file uses the full stop sign (.) as decimal separator.

Validation of project dates

If the defined project, work order and/or activity dates and any connection control dates, from various tabs in **Projects** do not correspond to all the dates in the selected period in the *Period* field in the timesheets entry windows, these dates are displayed as unavailable.

Timesheets - multiple resources

Use this window for entry of timesheets for multiple resources. You may choose between different time units; minutes, hours and days. The time units are distributed in dates in the timesheet. You may see employees' balances. The timesheet can be part of the workflow process in Unit4 ERP. This means that you can send them as approval tasks to the approver of the rows.

Dates on relations

This window will use default values from project or work order master file, except when using the resource's cost centre (which will use transaction date).

What would you like to do?

Register time in Timesheets - multiple resources

1. Specify the time period for which you want to register timesheet transactions.
2. The table is filled with the resource IDs for the employees for whom you are allowed to register time units. There will be one row per employee.
3. Click on **Add** to open new, empty rows. You are only allowed to add rows for employees that you are responsible for according to **Distributed information access**.
4. Register the required values.
5. To see and register more details, click on the Details section.
6. Click on **Apply** to add the row to the timesheet.
7. Select the check box for the employee balances you want to see and click **Balances**.
8. Click on **Save.**
9. Save a row as **Ready** when it is ready for approval or timesheet transfer.
10. Save a timesheet as **Ready** when it is ready for approval or timesheet transfer.

> **Note:** The transaction type **TS Timesheet entry** must be set to **N** in **Transaction types** to save a timesheet as a draft, or to set its status to **Ready**.

Enter parts of the day

To enter part of a day:

1. Set the registration unit to **Days**.
2. Define number of decimals to be used in the *Number of digits after decimals point* field in the **Timesheet setup** window.

> **Note:** Use limit control functionality to avoid entering more than 24 hours a day.

Validation of project dates

If the project, work order and/or activity dates and any connection control dates, all defined on various tabs in the **Projects**, do not correspond to all the dates in the selected period in the *Period* field in the timesheets entry windows, these dates are displayed as unavailable.

Timesheets - time and attendance

Window usage

The purpose of this window is to provide a timesheet entry window where the focus is on the attendance at work and less focus is on the type of work carried out.

> **Note:** You cannot enter project values in this window. They are retrieved in the background from the time codes. You can only enter time on one time code per day.

Status change is done on the header level, when status is changed to **Ready**, the whole timesheet will be processed. It is not possible to process parts of the timesheet.

The time worked is entered in *Time from* and *Time to*, and can either be entered manually, or by using the **Clock in** and **Clock out** buttons.

This timesheet can, in addition to ordinary time entry, be used with only distribution or only flexi-calculation.

You can print the timesheet.

Dates on relations

This window will use default values from project or work order master file, except when using the resource's cost centre (which will use transaction date).

Window sections

The window is divided into 4 sections:

- *Timesheet for* – contains information about the resource, period and status for the timesheet.
- *Balances* – contains status information for balances connected to time codes used in time entry and distribution.
- *Timesheet entry* – entry point for hours to be registered.
- *Distributed* – shows the distribution of hours on time codes different from Normal time.

What would you like to do?

Register hours, distribute hours and send on workflow

1. Enter the hours you have worked in the *Time from/to* fields in the Timesheet entry section. The days and dates for the period selected in the header section are displayed in this table. In the *Hours* field, the number of hours between *Time from* and *Time to* are calculated.
2. Enter zero hours (for example for time off), by registering *Time from*: **00:00** and *Time to*: **00:00**.
3. Click the **Calculate distribution** button to distribute the entered hours to the different time codes. Hours entered in the **Normal** hour's interval are not distributed. All other hours, which are distributed, are displayed in the Distributed section with the time code they are distributed on. You can amend and add hours in this section, for example to allocate overtime time codes. A check is made to ensure that the sum of hours additional to or less than normal hours are equal to distributed hours per day.

4. Set the status as **Ready** in the *Status* field in the Timesheet for section to send the hours for workflow approval and posting.
5. Click the **Save** button.

> **Note:** The transaction type **TS Timesheet entry** must be set to **N** in **Transaction types** to save a timesheet as a draft, or to set its status to **Ready**.

Amend and add hours

You can amend and add hours in the Distributed section, for example to allocate overtime time codes. A check is made to ensure that the sum of hours additional to or less than normal hours are equal to distributed hours per day.

- Use the **Add** button to add rows if you want to put your work hours deviating from your normal time schedule on a different time code than the one automatically used.
- Use the **Delete** button to delete the row with the wrong time code.
- Use the **Recalculate** button if you have done changes in the Distributed section, and want to set the hours back to the original distributed values.

Workflow approval and posting

1. Register your hours as described above.
2. Set status as **Ready** in the *Status* field in the Timesheet for section to send the hours for workflow approval and posting.
3. Click **Save**.

Clock in and out

This timesheet entry window offers functionality for clocking in and out for the times you arrive and leave work.

1. Click the **Clock in** button. The current time on the web server is entered in the *Time from* field for the current day in the Timesheet entry section. The button is not available if you already have entered data in the *Time from* field.
2. Click the **Clock out** button. The current time on the web server is entered in the *Time to* field for the current day in the Timesheet entry section. The button is not available before you have clicked the **Clock in** button or if you already have entered data in the *Time to* field.

Enter absence

You must create separate time codes in the **Time codes** window for absence and use these when you enter any kind of absence in the Timesheet entry section. The normal hours' values are automatically entered in the *Time from/to* fields when you choose a time code defined for absence.

Related topics

Important

- It is recommended that resources working part time use separate work schedules giving their correct time from and time to, as opposed to using a part-time percentage of a full-time normal work schedule. This is because the system needs to know the exact normal working time to be able to calculate deviating hours from normal work time and distribute these correctly.
- It is not recommended to let the same resource enter time in **Timesheets - standard** (TTS025) and **Timesheets - time and attendance** (TTS026). If a resource is eligible to enter time in TTS026, this should be the only entry point.

- It is recommended that resources who can do changes to their distributed hours, should do this after they have entered all their work hours for the period (saved the timesheet as **Draft** and have no more hours to enter). This is because manual changes will conflict with the automatic distribution functionality. Example: If a resource works too many hours on **Monday**, the system may automatically set the extra hours to flexi hours. The resource may change this to, for example, overtime. This manual change, however, will be reset if he on **Tuesday** also has too many hours and these extra hours are automatically set to flexi by the system. That is, all extra hours will be automatically distributed by the system.
- TS_BALANCE_VARIANT value **4** is only in use for **Timesheets - time and attendance** (TTS026). It cannot be used for distribution in **Timesheets - standard** (TTS025).
- Absence must be entered directly into the timesheet as there is no import functionality from Absence.

Time distribution

- This timesheet can be used with distribution functionality as defined by system parameter TS_BALANCE_VARIANT and its different variant values.
- Time worked more than normal work time will use time codes from the **Day type master file**.
- Time less than normal work time will be distributed to the time code setup in FLEXI_TIMECODE.

Workflow

You can define a workflow process for this timesheet to approve/reject hours. Rejected timesheets will be returned to **Timesheets - time and attendance** for correction.

Since distribution functionality is used, you cannot use the **Approval** step to change data even if this is set up as allowed in the **Process definition** window. Instead, changes must be done in the **Correction** step.

Window setup and options

- Sections or columns in sections can be hidden or made visible from **Window options** in System administration.
- Colouring of non-working days will follow the setup in **Timesheet setup**.
- Users can enter time for other resources by setting up **Distributed information access** in System administration.
- Resources can use different period lengths.
- Limit control is available.
- Data control is available.

TS13 Transfer timesheets

Window usage

Once all personal timesheets for a given time period have been entered and approved (where necessary), a number of follow-up routines are required before the actual processing of costs and income starts. First of all, the data needs to be transferred to the correct database tables.

This server process transfers all timesheet rows where at least one day has time different from **0** and within the date interval defined in the *Date from* and *to* fields in this process. All active timesheets for the period are specified into the *atstimedet* table. In the *atsteheader* table, the status on the timesheet will be changed to **T** for transferred (**N** = **Ready**, **P** = **Draft**). All subsequent changes to the timesheet must be done in the **Timesheets - maintenance** window.

Dates on relations

This server process will filter on resource relation values matching the start date of the timesheet periods. Revalidate resource relations uses the transaction date of the timesheet day to revalidate income category, cost category, cost centre and resource type.

Timesheets with status T

When the server process is run, the daily timesheets will have status **T** (Terminated) and can no longer be amended in the **Timesheets - standard** window. The timesheets can still be called up and amended in the **Timesheets - maintenance** window. Any changes here are not reflected in the original timesheet.

Hour differences

- Differences between the actual number of hours (registered on time codes where *Normal hrs* is set to **Activated**) and the resource's normal working hours for the period can be calculated.
- Differences (flexi-time) are entered as a separate time item with values called up from the system setup. Normal working hours differences are not calculated for contracted resources.

> **Note:** If an ACE transaction is aggregated, the system will automatically set the transaction date to the last day of the timesheet period. Activate the check box in the *Split per date*parameter if you would rather have the ACE transaction broken down by date.

Timesheets - maintenance (TTS004)

Window usage

Use this window to register hours and to make amendements/revise transferred timesheets that are entered in one of the timesheet entry windows.

Dates on relations

This window will use default values from project or work order master file, except when using the resource's cost centre (which will use transaction date).

When you have finished your changes, you may run **TS03 Process time and expenses** by clicking the **Process time and expenses** button in the upper part of the window. You may also reverse the timesheet.

Narratives

Please note that, although they don't appear in this window, the narratives linked to your timesheets can be impacted by your actions in this window. For example, copying a timesheet (or reversing one with copy) will also create a copy of the narrative, and deleting a timesheet will also delete the narrative. These changes are stored in the table *atsnarrative*. For more information about narratives, please see Invoice base (TTS027).

What would you like to do?

Register hours for a resource

1. Enter the code of the resource for which you are going to enter hours.
2. Enter either the*Date in period* or *Period* when the work was carried out. The values in *ResID* and *Period* together identify a timesheet.
3. Select the check box *Park timesheet* if you want to prevent the timesheet from being processed by **TS03 Process time and expenses**. Note that the *Status* field in the Information section is set as **P** (parked) or **A** (partly processed). If you select the check box, the timesheet gets status **Normal**, **Parked** or **Partly processed**.
4. Select the check box *Calculate flexi* if you want to automatically calculate flexi time.
5. Fill in the columns in the Time entry section. See the Explanation of fields for details on each field.
6. If all the data on the row is valid, it will be given status **N**.
7. Choose **Save**.

Retrieve existing timesheets

- When you move out of the *Period* field, a check is carried out to see if a timesheet already exists for the resource in this time period. You cannot call up timesheets which are being treated by the server process **TS03 Process time and expenses**.
- If the timesheet exists and has not already been posted by **TS03 Process time and expenses**, the timesheet transactions can be registered, amended or deleted.

Timesheet transferral

When timesheets are registered in **Timesheets - standard**, timesheets are transferred to **Timesheet-maintenance** by the **TS13 Transfer timesheets** server process and can be amended here. Additional rows may be registered in timesheets that have already been posted or be reversed here. Timesheets that are partly transferred have status **F**. You cannot amend timesheets with this status.

No registration on reg.unit Day

If the system parameter TS_ENFORCE_DATE is deactivated, you cannot register time on **Days**. The only available time units are **Hours** and **Minutes**.

Maintenance on Unit4 ERP Web

Below is a description on how the following **Timesheet - maintenance** concepts work in the Web application. These concepts are described:

- Status
- Flexi calculation
- Amendments

Note that all these concepts have a different behaviour on Desktop, but the database transactions are exactly the same.

Hereafter, **Timesheets - maintenance** on Unit4 ERP Web is named TTS004, while **Timesheets - maintenance** on the Desktop is named TS04.

Status concepts

Header status in TTS004:

The status concept on the header section in Unit4 ERP Web differ from the status concept in the Desktop.

In TTS004, you use the*Park timesheet* check box to park a timesheet and the *State*field to view the status of the timesheet.

The table below shows when the various states are displayed:

State	Park timesheet = ☒	Processed by TS03	Status field value
New	No	No	N
New	Yes	No	P
Processed	No	Yes	B
Partly processed	No	Partly	E
Partly processed	Yes	Partly	A

State	Park timesheet = ☒	Processed by TS03	Status field value
Deleted	No	No	D
Deleted	No	Yes	T
Partly transferred	No	No	F
In progress	No	In process/TS03 failed	R,S,C

This is an example of how the first row in this table reads: The*State* equals **New** when the check box*Park timesheet* is selected and **TS03 Process time and expenses** is not yet run. This equals the status value**N**.

Use **Window options** to display the*Status* field in the Information section.

Row statuses in TTS004

The status on the rows in Unit4 ERP Web also differs from the status concept in the Desktop: the *S* and *T* columns which were used in the Desktop are combined into one *Status* column in Web.

The*Status* column has the following valid values:

- **Ready** – Ready to be processed by TS03
- **Parked** - Not to be processed by TS03
- **Processed** - Processed by TS03
- **To be reversed** - To be reversed by TS03
- **Mass update** - Currently processed by TTS141 and ignored by TS03.

You can set status as **Parked** or **Ready** via the buttons **Park** and **Ready**. These buttons can be displayed/hidden via **Window options.**

Flexi time concepts

Calculate flexi time

In Unit4 ERP Web, if you select the check box *Calculate flexi*, flexi time is generated when you save the timesheet. This check box can be displayed/hidden with **Window options**.

Reversing timesheets

Use the button **Reverse timesheet** to reverse selected timesheet rows. When you click this button, a window is displayed where you can choose to copy the reversed rows into the window. The reversed rows are displayed in the window with status**To be reversed**, but are excluded from the calculation of total hours.

Amending timesheets

In TTS004, timesheets already processes by **TS03 Process time and expenses** have *State*=**Processed**. If you add a new row to the timesheet, the *State* automatically changes to **Partly processed**.

In TTS004, you are not allowed to change any timesheet transactions processed by **TS03 Process time and expenses,** but you may amend the timesheet by adding new rows.

Show transaction number

In Unit4 ERP Web, the transaction number field can be displayed/hidden in the Information section with **Window Options**.

Functionality not supported in the Unit4 ERP Web instance of this window:

- Timesheet distribution (the window cannot be opened when **TS_BALANCE_VARIANT** is activated)
- Limit control
- Draft concept (allow for illegal values when you enter data)
- Viewing personal work schedule
- System parameter TS04_SHOW_REL

TS03 Process time and expenses

Window usage

Use this server process to process timesheets and other expenses.

Dates on relations

This server process will filter on resource relation values matching the start date of the timesheet periods. The system parameter **TS_INC_REL_ATTR_ID** will consider relation values based on transaction date.

Related topics

Timesheets

The server process picks up all timesheets with status **N** (normal or reversed) or **E** (additions or remainders) and validates the timesheets. It works out the hourly cost for each individual time transaction for subsequent posting in the General Ledger by **TS04 Post timesheets**. It adds billable time to the invoice base.

Stepped price and formulae

The server process also handles stepped prices and formulas (refer to the **Formula register**). If some of the invoice units put on a billable project do not belong to the same step in the invoice rule, the report splits the row into as many rows as it passes steps.

Calculation of hourly costs

The total hourly cost for a time transaction is calculated as described below. If the system parameter EMPLOYEE_ VALUE is activated, cost will come from Payroll, else:

- The sum of the hourly costs for all the cost elements which are specified for this project type are retrieved from **Hourly cost** with regard to resource type and cost category.
- For contracted resources, the cost rate can be retrieved from Contract Accounting. For cost element **BP** (Base pay) the cost rate can be retrieved from Contract Accounting or Payroll.
- The hourly cost of any additional costs are added.

All cost rates will be retrieved in accordance with the time transaction's time period.

Billable and non-billable expenses

This server process transfers expenses that are billable to the **Invoice base**. Expenses that are not billable according to the invoice rule are transferred to the register for historical expenses.

Work order currency

The report reads the relevant currency from the work order if this differs from the currency of the connected project. It also puts the work order currency code on the rows that have been put into the invoice base.

GL Analysis

The server process prepares posting of the hourly costs for the validated timesheets.

The transactions which are transferred to the general ledger are generated with account, contrary account and corresponding cost centres from the posting rules given in **Posting rules for cost components**. These posting rules are defined by resource type for each individual cost element which is included in the hourly cost for the relevant project type.

Completion of the GL Analysis and also the posting in the general ledger occurs when the server process **TS04 Post timesheets** is run.

Errors

During validation of timesheets, errors and omissions are detected. The time transactions containing errors are held back. The timesheet can therefore be partly processed. You can retrieve and correct transactions containing errors in the **Timesheets - maintenance** window.

All time transactions with an error appear on an error list with a description of the error.

Transactions that are missing prices are either transferred to the invoice base, or remain unprocessed, depending on the status of the system parameter TS03_CHK_PRICE.

Printouts

- When the server process **TS03 Process time and expenses** is finished you receive confirmation that validation and treatment have been completed.
- If errors or omissions are detected on a time transaction, the hours are printed out on a separate error list.

Running TS03 with Global projects

For Global projects, some specification must be taken into account when running **TS03 Process time and expenses** in the Leading company. Please refer to Running TS03 from a Leading company for further details.

TS04 Post timesheets

Window usage

This server process posts the costs for approved hours in the General Ledger after time costs are calculated by TS03 Process time and expenses.

Dates on relations

This server process will update project and work order relation values based on transaction date in the report parameter if the system parameter **TS_USE_REL_IN_GL_ANAL** is activated.

The posting process

When you run this server process, the time costs are registered in accordance with the relevant account rules and assigned transaction numbers before posting in the General Ledger.

The costs are posted in accounts by the server process **GL07 Batch input transactions from external system** which is started automatically from **Post timesheets**.

The original time transaction is updated with the transaction number that posted the time transaction and the accounting period. Thus it is easily connected to the transaction in the General Ledger which the time costs were posted against.

The server process also updates the corresponding row in the invoice base with the GL period.

GL Analysis

The server process **Process time and expenses** prepares the posting of time costs by entering accounting analysis information from the posting rules (account, balancing account and the corresponding cost centres which will be used) for each individual cost element.

In the server process **Post timesheets** the GL Analysis is completed in accordance with the accounting rule with the following information (attribute values):

- Cost centre (C1)
- Project (B0)
- Activity (B1)
- Work order (BF)
- Resource (C0)
- Any project relations (e.g. project type)
- Any of the four free attributes defined by the system parameters **TS_FLD_1_ID** - **TS_FLD_4_ID**.

The items will be compressed by GL Analysis before the time costs are posted in the general ledger.

> **Note:** The *ACE* attribute (BL) may be used for General Ledger analysis for both cost and income transactions.

Posting of expenses and product costs

Expenses are posted through **VP10 Posting of expenses** (the PCB version of VP10). Products are posted in respective SO/PO module - the Accounts Payable module and the General Ledger.

Posting of time costs

Time costs data are transferred to the General Ledger. After transferral and validation, timesheets are ready for posting in the General Ledger. **TS04 Post timesheets** posts hours and ACE, completing the GL analysis. The server process updates the time transaction tables with the posting period and starts a separate server process: **GL07 Posting of time costs and invoice details** to do the posting to GL.

> **Note:** Note that for posting of interdepartmental revenues, you will need to create a variant of TS04.

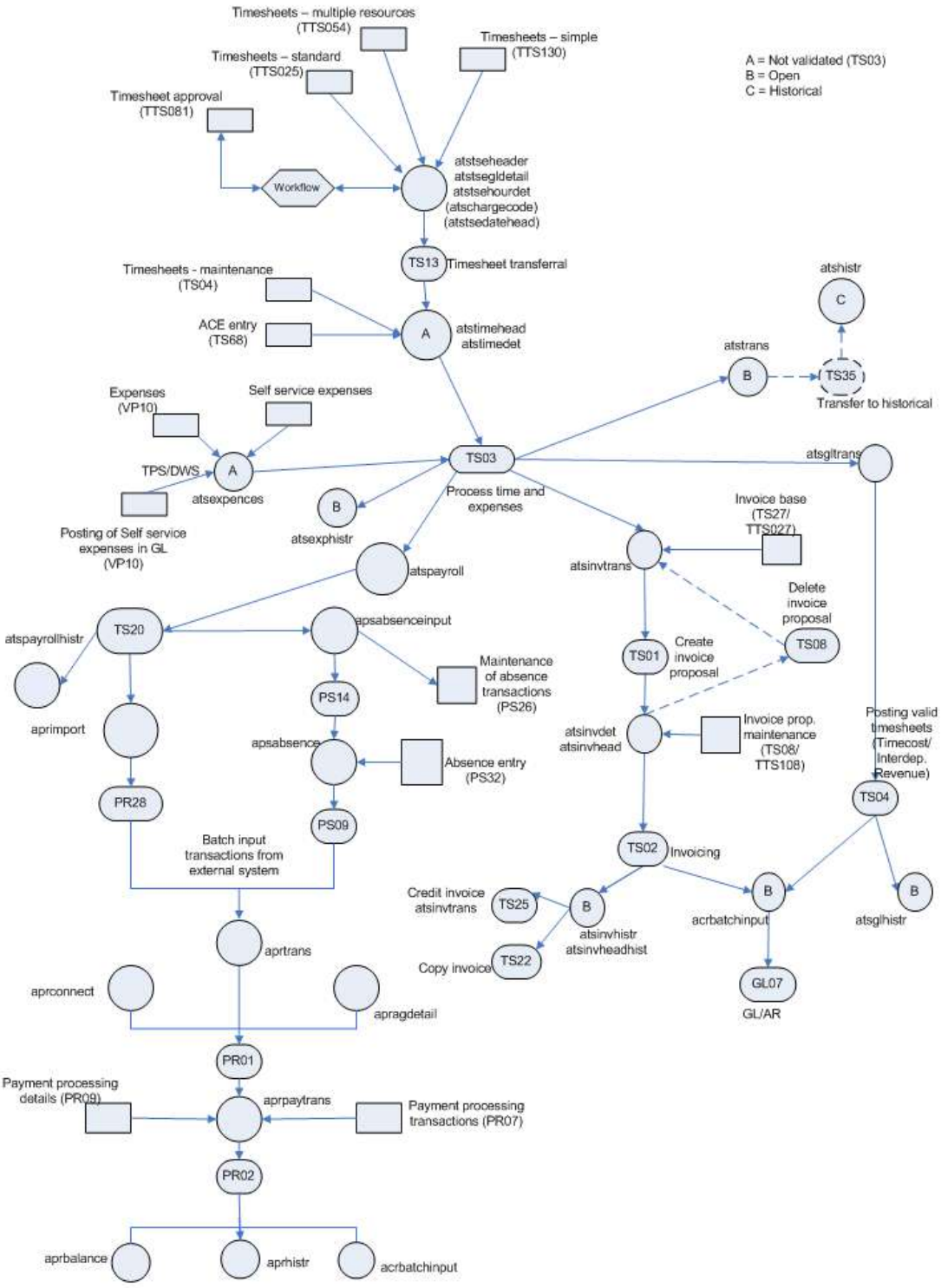
Timesheet and expenses processing for billing

Introduction

This chapter describes the processing of data and what happens when you run **TS03 Process time and expense**s. It starts with the validation of data, which calculates amounts for posting to the General Ledger, and checks what data can be invoiced to the customers. After running the **TS03 Process time and expenses** server process, posting of costs to the General Ledger and invoicing can be done independently, as they do not have any influence on each other.

Flow chart

This chart illustrates the processes described in this document:


Timesheets – multiple resources (TTS054)
Timesheets – simple (TTS130)
Timesheets – standard (TTS025)
Timesheet approval (TTS081)
A = Not validated (TS03)
B = Open
C = Historical
Workflow
atstseheader
atstsegldetail
atstsehourdet
(atschargecode)
(atstsedatehead)
TS13
Timesheet transferral
Timesheets - maintenance (TS04)
ACE entry (TS68)
A
atstimehead
atstimedet
atshistr
C
atstrans
B
TS35
Transfer to historical
Expenses (VP10)
Self service expenses
TPS/DWS
A
atsexpences
TS03
atsgltrans
Process time and expenses
B
atsexphistr
Posting of Self service expenses in GL (VP10)
atspayroll
Invoice base (TS27/ TTS027)
atsinvtrans
Delete invoice proposal
atspayrollhistr
TS20
apsabsenceinput
TS01
Create invoice proposal
TS08
Maintenance of absence transactions (PS26)
PS14
aprimport
atsinvdet
atsinvhead
Invoice prop. maintenance (TS08/ TTS108)
Posting valid timesheets (Timecost/ Interdep. Revenue)
apsabsence
Absence entry (PS32)
PR28
PS09
TS04
TS02
Invoicing
Batch input transactions from external system
Credit invoice atsinvtrans
TS25
B
B
B
atsinvhistr
atsinvheadhist
acrbatchinput
atsglhistr
aprtrans
Copy invoice
TS22
GL07
GL/AR
apconnect
apragdetail
PR01
Payment processing details (PR09)
aprpaytrans
Payment processing transactions (PR07)
PR02
aprbalance
aprhistr
acrbatchinput

Validation of time and expenses

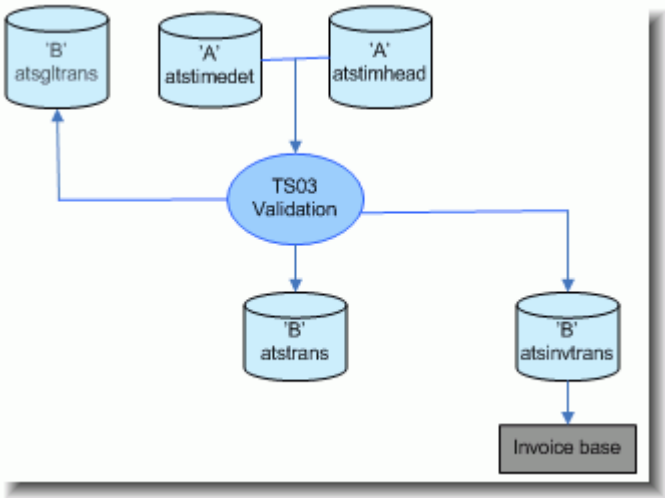
Description

TS03 Process time and expenses is one of the key server processes in the PCB module. It goes through a long sequence of routines:

- First cost rates, invoice prices and status codes on time and expense entries are checked.
- Then the results are matched with settings in the invoice rules for each project or work order.
- For invoice rules with stepped prices, the process checks whether hours entered belong to the same step or not, and if there are gaps in the steps, before it continues.
- After a base price for each time entry has been established, the report looks for any formula for add-up calculation.
- Then, costs to post in the GL and billable entries for the invoicing process based on the checks and matches are established.
- Lastly, the validated data is moved to the atsgltrans table for subsequent posting to the General Ledger, and to the invoice base (atsinvtrans) table for subsequent invoicing.

Flow of time data

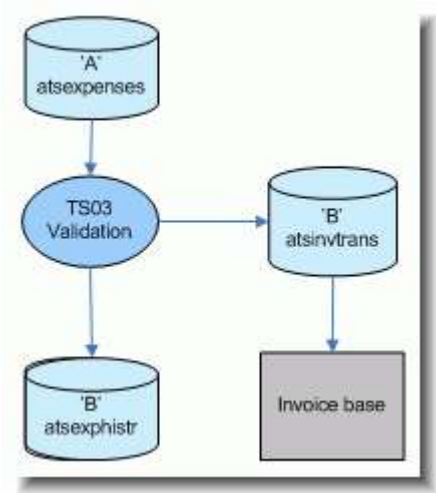
A summary of the **TS03 Process time and expenses** handling of time rows can be illustrated like this:



Data from the *atstimedet* and *timehead* tables is extracted and calculated based on invoice rules and hourly costs, then moved in three directions: To the *atsgltrans* table for subsequent posting of costs to the GL, to the *atstrans* table for enquiry on time transactions and to *atsinvtrans* which is the invoice base.

Flow of expenses data

Expenses data is not moved to the GL, as the expenses were posted there in the first place:



Expenses data from the *atsexpences* table is validated against invoice rules and placed in the *atsinvtrans* table, ready for invoicing. It is also placed in *atsexphistr.*

Common error messages for TS03

Introduction

Since **TS03 Process time and expenses** is in reality checking all setup and all entries made to the PCB system, running this report successfully is a good indication that the setup is working. However, this also means that any omissions in the setup for projects, resources, time, expenses or invoice rule are likely to create error messages in when this report is run.

Frequently occurring errors

Some common error messages. Please note that this list is far from complete:

Message	What's wrong	Solution
402 - Wrong status on transaction	Project or work order has status **C**, or *Date to* field has a value before the date on the time transaction row.	Set status to **N**, run **TS03 Process time and expenses** again and reset status to **C** if necessary on relevant project/work order, or change *Date to* to a date after the end of the relevant time period.
403 - No income category	Income category missing or not valid for the time period of the time transaction.	Check that resource is connected to income category valid for the period. Rerun **TS03 Process time and expenses**.
408 - Transactions missing cost	Cost category not defined or not valid for the relevant time period. Occurs particularly if cost category on a resource is changed after timesheet for a period is initiated, but before it is validated.	Re-enter time in the next period.
409 - Transaction missing department		Go to **Timesheets - maintenance**. Open the relevant timesheet and select the row in question. Some field values will be missing. Click the **Check row** command on the Tools

Message	What's wrong	Solution
for project, resource or line		menu, and the missing values will appear
410 - Transaction missing account	No account is defined for the time transaction	Make sure an account for hourly costs is defined in **Time/project account**.
411 - Can't find price from contract or payroll	The system parameter EMPLOYEE_VALUE and/or CONTRACT_PRICE are active, but there is no value reference rate for the value reference, or a contract in the Contract accounting module. BP (Base pay) in the **Hourly costs** window has not been defined for the resource.	Unless integrated with payroll, turn off parameters and establish resource or resource's cost category with a BP rate in the Hourly costs window. Rerun **TS03 Process time and expenses**.
414 - Missing income price for transactions	A warning, not an error. No price was defined on the time transactions when it was registered. The system parameter TS03_CHK_PRICE sets whether the transaction will go through the next time. If the system parameter is active, the hours will remain on the error list.	

Limited processing in TS03

Introduction

Extended functionality in **TS03 Process time and expenses** makes it possible to run selected timesheets using relational values. However, the server process cannot be ordered for a specific project or work order, only for some limiting aspect of a resource or group of resources.

Procedure

To run the reports for a particular selection, the user must:

1. Choose a relation to limit the report and select an attribute value for it. All relational values that are connected to a resource can be used to limit what data is processed, but only for relations on RESNO (C0).
2. Order the report for the period wanted, with the chosen settings included.

Relations

The relational values set up in the **Relations** tab in **Resource** (HS01) are the default relational values that can be used to limit the report.

When a default relational value has been overridden, for example income or cost category at timesheet entry, this relational value will not be used as selection criterion. The selection criteria of relational values are those that are stored in ahsrelvalue. This avoids the production of reports on a resource where half of the timesheet is processed and the other half is not.

Handling of rows with no prices in TS03

Function

Previously, **TS03 Process time and expenses** processed all timesheet rows even if the system had been unable to find a price automatically. This resulted in a row with a zero price in the invoice base. It is better to see this situation reported on an error report and not processed through to the invoice base. The TS_CHK_PRICE system setup parameter makes this possible.

Effect of system parameter

Rows with no price are not transferred to the invoice base (*atsinvtrans*), but will remain in the time transactions table (*atstimedet*). It will be necessary to correct the error and then re-run the server process.

Without the parameter

If the TS03_CHK_PRICE system setup parameter is not activated, rows with no price are transferred to the invoice base. Any corrections to price can be made within the invoice base.

Steps and free hours

To give a customer some hours for free, the first step for hours on the invoice rule must be connected to a price list with zero prices. These rows will be handled by **TS03 Process time and expenses** exactly like rows that accidentally are without price. To have these rows transferred to the invoice base, TS03_CHK_PRICE must be deactivated. Since some customers want these rows to be visible on the invoice to the customer, these rows are sent to the invoice base.

Maintenance of processed time data

Introduction

If timesheets have been registered but not transferred, they can be amended in the original entry window (personal or group). Timesheets can also be amended or reversed at any point in the time process, but different procedures need to be followed depending on where in the process the amendment takes place.

After transferral

If timesheets have been transferred through the **TS13 Transfer timesheets** server processes, they can only be amended in the **Timesheets - maintenance** (TS04) window.

After validation

If time data is amended at any point after it has been processed by **TS03 Process time and expenses**, this server process needs to be re-run for the amendment to be registered.

After posting

If data needs to be amended after it was processed by the **TS04 Post timesheets** server process, this server process must be re-run to update the General Ledger.

After invoicing

If time data needs to be amended after **TS02 Generate invoices** has been run, the invoices affected can be corrected using these methods:

- The easiest way is to amend the relevant time entries in **Timesheets - maintenance** (TS04), then re-run all processes for validation and invoicing. This produces a new invoice to the customer, including both credits and debits of the invoices previously produced.
- A credit invoice can also be made. This updates the invoice base. The amendments made in time **Timesheets - maintenance** (TS04) will then be credited or debited towards the invoice base before the customer is presented with an invoice.

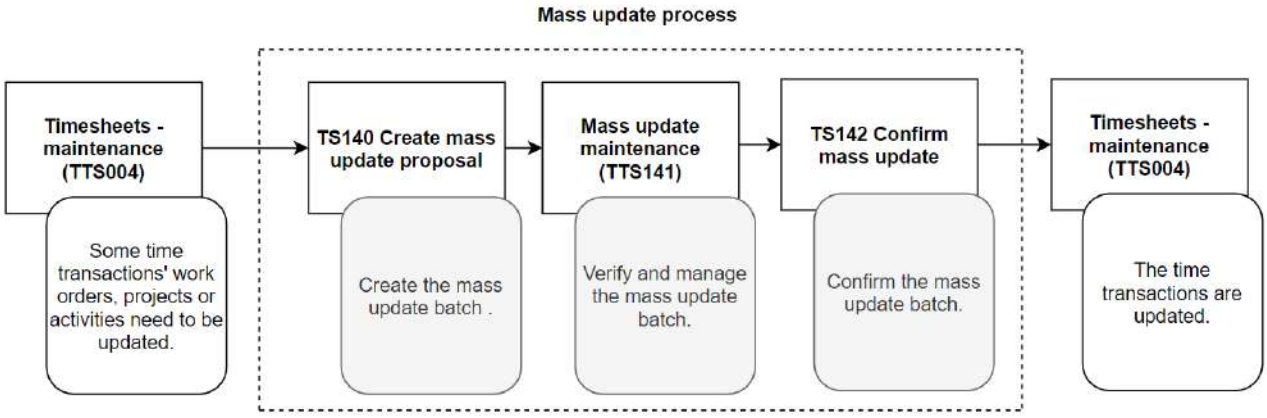
Important

Although the amendment process is treated here, it is relevant for any point in the processing of time data after transferral of timesheets.

Mass update of time transactions

You can amend simultaneously several time transactions in Unit4 ERP, including the ones which have already been registered. More specifically, you can update the time transactions' project, work order and activity.

The general process and the relevant windows and server processes are described in this diagram:



Note:
To enquire on mass update proposals via Information browser, use the following reporting objects:

- **Mass update**: for the elements that are currently in the mass update process,
- **Mass update history**: for the elements confirmed and transferred to the database.

Remember to grant access to those objects via the window **Object access** (XAG002).

Prerequisites

This mass update process will only work for projects that have the same structures. This means that you need to respect the project definitions: if the original project structure has work orders and activities, the new project must have work order and activities too.

What would you like to to?

Create a mass update proposal

1. Go to the server process **TS140 Create mass update proposal**.
2. Enter a *BatchID* number.
3. Select the range of dates of the time transactions you want to mass update.
4. Select in *Current project* the original project attached to your time transactions, and in *New project* the one you want to transfer them to (or the same if no change is required at that level).
5. Select in *Current work orders* the original work orders of the time transactions, and in *New work orders* the one you want to transfer them to (or the same if no change is required at that level).

6. Select in *Current activity*, the original activity attached to your time transactions, and in *New activity*, the one you want to transfer them to.
7. Click **Save** to create the batch.

Confirm a mass update proposal

1. Go to **Mass update maintenance** (TTS141): the batches successfully run through TS140 will appear.
2. Sort out and browse the proposals to confirm in the left-hand panel.
3. Click **Confirm proposal** to open the server process **TS142 Confirm mass update**.
4. Select the *BatchID* number and click **Save**.

Delete a mass update proposal

1. Go to **Mass update maintenance** (TTS141): the batches successfully run through TS140 will appear.
2. Browse and sort out the proposals with the left-hand panel.
3. Select the proposals to delete.
4. Click **Delete** and confirm.
5. Click **Save**.

Important information

Output of the mass update confirmation in Timesheets - maintenance (TTS004)

If the status of the time transactions that you update is:

- **Processed**: TS142 will add two rows to each original transactions in TTS004:
  - a negative row to cancel the original transaction,
  - a second row with the mass update time transactions data.
- **Ready**: TS142 will update the original row.

Best practice

For optimal performances:

- Keep the mass update proposals under 2500 rows.
- Confirm the proposals frequently to remove data from **Mass update maintenance**.

Project connections

If the project, work order or activity have connections in the project's Connections tab, only the *Inc.cat* connection will be taken into account by the mass update batch.

Work order's Analysis

If the system parameter DEF_PROJECT_DEP is activated:

1. the mass update will take into account, if any, the cost centre of the work order (defined in the tab **Work order** > **Analysis**),
2. and, if none is defined at work order level, the mass update will assume the project's cost centre itself.

> **Note:** In the work order's *Analysis* tab, the only dimension considered to work with the mass updates is the cost centre. Other possible analysis dimensions (*Localization*, *Market*, etc.) are not covered.

Invoicing in PCB

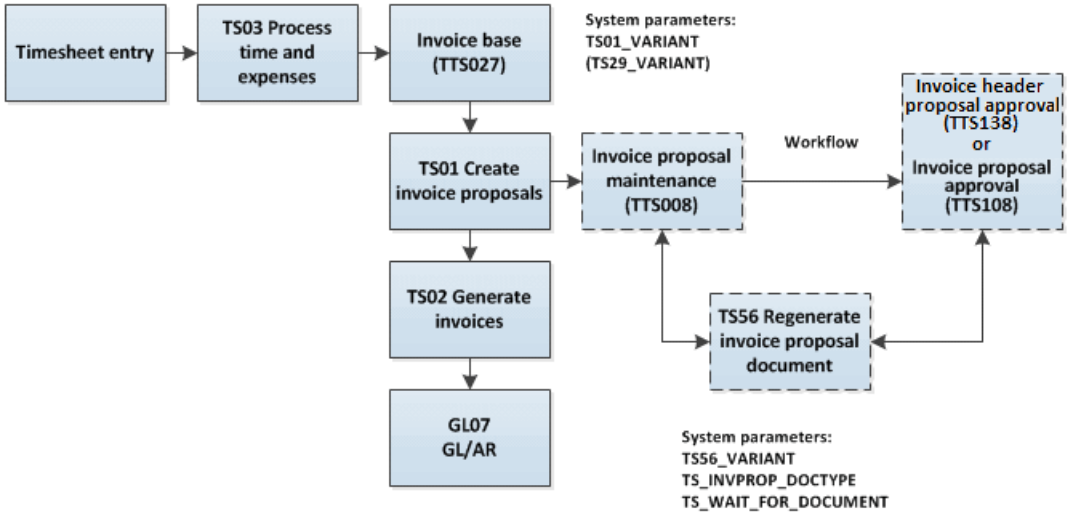
Invoicing

Introduction

As stated earlier in this document, time is a precious asset for a project manager. Time may also be the source for either costs or income. In this part of the document, we will show how time can be invoiced and generate income based on a timesheet entry. In this process, we will also show how the use of system parameters may influence the setup of invoicing.

Timesheets and invoicing

We have already described timesheet entry and how the **TS03 Process time and expenses** server process validates all rows and sends the rows ready for invoicing to the **Invoice base** (TTS027). Now, however, we will look solely on the invoicing side. The figure below illustrates this chapter. The flow downwards shows the mandatory process through invoice proposals to the final posting to the General Ledger. The sideways flow shows an optional addition, where you may maintain the invoice rows after the invoice proposal is created. It will also show how you through the **TS56 Regenerate invoice document** server process, and the use of system parameters may create an invoice document already at the invoice proposal stage. Finally, we will touch upon workflow, and how to use the **Invoice proposal approval** (TTS108) and **Invoice header proposal approval** (TTS138) windows:



First, however, it may be useful to repeat the **Price list** and **Standard invoice rule**windows on Unit4 ERP Web, and repeat some facts about the project master file, and define the concept of system parameters.

Price list

This window is used to create price lists for billing of projects.

1. This is how to use the **Price list** window:
2. Click on **Price list** in the Unit4 ERP menu.
3. Enter a code and a description for the price list.
4. Click on **Add**.
5. Click on either *Resource* for a resource-specific price list, or on *Inc. cat*. for a price list specific for an income category.
6. Enter the time span for the price, in *Date from* and *Date to*.
7. Enter the price.
8. Repeat the steps above for as many currencies as you wish.
9. Click on **Save**.

Price list hierarchy

The table below shows an overview over preferences and hierarchies in price lists. The most specific price is on the top of the list:

Hierarchy	Description
1	Resource, Job type and Time code
2	Resource and Job type
3	Resource and Time code
4	Resource
5	Income category, Job type and Time code
6	Income category and Job type
7	Income category and Time code
8	Income category
9	ACE, Job type and Time code
10	ACE and Job type
11	ACE and Time code
12	ACE
13	Job type and Time code
14	Job type

Hierarchy	Description
15	Time code
16	None

Standard invoice rule:

This window is used to create a standard invoice rule for a project.

This is how to use the **Standard invoice rule** window:

1. Click on **Standard invoice rule** in the Unit4 ERP menu.
2. Enter a code and a description for the invoice rule
3. Click on **Add** to add an invoice element to the invoice rule.
4. Select an invoice element from the drop-down. If you select the **Hours** element, you must add additional information like the price list and the price unit.
5. Add all required elements.
6. Click on **Save**.

> **Note:** Only selected elements will appear on the invoice.

Project master file

The project master file gives you opportunities to plan the invoicing process at an early stage in the project.

You may create invoice plan, project-specific price lists, and select invoice rules.

Billing tab:

On the **Billing** and **Invoice rule** tabs, you may create project-specific settings for invoicing.

System parameters

System parameters are commonly used in Unit4 ERP. They may be defined as a kind of switches that turn functionality on or off, according to the user's preferences. They may also set default values once a functionality is activated/on, and define specific variants of server processes - variants containing default settings, for example, to trigger another server process without going into the menu to do this manually.

Below is a table containing a short description of the relevant system parameters:

System parameters	Description
TS01_VARIANT	Sets which variant of **TS01 Create invoice proposal** to run from the **Invoice base**on Unit4 ERP Web
TS29_VARIANT	Sets which variant of **TS29 Recalculate prices** to run from the **Invoice base**on Web
TS56_VARIANT	Sets which variant of **TS56 Regenerate invoice proposal document** to run, to create an invoice document.
TS_INVPROP_ DOCTYPE	Sets the invoice proposal document type taken from the **Document type**setup window in Common.
TS_WAIT_FOR_ DOCUMENT	Sets if the user should be made aware of the TS56 server process running in the background

> **Note:** In the Appendix of this document, you will find all system parameters used in Project Costing and Billing listed, with an abbreviated explanation. For the complete description, please refer to online help on System parameters.

Invoice base (TTS027)

Window usage

Use this window to display all rows containing hours, expenses and other types of billable income that are ready for invoicing. Invoice elements of the types hours, expenses and ACEs transferred to this register when the **TS03 Process time and expenses** server process is run.

> **Note:** The tables on the **Summary** tab are based on System browser templates (SBRT). The top table (Transaction up to and including) is based on SBRT number 327 and the bottom table (Transactions for later invoicing) is based on SBRT number 330. These browser templates can be amended in the **System Browser templates** window.

You can refine your search for invoices with the following options:

- The *Responsible* field enables you to enquire on invoice transactions even though you are not defined as the project manager or work order responsible for the selected work order/project.
- The *Project* field enables you to enquire on invoice transactions across projects.
- The section Invoice status enables you to select one or more of an invoice status you want to search for. Valid values are:
  - **Ready for invoicing** (N). Transactions with this status will be included in the next invoice proposal.
  - **Partly invoiced** (A). If the system parameter TS_PART_INVOICE is activated, partly invoice transactions will get this status.
  - **Parked** (P). Transactions with this status will be excluded from invoice proposals.
  - **Not to be invoiced** (C). Transaction will be excluded from invoice proposals. Transactions with this status can be removed from the invoice base by running the server process **TS11 Delete non-billable items**.
  - **On proposal** (R). Transaction is already part of an existing invoice proposal.

  All fields in this window are validated and must have a valid value.

Recommended configuration

For an optimal use of this window, we recommend you to follow this configuration:

- Parameter TTS027_ENABLE_TOOLS is active.
- Parameter TS_PART_INVOICE is not active.
- Hide in the tables the columns that are not relevant to the user. For example, if *Activity* is not indicated in any project, the corresponding column in the tab **Time and ACE** could be hidden with **Window options**.
- Use at most the 100 lines view per page.
- Use the table filters, to display only the information that requires editing.

Narratives

When you need to add a longer description to your timesheet entries, you can also enable the narrative functionality and add longer descriptions for each invoice line row.

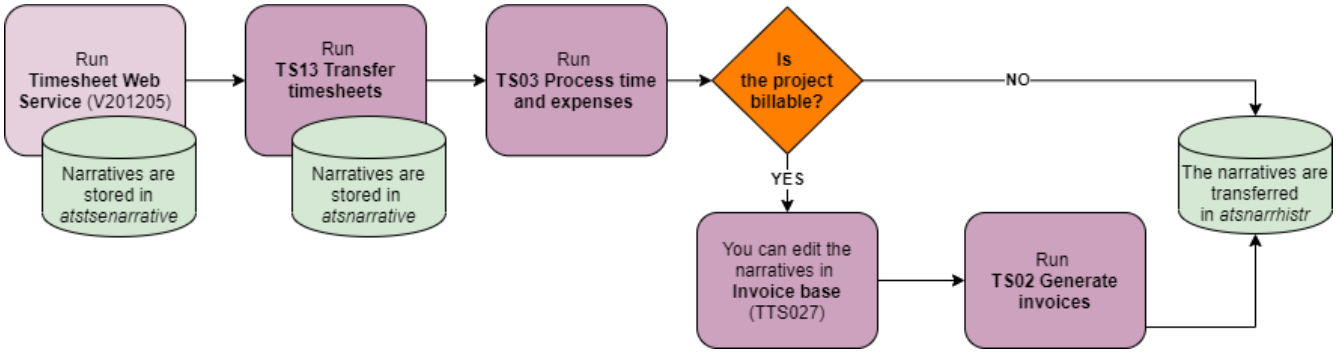
Enabling narrative columns

Timesheet narratives columns are hidden by default. To activate them, go to **Window options**, to make them visible in the tab **Time and ACE**.

Importing narratives with Web Services

You can import narratives from a third party tool with the **Timesheet Web Service** (V201205). In the *AddTimesheet* method, a field *Narrative* allows you to import narratives of up to 4000 characters. When Web service runs successfully, the narratives are stored in the table *atstsenarrative*. Then, run the **TS13 Transfer timesheets** server process to import the narrative into the *atsnarrative* table.

Here is a flowchart of the whole process:



Adding narratives to the invoice layout

You can display the *Narrative* field content in your invoice layout. This information can be retrieved from the *atsnarrhistr*.

Reporting on narratives

You can use **Information browser** to enquire on timesheets narratives with these two objects:

- **Timesheet narrative** (Associated to **Invoice base** object).
- **Narrative History** - (Associated to **Project invoiced items** object).

What would you like to do?

Add new invoice base rows

- Only fixed price rows (rows with type other than **Hours**, **Expenses** or **Products**) can be registered in this window. Fixed price transactions can only be entered if the invoice rule for the project/work order allows this. You enter these transactions either directly into **Invoice base** or via **Invoice plan**.
- All time and expense transactions are transferred automatically to the invoice base via the TS03 Process time and expenses server process.
- Product rows are transferred automatically when goods are received/delivered on sales orders/purchase orders marked for transfer to Project Costing and Billing.

Search for all rows ready for invoicing

1. Do not enter any data in the *Responsible* field and/or *Work order* fields.
2. Select a value in the *Date to invoice* field.
3. Click **Load**.
4. The *Transaction up to and including* and *Transaction for later invoicing* tables are filled.

Recalculate prices

1. Click **Recalculate prices**.
2. The server process **TS29 Recalculate prices** opens and enables you to correct prices before the invoice proposal is created.

Create invoice proposals

1. Click **Create invoice proposals**.
2. The server process **TS01 Create invoice proposals** opens.
3. Click **Save** to generate an invoice proposal based on the relevant invoice rule.

> **Note:**
> - If you activate the system parameter TS01_VARIANT and give it a value, this value will set the report variant for the server process by default.
> - If the system parameters TTS027_ENABLE_TOOLS or TS_PART_INVOICE are active, the price displayed in the outcome corresponds to the one indicated in the *Inv price* column in **Invoice base** (TTS027).

Mass update data

1. Select rows in the table on the **Time and ACE** or **Other invoice elements** tabs.
2. Click the button **Change values**.

3. In the dropdown list *Change*, choose one of the available column/option:
    - **Inv. status**: to change the invoice status for several rows simultaneously. The following status can be selected: **Not to be invoiced (C)**, **Parked (P)**, **Ready for invoicing (N)**.
    - **Description**: to change the description for several rows simultaneously.
    - **Inv price - amount**: to change the invoice price for several rows simultaneously. It admits negative amounts.
    - **Inv price - Write up/down (%)**: to modify the invoice price for several rows simultaneously by applying a percentage.

    > **Note:**
    > To enable the mass update for Invoice price:
    > - The system parameter TTS027_ ENABLE_TOOLS must be active
    > - The system parameter TS_PART_INVOICE must be inactive.

4. Enter the new value in the subsequent field.
5. Click **OK**.

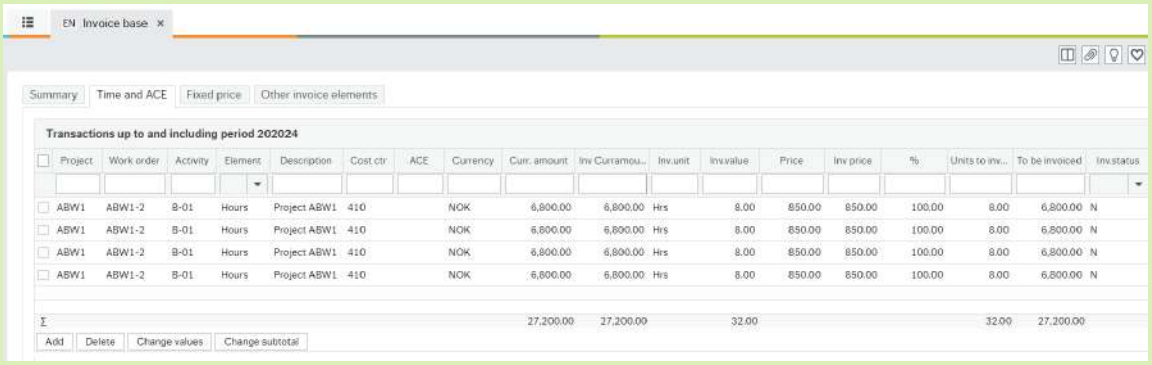
> **Note:** To use the fields *Invoice status*, *Description* or *Invoice price*, they must be enabled via **Window options**.

Change subtotal

1. Make sure that the parameter TTS027_ ENABLE_TOOLS is active.
2. Go to the tab **Time and ACE**.
3. The displayed rows must have:
    - the same project,
    - the same currency
    - and the status **Ready for invoicing (N)**, **Parked (P)** or **Partly invoiced (A)**.
4. Click the button **Change subtotal**.
5. Enter a new amount in the pop-up window and click **OK**.
6. The new amount is displayed under *To be invoiced*, and the invoice lines are recalculated proportionally to meet the new subtotal.

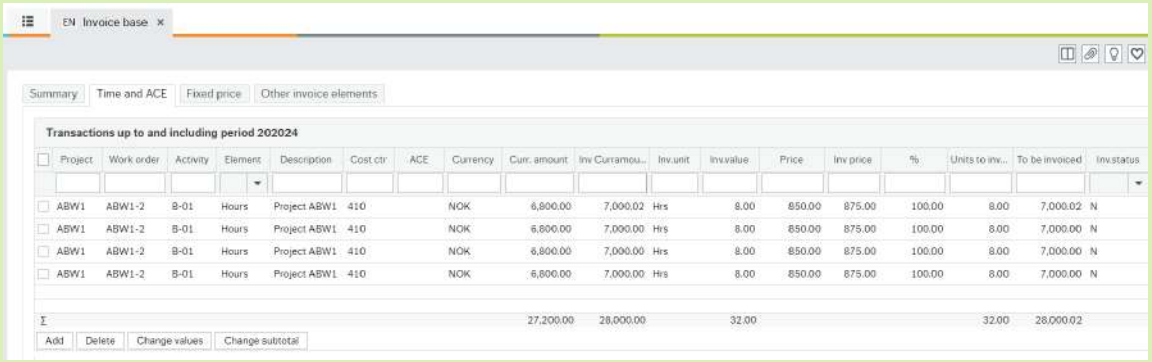
> **Note:** There can be mathematical inconsistencies from the formula *Invoice price* × *Units to invoice* when applying the distribution of the new subtotal between the invoice lines.

> **Example:**
>
> Project ABW1 has 4 rows for a total of **27,200 NOK**



When the user changes the subtotal for **28,000.02**. The percentage of increase is 28,000.02 ÷ 27,200 = 1.0294117647058822, therefore:

- *To be invoiced*: 6,800.00 × 1.029411767058822 = **7,000.00**
- *Invoice price*: 850 × 1.0294117647058822 = **875**



The remaining amount (0.02) is added to the first row. As a consequence, in this first row, there is a mathematical inconsistency for the calculation of 875 × 8.

Enable and add narratives

1. Click the **Window options** icon, in the top right corner of the window.
2. Find the window element *Narrative*, select the check box *Visible* and click **Apply**.
3. Click **Save**, then click **Window options distribution** and select the roles or clients to have access to it.
4. Close **Invoice base**, clear cache and reopen it to display the narrative columns in the tab **Time and ACE**.
5. Click the *Narrative detail* icon in the required row to open the narrative dialog.
6. Fill in the *Narrative description* text box.
7. Click **Save**.

> **Note:**
> - When you are in the *Narrative detail* pop-up window, you can click the thumbnails **Previous narrative** and **Next narrative** to navigate between all the narratives in the table.
> - You can't add or edit a narrative to an invoice line with the state **On proposal**: the *Narrative description* text box will appear greyed out.

Delete invoice base rows

- It is not possible to delete rows manually from the invoice base. By setting the status to **Not to be invoiced**, you confirm that the hours should not be invoiced. You can also delete rows with the server process **TS11 Delete non-billable items**.
- Rows which have been invoiced (the **Generate invoices** server process has been run) are deleted from the invoice base. It is not possible to run enquiries on these rows in this window.

Related topics

Do partial invoicing

You can invoice parts of rows in the invoice base if you activate the system parameter TS_PART_INVOICE . When a row is partly invoiced by **Generate invoices**, the row is placed in the invoice base with the status **Partly invoiced**.

It is possible to make split invoices several times until the total % invoiced equals 100%. In order to make a new proposal, the invoice status must manually be set back to **Ready for invoicing**. When you have updated *Number*, *Price* or *Inv Curramount* , the percentage is recalculated and added to the previous percentage.

> **Warning:** TS_PART_INVOICE and TTS027_ENABLE_TOOLS can't be active at the same time.

Partial invoicing of hours:

You can only amend these fields when the system parameter TS_PART_INVOICE is activated.

- Amend the *%* column
- Amend the amount by updating column *Inv Curramount*. Note that this change overrules the number and price columns. This use cannot be combined with changes in number or price.
- Amend the number to be invoiced and/or *Inv price.*

Partial invoicing of expenses and fixed price rows:

- Amend the *%* column
- Amend the column *Inv Curramount* with the amount that is to be invoiced. (Price and number are not used in fixed price or expenses)

> **Note:**
> The following fields are affected by the use of partial invoicing:
>
> *Curr. amount*
> Currency amount is always fixed and can never be updated with any changes done in the invoice base. Currency amount will keep track of the original amount to invoice.

Inv Curr.amount
The amount to be invoiced. It can be used for all invoice elements.

Inv price
This is the amended price that will be used for invoicing. (The price column is the original price calculated in **Process time and expenses**).

Example:

1. You want to invoice 40% of a total sum of 100 000.
2. You add **40.0** in the *%* column and **100 000** in the *Curr.amount* column.
3. The value in the *To be invoiced* column becomes **40 000**.
4. After invoicing, the value in the *Invoiced* column becomes **40 000** whilst the *To be invoiced* column is set to zero.
5. If you wish to invoice a further 20% in the next invoicing round, the *%* column is increased from **40%** to **60**%. The value in the *To be invoiced* column will then become **20 000**.
6. The row will be invoiced and removed from the invoice base when the percentage reaches **100**.

Editing fields

Some of the fields are connected: when you modify them, you trigger changes in other fields. In some cases, those connections prevents you from modifying them. The following table indicates which fields can have impact on other fields:

Field modifed	Impact on other fields
Inv.value	*Units to invoice = Inv. value*. *To be invoiced = Units to invoice × Inv price*. *Curr. amount = To be invoiced*. *Inv Curramount = To be invoiced*.
Price	*To be invoiced = Units to invoice × Price*. *Curr. amount = To be invoiced*. *Inv Curramount = To be invoiced*.
Inv price	*To be invoiced = Units to invoice × Inv Price*. *%* - Recalculated, only if new *Invoice price* is less than *Price*. *Curr. amount = To be invoiced*. *Inv Curramount = To be invoiced*.
%	*Units to invoice = Units to invoice × %*. *To be invoiced = Units to invoice × Inv price*. *Inv Curramount = To be invoiced*.

Field modifed	Impact on other fields
Units to invoice	*To be invoiced = Units to invoice × Inv price*.

> **Note:**
> When the parameter TS_PART_INVOICE is active, the behaviour changes:
>
> - *Curr. amount* does not change, regardless of the modifications made in the rest of the fields.
> - *Inv Curramount*: editable.
>   - *%* - recalculated according to new amount.
>   - *To be invoiced* - gets the same value as Invoice currency amount.
> - *Price* - not editable.
>
> When the parameter TTS027_ENABLE_TOOLS is active, the behaviour changes:
>
> - *%* is not modified when changing the invoice price.
> - *Inv. value* is not editable.
> - *Price* is not editable.
> - When you change *Inv price*, *To be invoiced* is recalculated with the formula *Units to invoice* × *Inv price*.

Rounding

You can choose how entered hours should be rounded with the system parameter INV_VALUE_NO_ROUNDING .

Invoice proposal maintenance (TTS008)

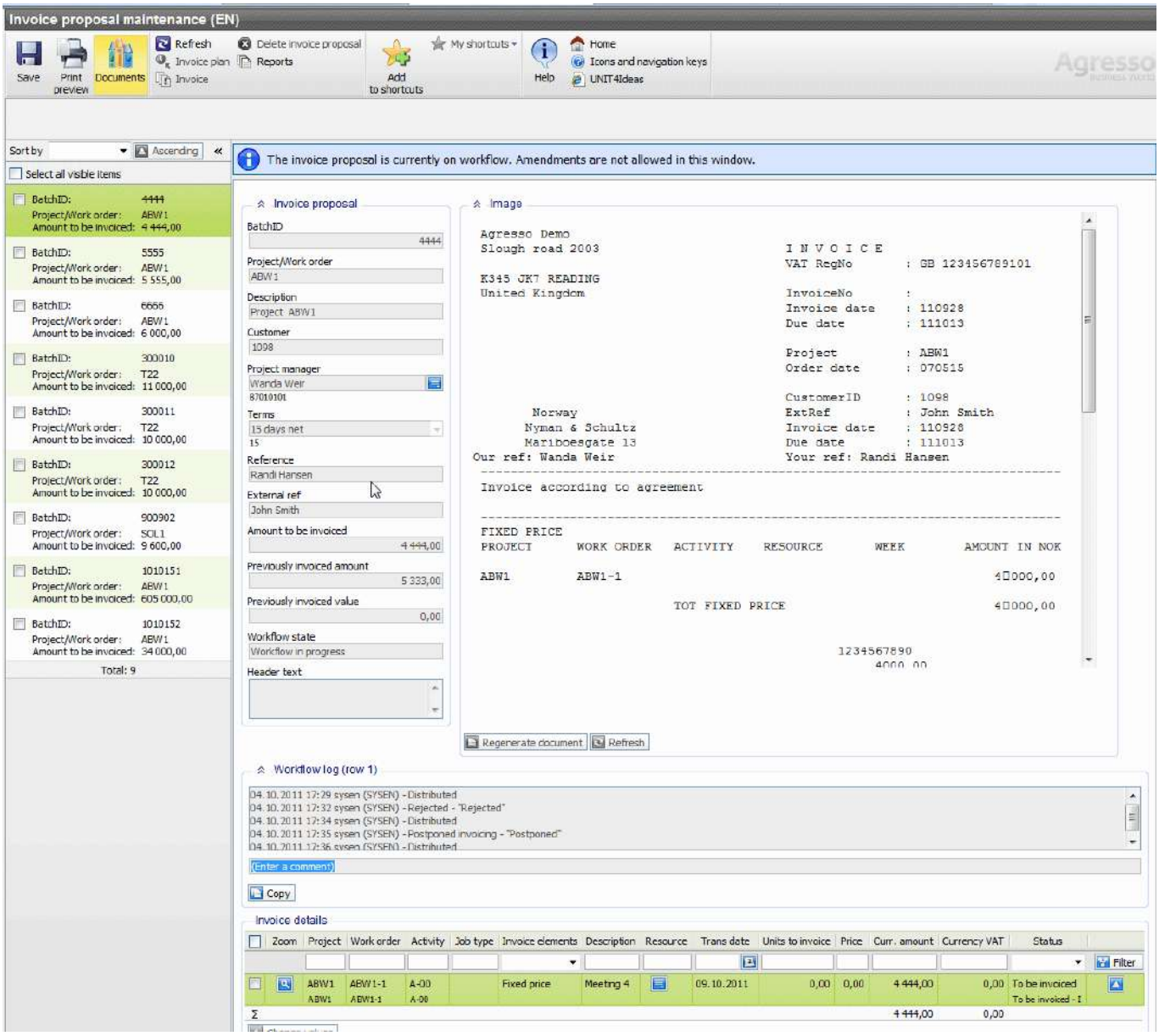
Introduction

The **Invoice proposal maintenance** (TTS008) window is where you maintain invoice rows that have been created through **TS01 Create invoice proposals**:

- You may send invoice rows on workflow. These rows are available from the **Invoice proposal approval** page.
- You may see an invoice document in the *Image* section. The main objective of the maintenance page is to validate that the invoice image document sent to the customer is correct, and you can now see and validate the invoice information. You may also refresh the invoice document to reflect changes you have made to the invoice proposal.

Invoice document

Below, you see the expanded Image section in the **Invoice proposal maintenance** window on Unit4 ERPDesktop :



Please refer to the Invoice document part of this document for the setup of the invoice document functionality.

User scenario

This user scenario is an illustration of the use of **Invoice proposal maintenance** and **TS56 Regenerate invoice proposal image** on Unit4 ERP:

Paul the project manager is responsible for all projects running for one of the key account customers in his company. He spends 50 percent of his time out of the office, and initiates the billing process in corporation with the accounting department on a regular basis, or when milestones in the project are reached.

When Paul has checked with the project team that all hours and expenses are registered and approved (through reports), he runs **TS01 Create invoice proposals** for a given period in his project. After TS01 has finished; he goes to the**Invoice proposal maintenance** page on Unit4 ERP Web and finds his invoice proposal based on batch_id and project ID.

In the document image view on the **Invoice proposal maintenance** page, Paul can verify that the document image matches his expected output. In particular, he checks references that he has agreed with the customer to include on the invoice , so that it will end up in the right place.

Looking at the details of the invoice, Paul has to evaluate if all the information is there. If there are missing parts on the invoice, he must delete the whole proposal through the **TS08 Delete invoice proposals** shortcut on the**Invoice proposal maintenance** page, and rerun **TS01 Create invoice proposals**. If the information actually has been included in the invoice proposal row, but has the wrong price, date or description, Paul can edit it directly. He can also change the status of the invoice details.

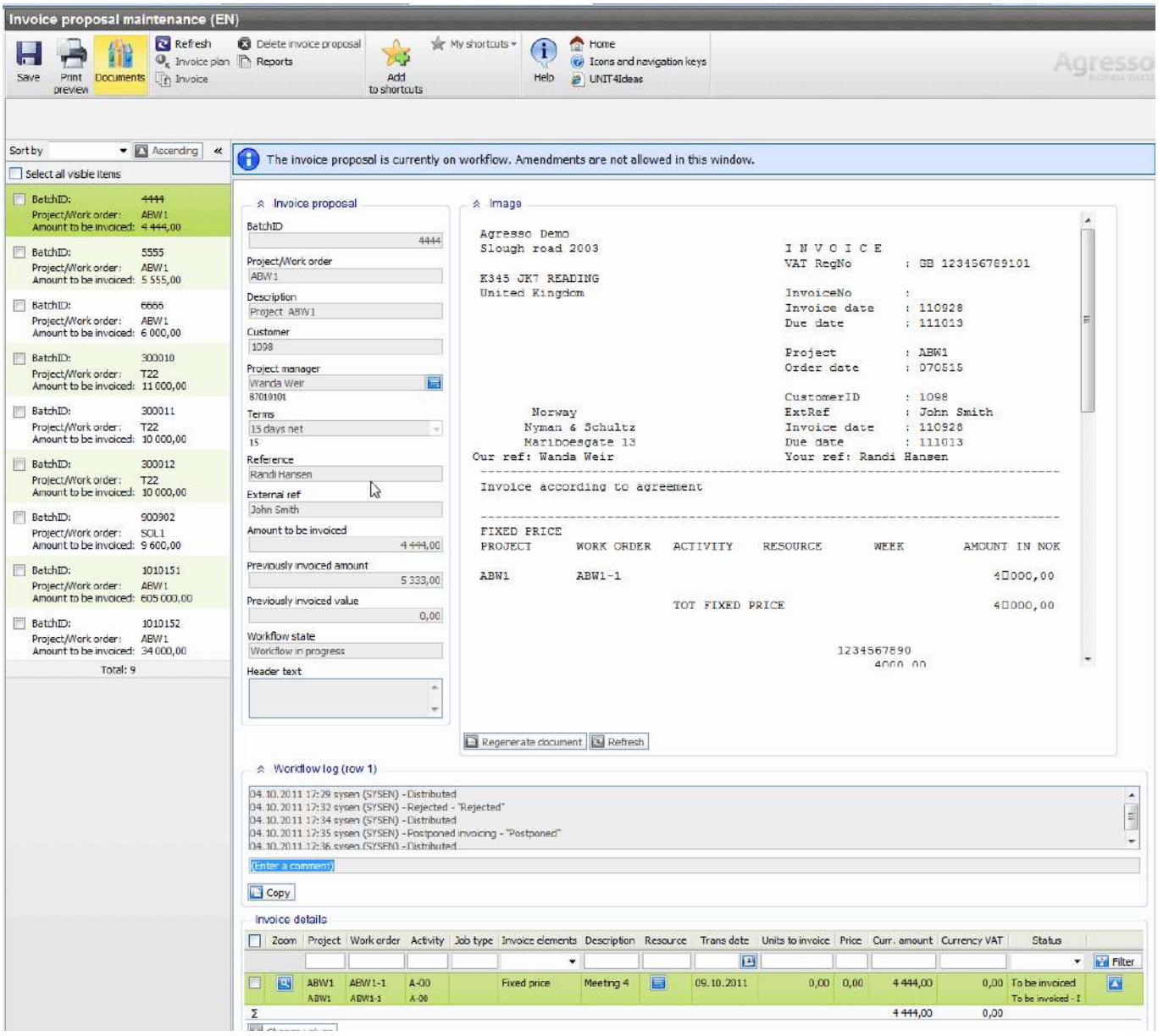
When Paul has made his changes, he saves the proposal and refresh the document image section on the page. To refresh, he first click on the **Regenerate invoice document**-button, and then click on **Refresh**. The first action starts the server process **TS56 Regenerate invoice proposal document**; the second action loads the changes made by TS56 in the document image view of **Invoice proposal maintenance**.

Looking at the invoice proposal document , Paul gets a better overview of what will actually be sent to the customer. He now feels confident that the invoice information is correct, and starts **TS02 Generate invoices**, which will produce and send the invoice to the customer and post the transaction in the General Ledger.

Invoice document

Invoice document section

You may see an invoice document in both the **Invoice proposal maintenance** window and the **Invoice approval** window. The picture below shows the invoice document in the Image section of **Invoice proposal maintenance** on Unit4 ERP:



Invoice document setup and prerequisites

This setup should be in place to enhance the invoice document functionality:

1. Create a document type for invoice proposals in **Document type**, Common. The *Document key* drop-down list must be set to **Batch**.
2. Create a variant (for example, **Variant 1**) of the **TS56 Regenerate invoice proposal document** server process (the same value as you will use for the TS56_VARIANT system parameter), and set these mandatory values:

- *Document type* report parameter: **INVPROP** (user-defined value, from your settings in **Document type**, Common.
- *Report file 3* report parameter: **TS02B1**

3. Select the TS56_VARIANT system parameter and give it the correct value (the variant value for **TS56 Regenerate invoice proposal document**).
4. Select the TS_INVPROP_DOCTYPE system parameter and set its value to the document type you have created, so the system can find the correct document type for invoice proposal rows.
5. Optionally, if you are a system administrator, you may want to select the TS_WAIT_FOR_DOCUMENT system parameter. This system parameter is useful to make people understand that they must wait for the **TS56 Regenerate invoice proposal server** process to refresh the invoice document, after they have changed invoice proposal rows, and clicked the **Regenerate document** button.

TS01 Create invoice proposals

For the server process **TS01 Create invoice proposal**, you need to make sure that these report parameter values are in place:

- *Document type* report parameter: **INVPROP** (user-defined value, from your settings in **Document type**, Common.
- *Report file inv.prop.* report parameter: **TS02B1**
- *Print invoice* check box: Must be selected.

Price

By default, the price amount displayed in the document is the original price displayed in the **Invoice base** window, in the column *Price*. But if the system parameters TTS027_ENABLE_TOOLS or TS_PART_INVOICE are active, the value will correspond to the one indicated in the column *Invoice price*.

Invoice base - TS01/TS29_VARIANT

If you want to run **TS01 Create invoice proposals** with a document for the invoice rows, from the Tools menu in **Invoice base**, there are some additional settings that must be in place:

Apart from the correct settings in **TS01 Create invoice proposals**, you need to select the TS01_VARIANT system parameter. This ensures that you select the correct variant from TS01.

> **Note:** Note that this only applies to Unit4 ERP Web as the **Invoice proposal maintenance** window on the Desktop does not have an invoice document section.

How to get a .pdf

In order to get an invoice .pdf, you must put **TS02B1.RPX** in the customised report folder. In addtion, you must activate common parameter ARC_DEF_FILE_TYPE and set its value to **PDF**.

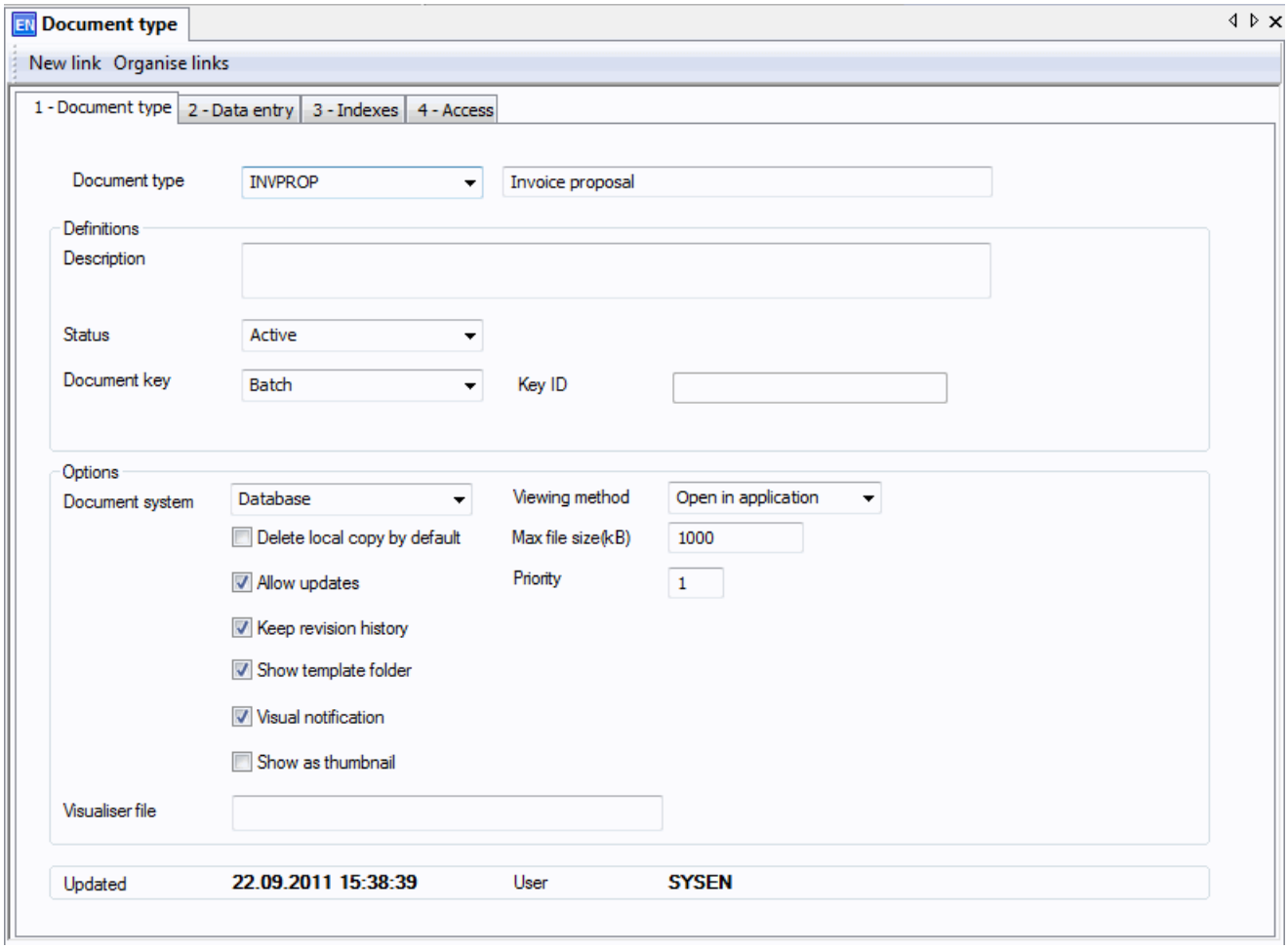
Illustrated setup example

Below you will find an illustrated setup example:

Document type window

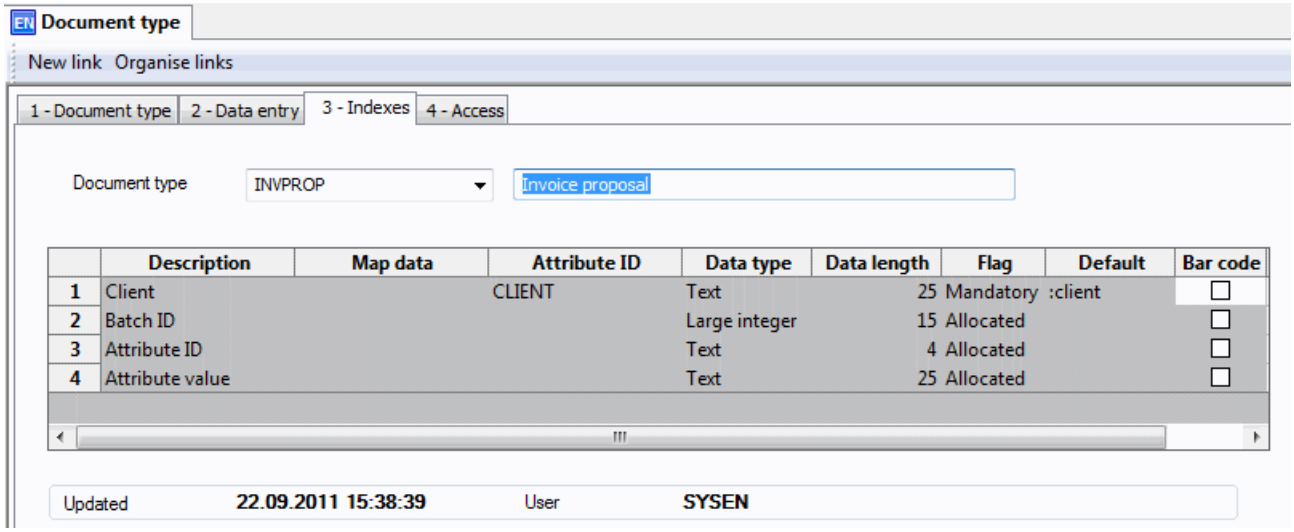
Document type tab:

In the picture below, you see the **Document type** window in Common, where you set up the invoice proposal document. These setting are user-defined:



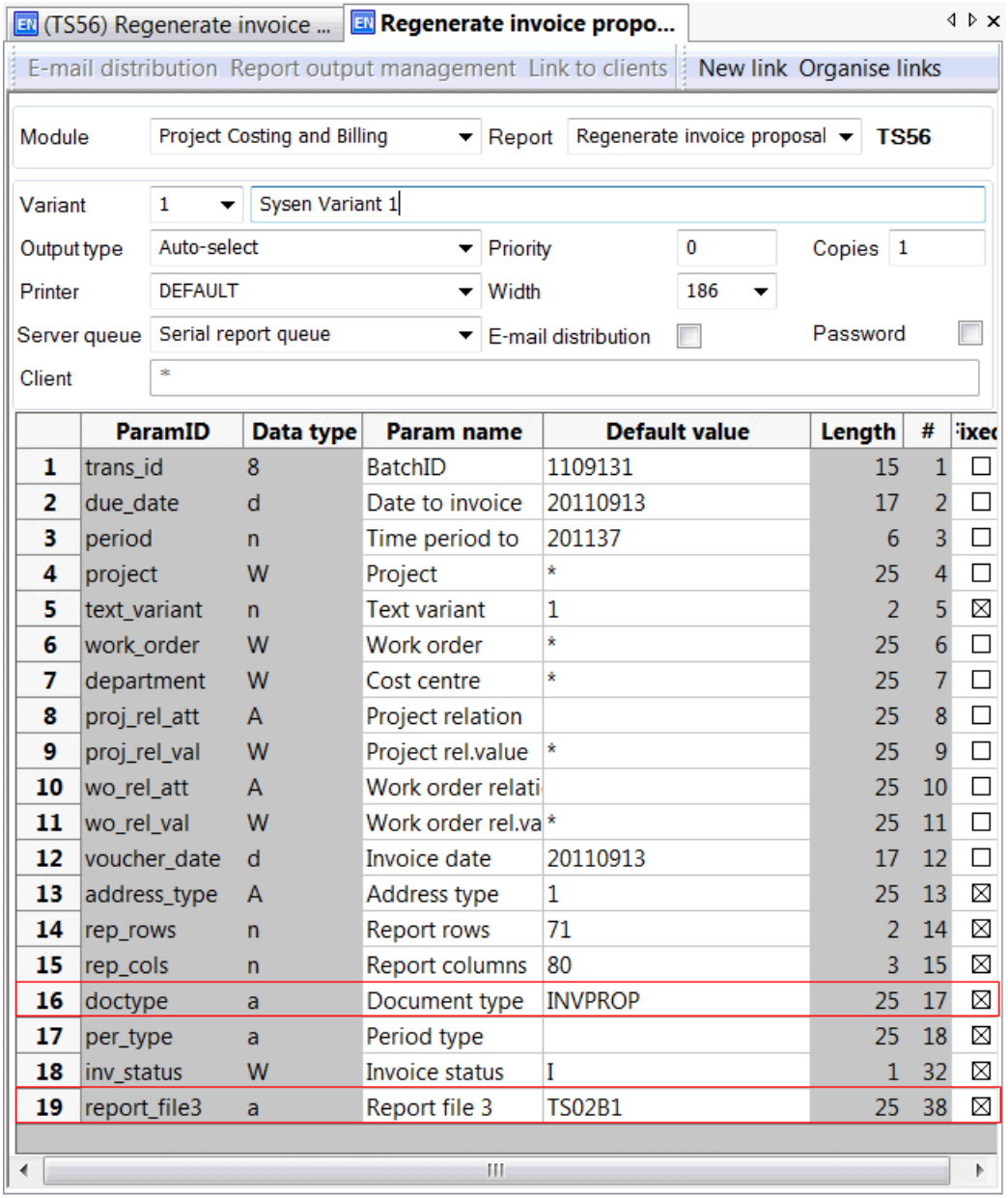
Indexes tab:

In the picture below, you see the **Indexes** tab in **Document types**. This tab should be set up with values for **Client**, **Batch ID**, **Attribute ID** and **Attribute value**:



TS56 Regenerate invoice proposal document

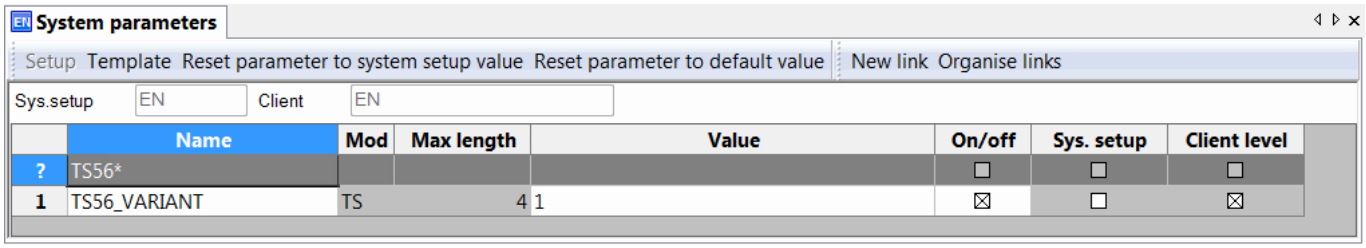
In **TS56 Regenerate invoice proposal document**, you must create a variant (**Variant 1** in this example), which is the value you define in the TS56_VARIANT system parameter. You must also enter the document type **INVPROP** (user-defined value), which you made in the Common **Document type** window, and the **TS02B1** value (system-defined value) for the *Report file 3* parameter:



	ParamID	Data type	Param name	Default value	Length	#	ixed
1	trans_id	8	BatchID	1109131	15	1	☐
2	due_date	d	Date to invoice	20110913	17	2	☐
3	period	n	Time period to	201137	6	3	☐
4	project	W	Project	*	25	4	☐
5	text_variant	n	Text variant	1	2	5	☒
6	work_order	W	Work order	*	25	6	☐
7	department	W	Cost centre	*	25	7	☐
8	proj_rel_att	A	Project relation		25	8	☐
9	proj_rel_val	W	Project rel.value	*	25	9	☐
10	wo_rel_att	A	Work order relati		25	10	☐
11	wo_rel_val	W	Work order rel.va	*	25	11	☐
12	voucher_date	d	Invoice date	20110913	17	12	☐
13	address_type	A	Address type	1	25	13	☒
14	rep_rows	n	Report rows	71	2	14	☒
15	rep_cols	n	Report columns	80	3	15	☒
16	doctype	a	Document type	INVPROP	25	17	☒
17	per_type	a	Period type		25	18	☒
18	inv_status	W	Invoice status	I	1	32	☒
19	report_file3	a	Report file 3	TS02B1	25	38	☒

System parameter TS56_VARIANT

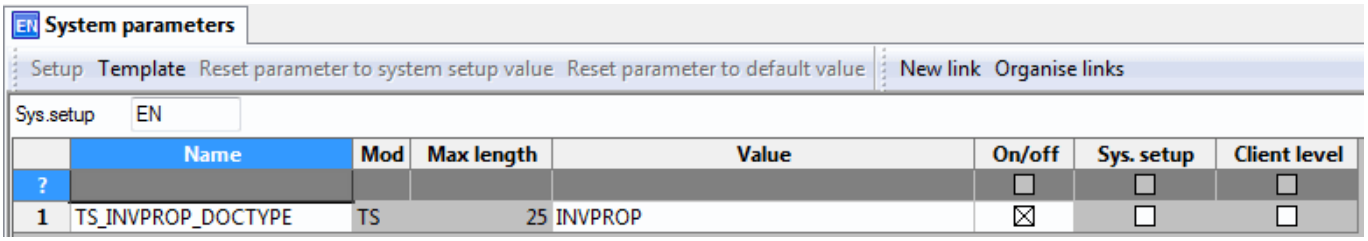
TS56_VARIANT must be selected and, in this example, have value **1**, which is the report variant of **TS56 Regenerate invoice proposal document**.



	Name	Mod	Max length	Value	On/off	Sys. setup	Client level
?	TS56*				☐	☐	☐
1	TS56_VARIANT	TS	4	1	☒	☐	☒

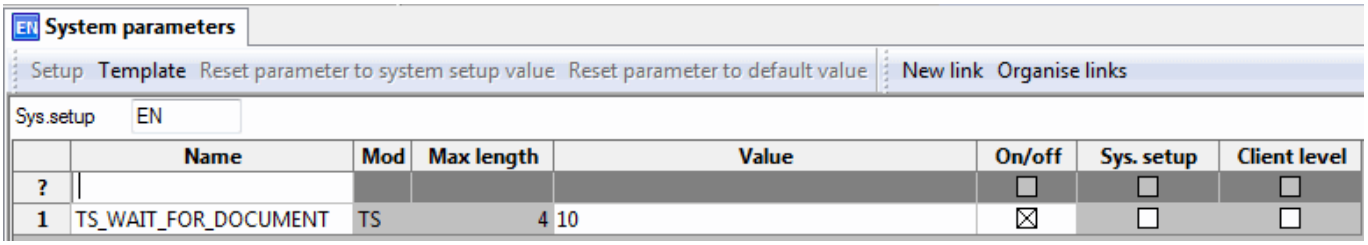
System parameter TS_INVPROP_DOCTYPE

Select TS_INVPROP_DOCTYPE and give it the correct document type as its value. Its value may be integers and chars.



System parameter TS_WAIT_FOR_DOCUMENT

Optionally, you may want to select the TS_WAIT_FOR_DOCUMENT system parameter. Its value is an integer for the maximum number of seconds to wait for the system to refresh the document.



Invoice proposal processes

Introduction

There are two ways to approve invoices proposals, each with a special approval window:

Approve at row level using Invoice approval (TTS108).

This is the default solution, where your invoice proposals are sent to **Invoice proposal (TTS108)** window. There, the approver can amend the rows of the proposal and decide which rows can be sent to the **Generate invoices TS02** server process.

> **Note:** With this solution, the more details you have in your invoice proposals, the longer it takes for the workflow to process the invoice proposal.

Approve at header level using Invoice header approval (TTS138).

If you want to gain time and efficiency in the workflow process of your invoice proposals, you can activate the system parameter TS_INV_PROP_HEADER: the invoice proposal is sent to the **Invoice header proposal**

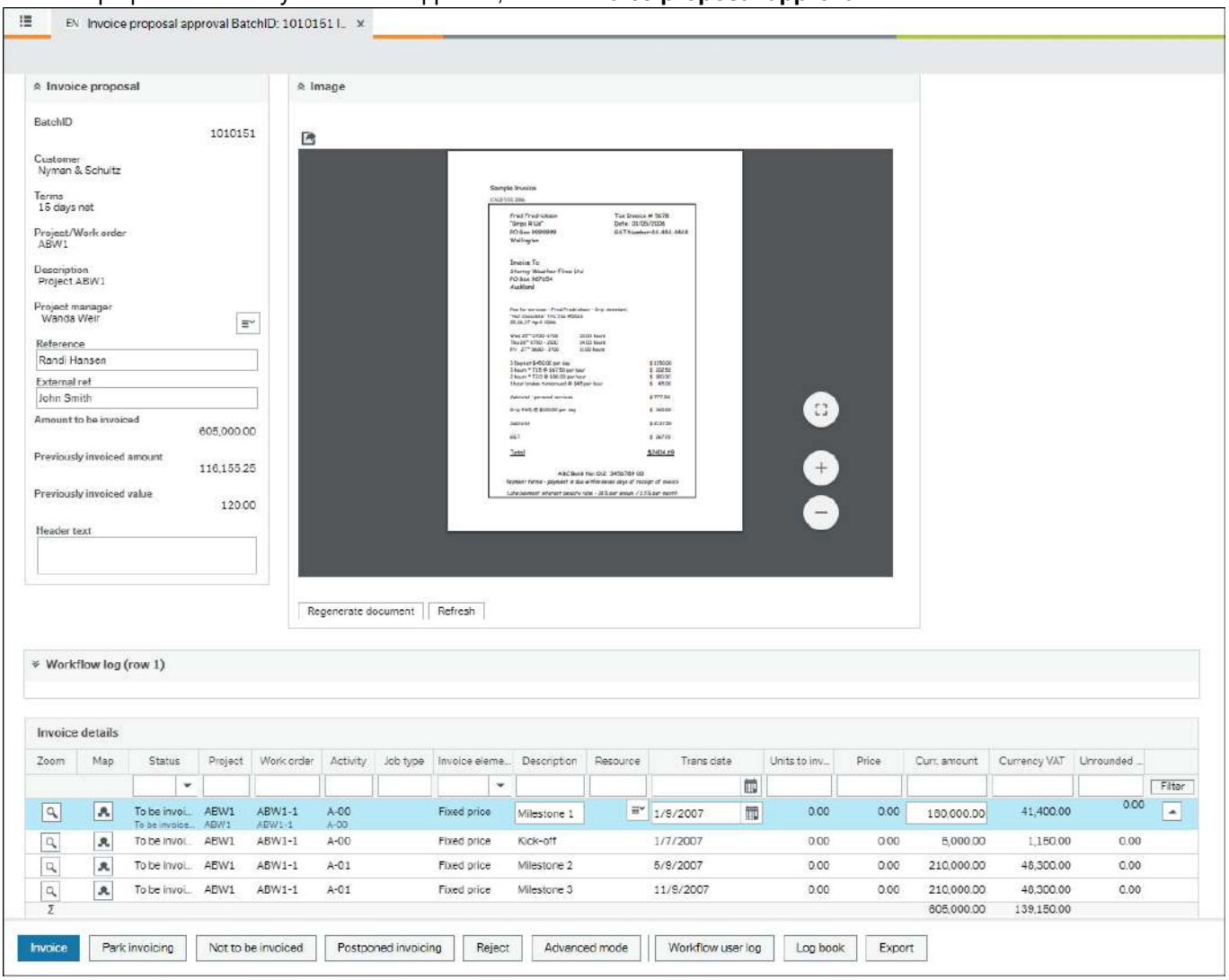
approval (TTS138) window, where the approver can approve them at header level, regardless of the rows number and status.

> **Note:** With this solution, the approver cannot amend the rows of the invoice proposal.

Invoice proposal approval (TTS108)

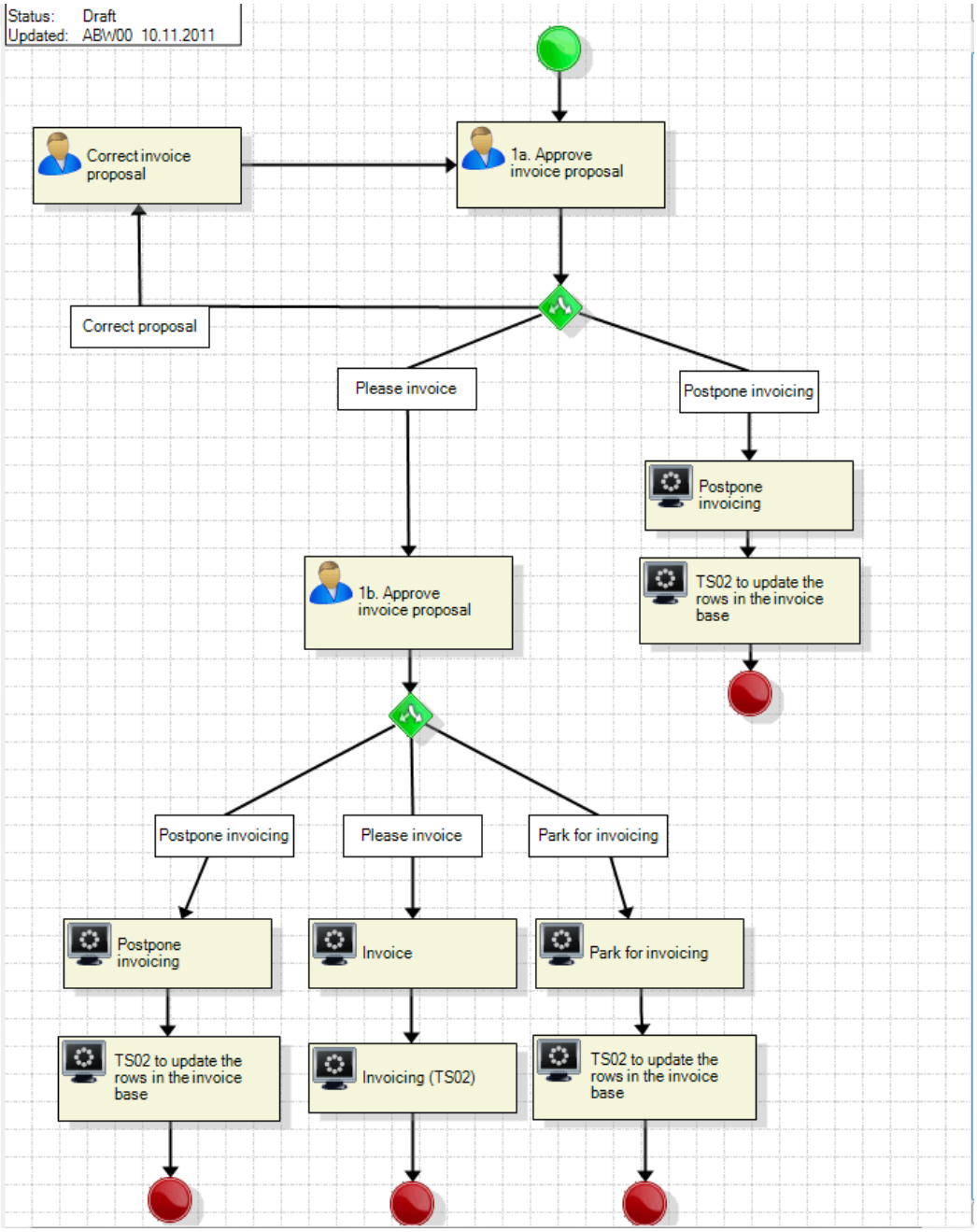
Introduction

Invoice proposal rows may be sent on approval, to the **Invoice proposal approval** window:



Process definition setup for Invoice proposal approval

The picture below illustrates one possible way to set up the invoice proposal approval process:



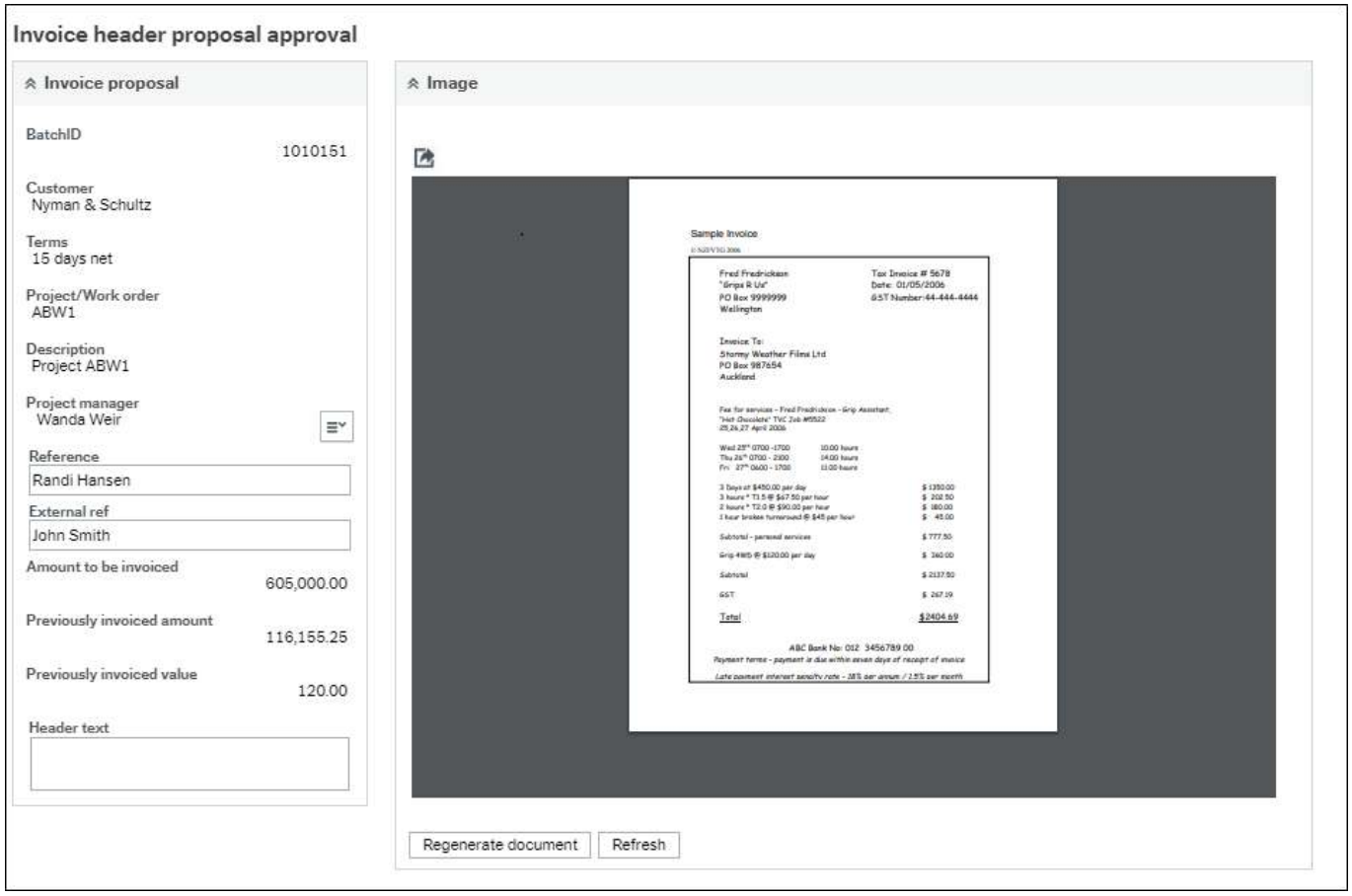
Listed below are some comments on the setup:

- Step 1a shows the person responsible for the first step of the approval. If the invoice proposal rows should be corrected, the system sends it back to the person that should make the corrections.
- If the responsible in Step 1a decides to postpone the invoicing of the invoice proposal rows, he may set this status. This setup also states that TS02 should update the rows in the invoice base.
- Step 1b shows the different flows depending on how the approver wants the invoice proposal rows to be treated. After each approval function, it is recommended to place **TS02 Generate invoices** behind it, to update the invoice base automatically, instead of manually.

For more information on workflow setup, please refer to the Workflow reference manual

Invoice document

You may see the invoice document in **Invoice proposal approval**. The picture below shows the **Image** section expanded with the invoice document displayed:



> **Tip:** You can improve the visibility of this section by activating the the system parameter PIN_DOC_IN_SCREENS.

> **Note:** Note that the **Regenerate document** and **Refresh** buttons are hidden by default in **Window options**.

Please refer to the Invoice document part of this document for the setup of the invoice document functionality.

Invoice header proposal approval

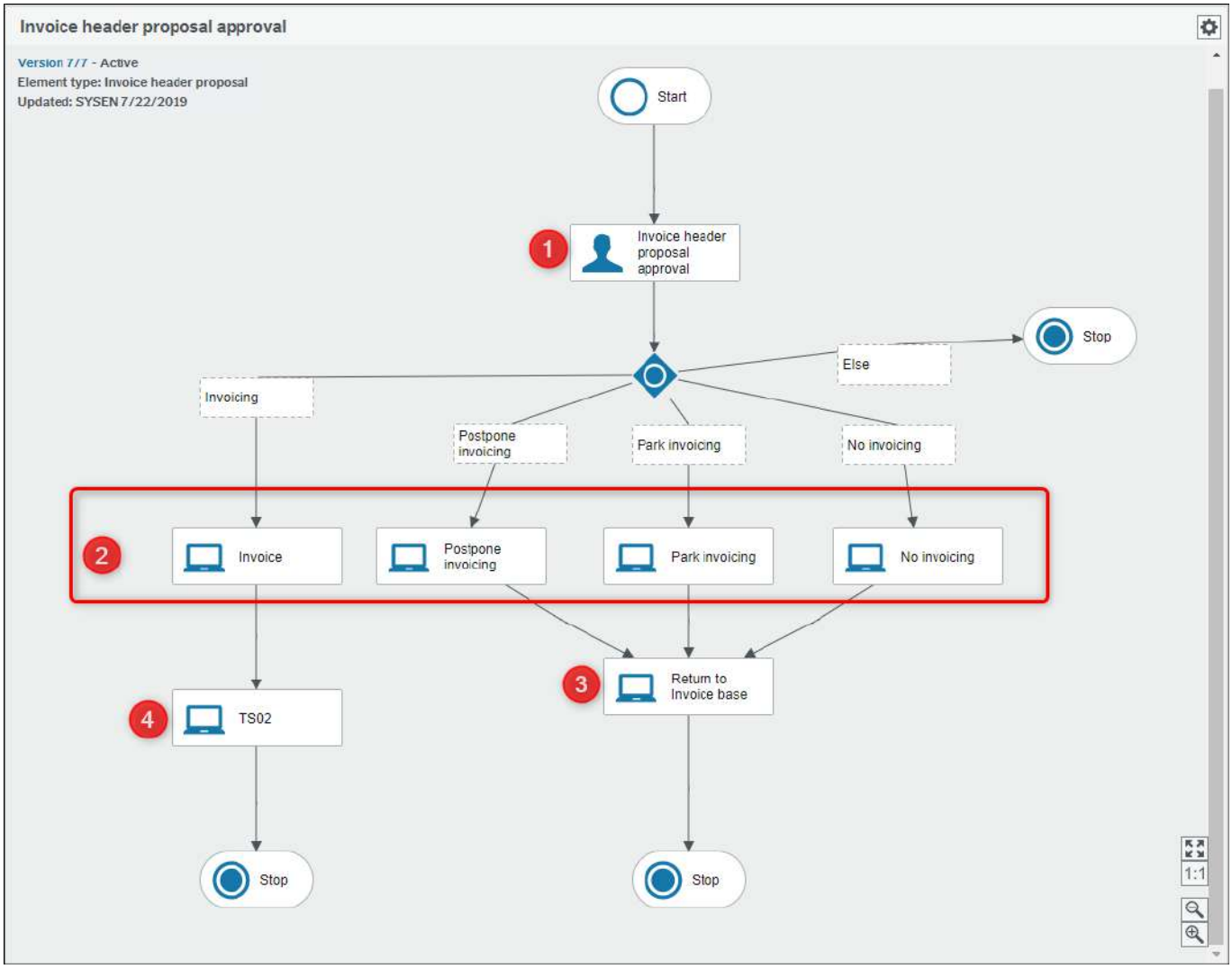
Introduction

When the system parameter TS_INV_PROP_HEADER is activated, the invoice proposals are sent for approval to the **Invoice header proposal approval** window:

> **Note:** This window is almost identical to Invoice proposal approval, except that you can't amend the invoice details rows.

Process definition setup for Invoice header proposal approval

The picture below illustrates one possible way to set up the invoice proposal approval process, using the element type **Invoice header proposal (INH)**:



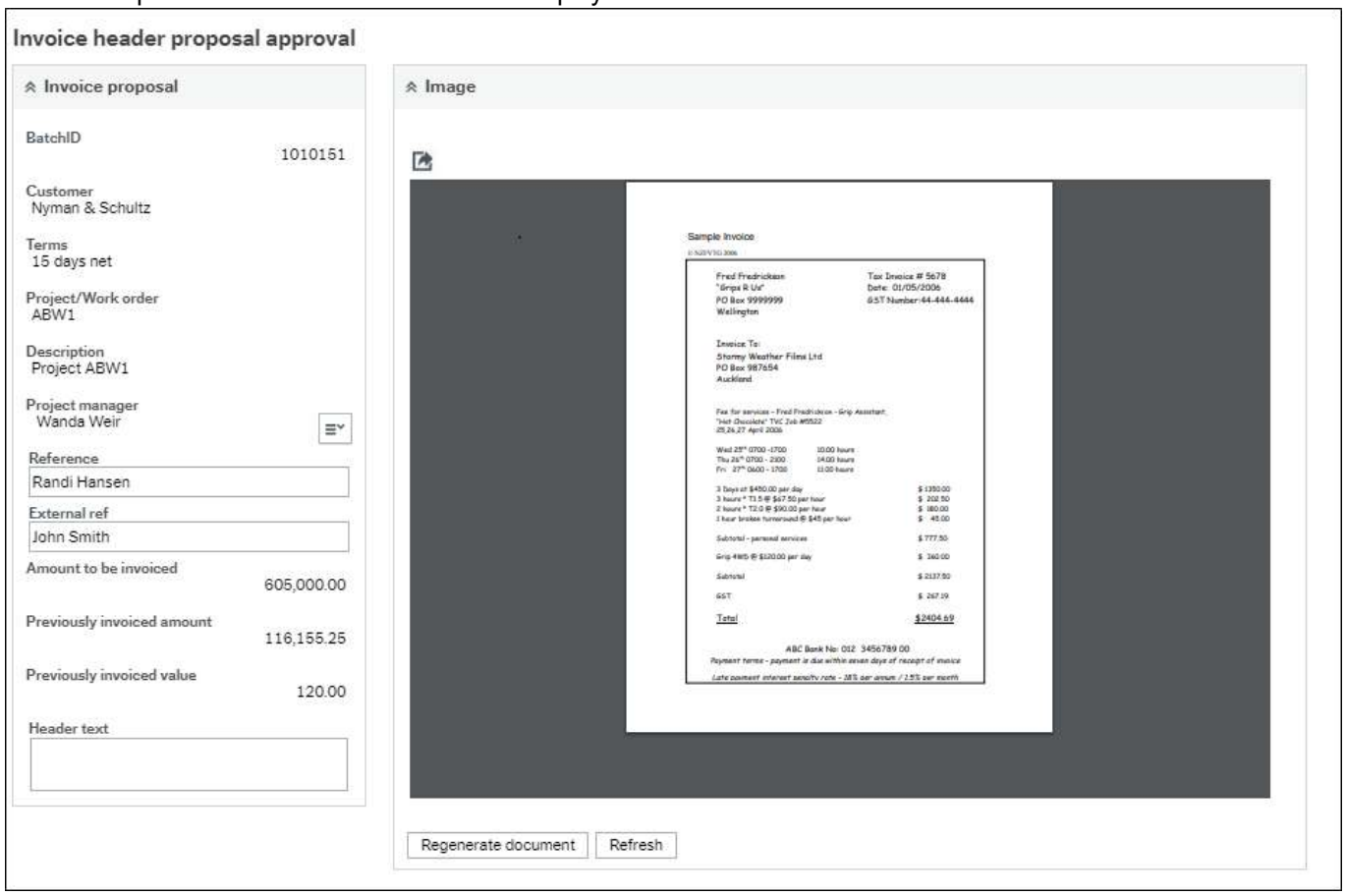
Listed below are some explanations on the workflow setup:

1. User step where the approver can take a relevant action.
2. Here are the system steps which set the invoice rows status.
3. System step which removes the proposal and returns the invoice rows to the **Invoice base**with the status selected in the previous system step (postpone, no invoicing, park, etc.).
4. System step which runs **TS02 Generate invoices** for the proposal.

> **Note:** For more information on workflow setup, please refer to the **Workflow** reference manual

Invoice document

You may see the invoice document in **Invoice header proposal approval**. The picture below shows the **Image** section expanded with the invoice document displayed:

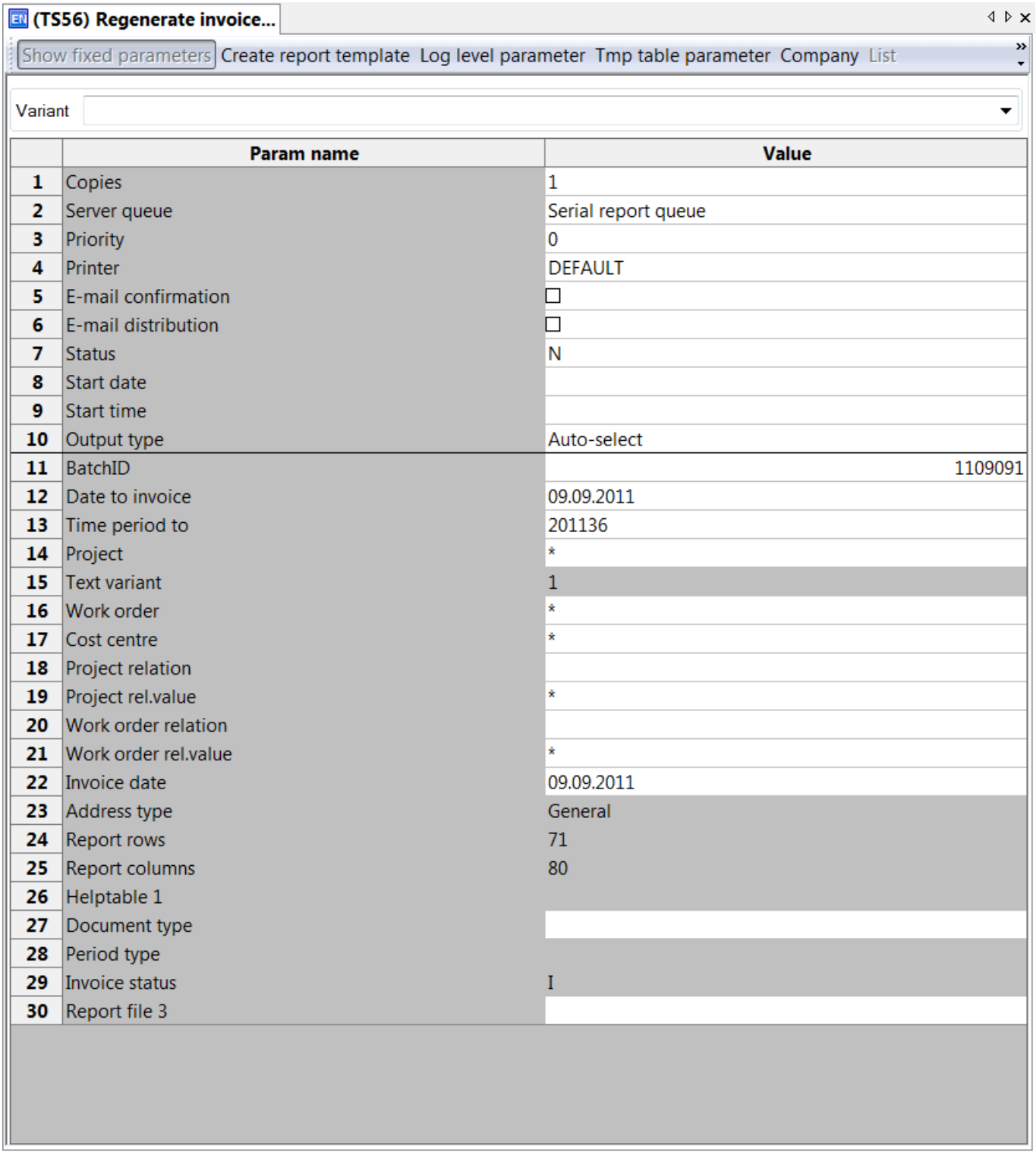


> **Tip:** You can improve the visibility of this section by activating the system parameter PIN_DOC_IN_SCREENS.

Please refer to the Invoice document part of this document for the setup of the invoice document functionality.

TS56 Regenerate invoice proposal document

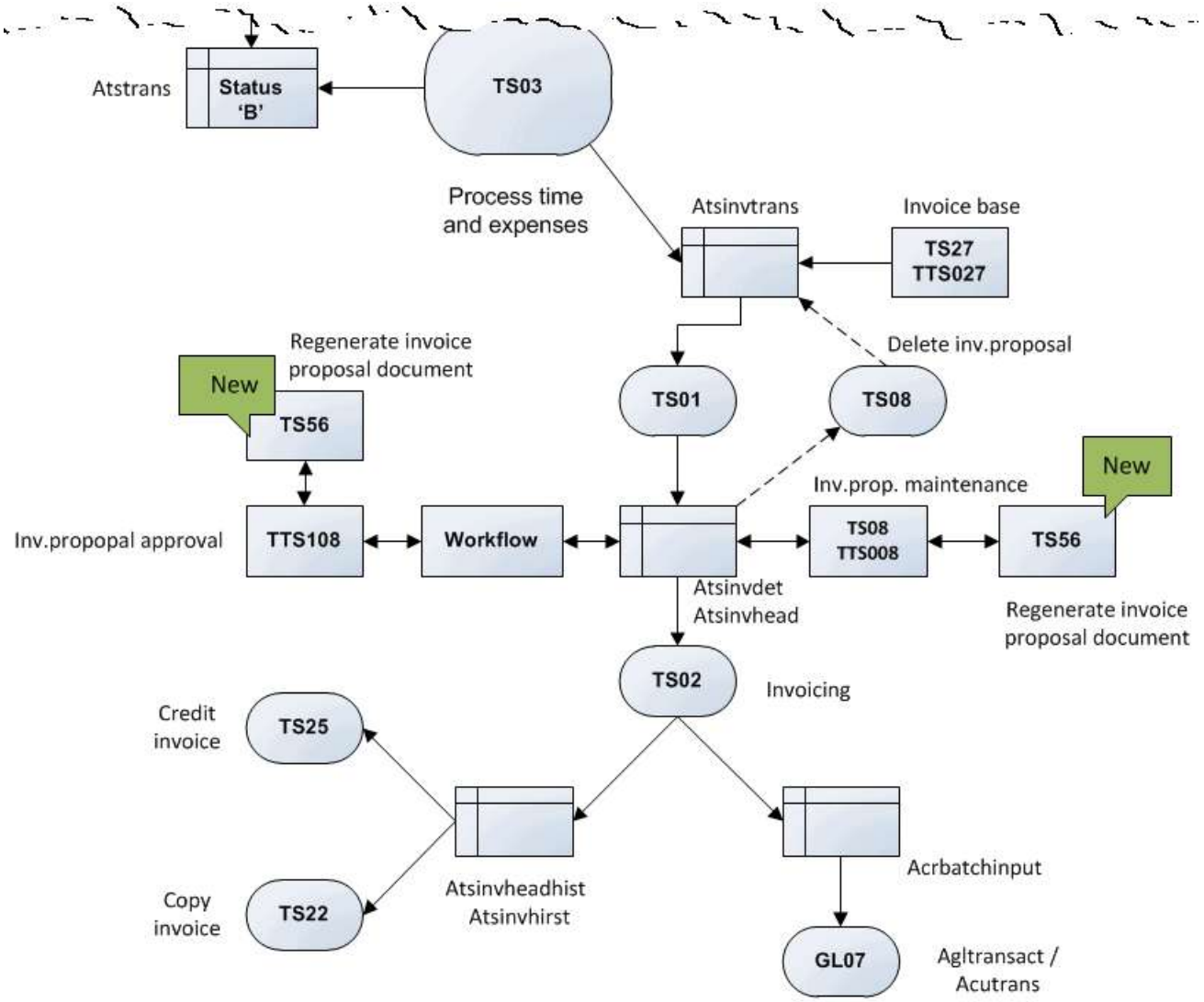
This server process is useful when you have changed values on the invoice details rows of a batch in the **Invoice proposal maintenance** window on Unit4 ERP Web. When you run this server process, the invoice document image on the screen will be refreshed according to your changes on the invoice proposal.



	Param name	Value
1	Copies	1
2	Server queue	Serial report queue
3	Priority	0
4	Printer	DEFAULT
5	E-mail confirmation	☐
6	E-mail distribution	☐
7	Status	N
8	Start date	
9	Start time	
10	Output type	Auto-select
11	BatchID	1109091
12	Date to invoice	09.09.2011
13	Time period to	201136
14	Project	*
15	Text variant	1
16	Work order	*
17	Cost centre	*
18	Project relation	
19	Project rel.value	*
20	Work order relation	
21	Work order rel.value	*
22	Invoice date	09.09.2011
23	Address type	General
24	Report rows	71
25	Report columns	80
26	Helptable 1	
27	Document type	
28	Period type	
29	Invoice status	I
30	Report file 3	

Diagram - TS56 Regenerate invoice proposal document

This is an overview of how the server process is included in the invoicing process:



You may activate the **TS56 Regenerate invoice proposal document** server process from both the **Invoice proposal maintenance** window on Unit4 ERP Web and from the **Invoice approval** window. You may also activate it from the menu.

> **Note:** Note that for **Invoice proposal approval**, you need to setup the **Regenerate document** and **Refresh** buttons from **Window options**, System administration.

Dates on relations

This server process will filter on project and work order relations matching the invoice date given in the report parameter.

Parameters

BatchId
The unique identifier for the invoice image document created.

Date to invoice
Only rows where the invoice date in the Invoice base window is previous to, or equal to, this date will be included in the invoice document image. Rows where this field is left blank (has no value) will also be included.

Time period to
The value used in this field controls which transactions are included in the invoice document image.

- Hour transactions and fixed prices registered for time periods up to, and including, this period.
- Expense items posted in periods up to, and including this time period's accounting period.

Project
The selection of projects to be included on the invoice image document. The default value is ***** (all projects).

Text variant
The variant of the text type **Invoice** from the text register which is used as text on the invoice image document. The default value is set to **1**.

Work order
The work orders to be included on the invoice image document. The default value is set to ***** (all work orders).

Cost centre
The selection of projects based on their cost centres. The default value is set to ***** (all cost centres).

Project relation
The relation to project. This value can be used to limit the selection of projects for which the invoice image document is regenerated. The list displays all attributes which are related to the project attribute (**PROJECT B0**). If the *Project relation* parameter is blank, the server process will find all projects with no project relation defined. If you do not want to use relations, you must not include any value in this parameter or in the *Project rel. value* parameter.

Project rel.value
The project relation value. Only projects that are related to this value are included on the invoice image document. The drop-down list will display valid Active attribute values for the attribute stated in the *Project relation* parameter. If the relation field is blank, the server process will find all projects with no project relation value defined. The default value is set to ***** (all project relation values containing a value are included).

Work order relation
The relation to work order. This value can be used to limit the selection of projects for which the invoice image document is generated. The list displays all attributes which are related to the work order attribute (**WORKORD BF**). If the *Work order relation* parameter is blank, the server process will find all projects with no project relation defined. If you do not want to use relations, you must not include any value in this parameter or in the *Work order rel. value* parameter.

Work order rel. value
The work order relation value. Only work orders that are related to this value are included on the invoice image document. The drop-down list will display valid Active attribute values for the attribute stated in the *Work order relation* parameter. If the relation field is blank, the server process will find all work orders with no work order relation value defined. The default value is set to ***** (all work order relation values containing a value are included)

Invoice date
The invoice date to be printed on the invoice. This date will be used in calculations of the due date together with the credit terms code. This value is only used if you autostart **TS02 Generate invoices**.

Address type
The customer's address type that is used on the invoice image document. The system uses the project's address type as the first option on the document. Secondly, the project's general address type is used. Third, the ordered

address type is retrieved from the customer master file. As the last option, the general address in the customer master file is used. This parameter is only valid if the *Print invoice* parameter is activated. Default value is **General**.

Report rows
The number of report rows on the invoice image document. Default value is **71**.

Report columns
The number of report columns on the invoice image document. Default value is **80**.

Document type
The name of the document type as specified in **Document type** in Common on Desktop.

Period type
The period type.

Invoice status
The status of the invoice rows included on the document image. The default value is set to **I (To be invoiced)**.

Report file 3
The default value is **TS02B1**.

Invoice proposal maintenance - resubmit

Introduction

The **Invoice proposal maintenance** window on Unit4 ERP Web has a **Submit** button for use when in Correction mode for workflow items.

Usage

When you reject an invoice proposal approval batch you will find the rows in your task list linked to this screen.

When the screen is in correction mode, these points apply:

- You are not allowed to invoice the invoice proposal rows.
- You are allowed to make changes, and save them.
- You must use the **Submit** button when you send the invoice proposal rows back to workflow.

Filtering in invoice proposal maintenance

Filtering in invoice proposal maintenance has been added to save time loading all the invoice proposals and makes the list more relevant. This is optional and can be turned on in windows options by activating the invoice proposal maintenance section.

Date on relations report parameters

You have at your disposition two report parameters to enable you to specify the dates to be used if Dates on relation is activated on project and/or work order:

- Relation date
- Relation date field.

When filtering **Invoice proposals** (TS01) on project or work order relations, the new **Relation date** report parameter will be applied when deciding which project/work order relation to include in the filter.

> **Example:**
> Project 1 has a relation on Department with value 100 until 15.08.2014 and value 200 thereafter.
> If filtering on Project, Department relation = 100 with relation date = 01.09.2014 will produce no results.
> Using the relation date 01.08.2014 will pick the transactions for this project.

The **Relation date field** report parameter is used to specify which date field to apply when looking up posting values and has two values:

- Transaction date - This is the default setting and will be used if this report parameter is left empty.
- Date to invoice - The due date on the transaction .

Level of invoicing

Previously users have only been able to create invoice proposals by either Project, Work order or Customer; however now they can take advantage of increased flexibility in Unit4 ERP and invoice by Work order relation.

Users can create invoice proposals based on any attribute which is a relation on Work order by selecting a Work order relation and turning on the Invoice on relation report parameter in **Create invoice proposals** (TS01).

> **Note:** In order to invoice on work order relation, the user needs to select **Separate invoice** on the relevant work order.

Global projects

Introduction

When a project is global and requires the combined work of companies from different countries or legal entities, the windows available in the **Global projects** section enables you to set up and handle the necessary exchange of information between all parties involved.

Prerequisites

- You need to install a license for Global projects to be able to use this feature.

  > **Tip:** In case you want to uninstall the license, it is recommended to follow these steps first:
  >
  > - Remove access to all windows and tabs related to Global projects.
  > - Set any existing Global project's status to *Closed* or *Terminated* in the system.
  >
  > Otherwise, server processes may be triggered when applying changes or using time and invoice information related to a Global project.

- You need to configure **IC resources** for Global projects to be able to populate the correct resources. See the **Reference Manual Personnel 7.6** to learn more about **IC resources**.

Important information

About Project IDs

Unit4 ERP allows several clients to have the same *Project ID*. For Global projects, it is advised to use *Project ID*s that are not used in other companies, so Supporting projects can be created without problems.
Additionally, it is advised to use a unique *Project ID* across entities for Global projects to avoid issues when adding Supporting clients that work for several Leading companies:

> **Example:**
> - Global project **ABC1** is created for Leading company UK and adds NO as supporting company.
> - Global project **ABC1** is created for Leading company FR. When trying to add NO as supporting company to FR, an error message is displayed because this client NO already contains a Supporting project ABC1, but for the Leading company UK.

In case of errors, the only possible workaround is creating a new Leading project with a different code that allows its creation in the needed Supporting companies.

About workflow

The server process TS77 is run where there are relevant changes to include in the supporting companies, without taking into account the Project's workflow status. That's why it is recommended to add supporting projects once the Leading project is approved in workflow.

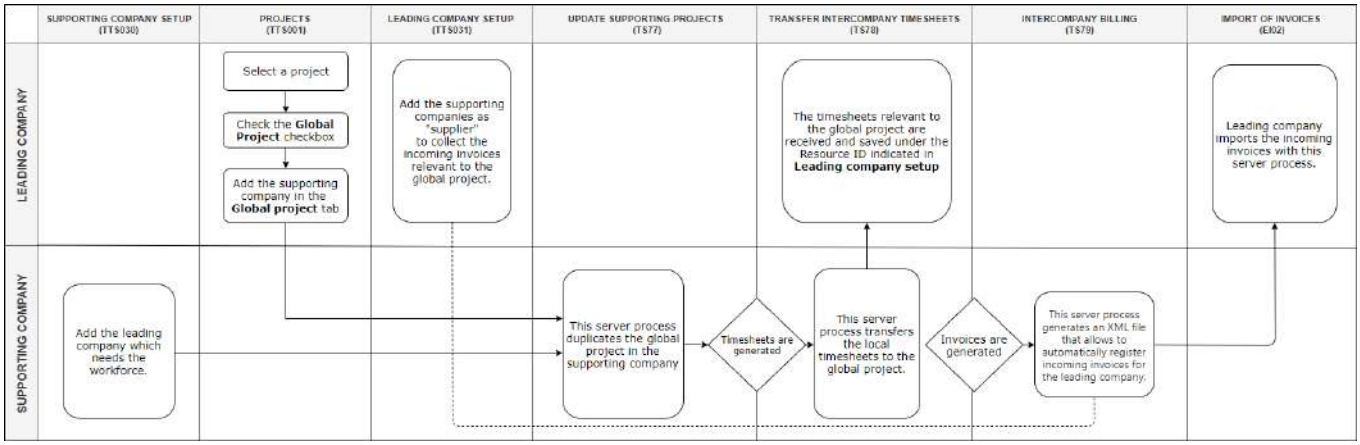
When the Leading project is pending approval, TS77 will not run successfully and the relevant information won't be included in the supporting companies. In that case, to update the supporting companies, you must run the server process manually when the project is approved.
Key fields as well should not be included in the workflow approval process, so that a new approval of the Project information is not required.

About expense transactions

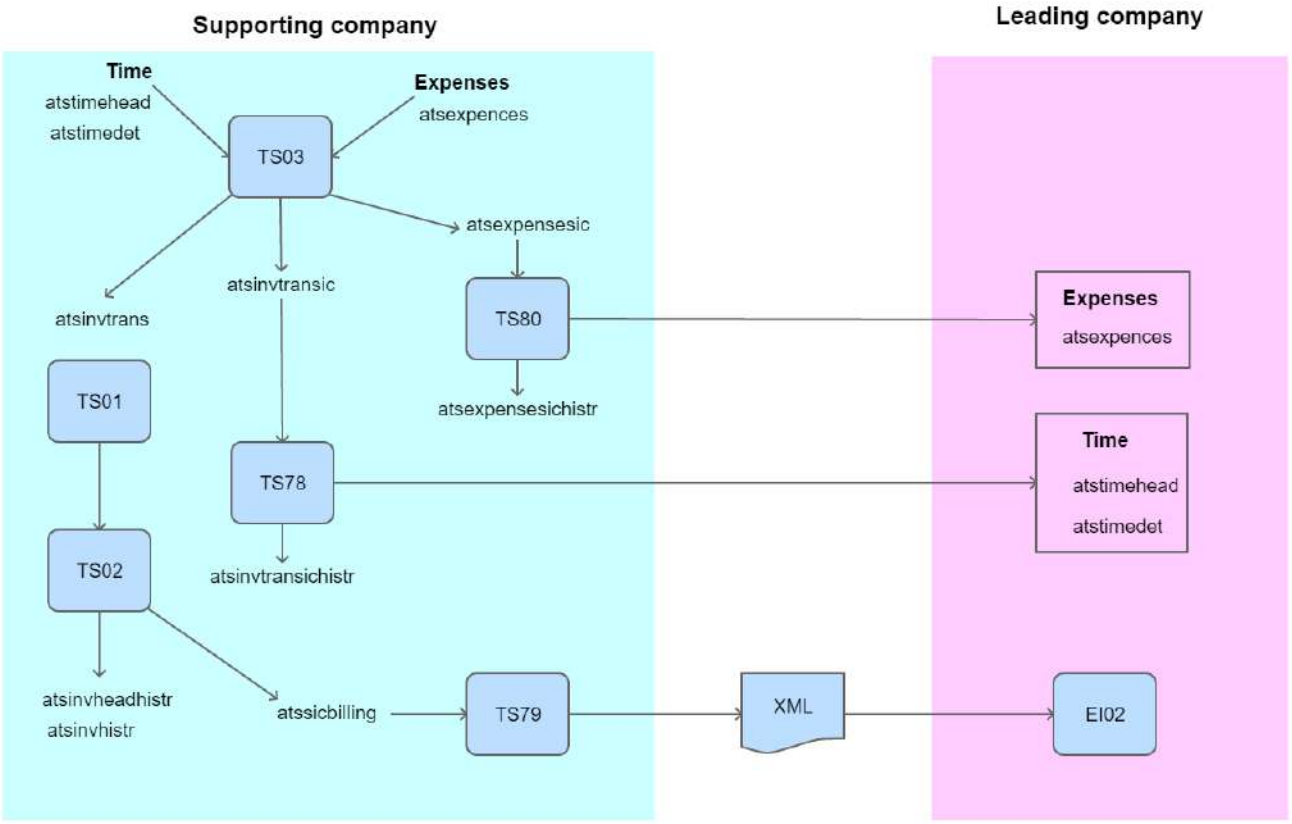
Expense transactions are automatically transferred to the Leading company. Therefore, the Balance table that populates expenses based on Supplier invoices must be adjusted. Otherwise, expense transactions will be populated once again when the IC Billing takes place, as the system identifies it as any other Supplier invoice.

Process

The following flowchart describes the role each window play for each company:



This diagram shows the overall data flow from the Supporting company to the Leading company:



About supporting projects

To ensure the alignment of the information between Leading and Supporting projects, some fields are not allowed to be edited in the Supporting projects nor their related Work orders and Activities, and appear disabled:

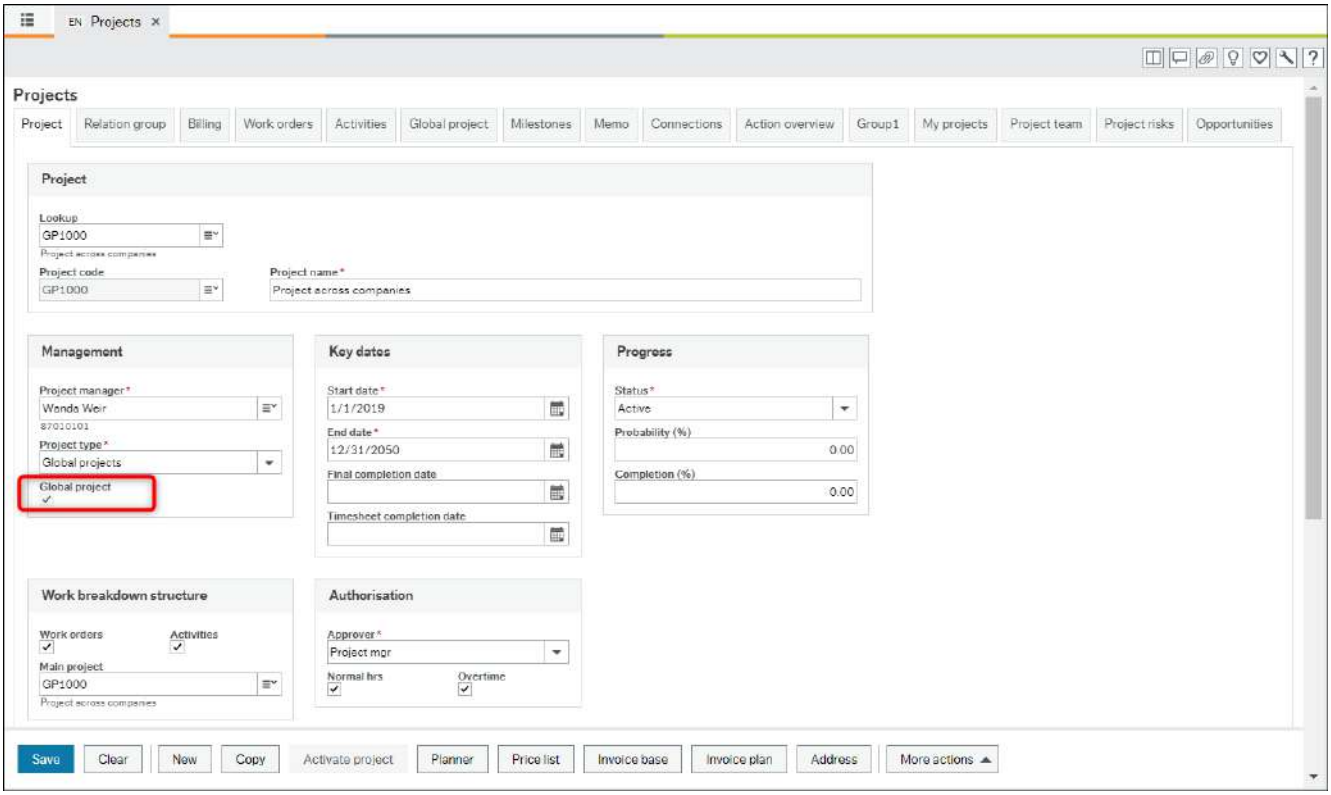
Project	Activities	Work orders
• *Project code* • *Project name* • *Project manager* • *Project type* • *Start date* • *End date* • *Status* • *Final completion date* • *Timesheet completion date* • *Work orders* checkbox • *Activities* checkbox • *Global project* checkbox	• *Activity* • *Start date* • *End date* • *Status*	• *Work order code* • *Work order description* • *Work order manager* • *Start date* • *End date* • *Status* • *Project* • *Timesheet completion date*

Note: Supporting projects cannot be copied. When you click Copy, an error message is displayed.

Overview

Projects (TTS001)

Checkbox Global project



This check box determines whether or not the project includes workforce from other companies. Settings are:

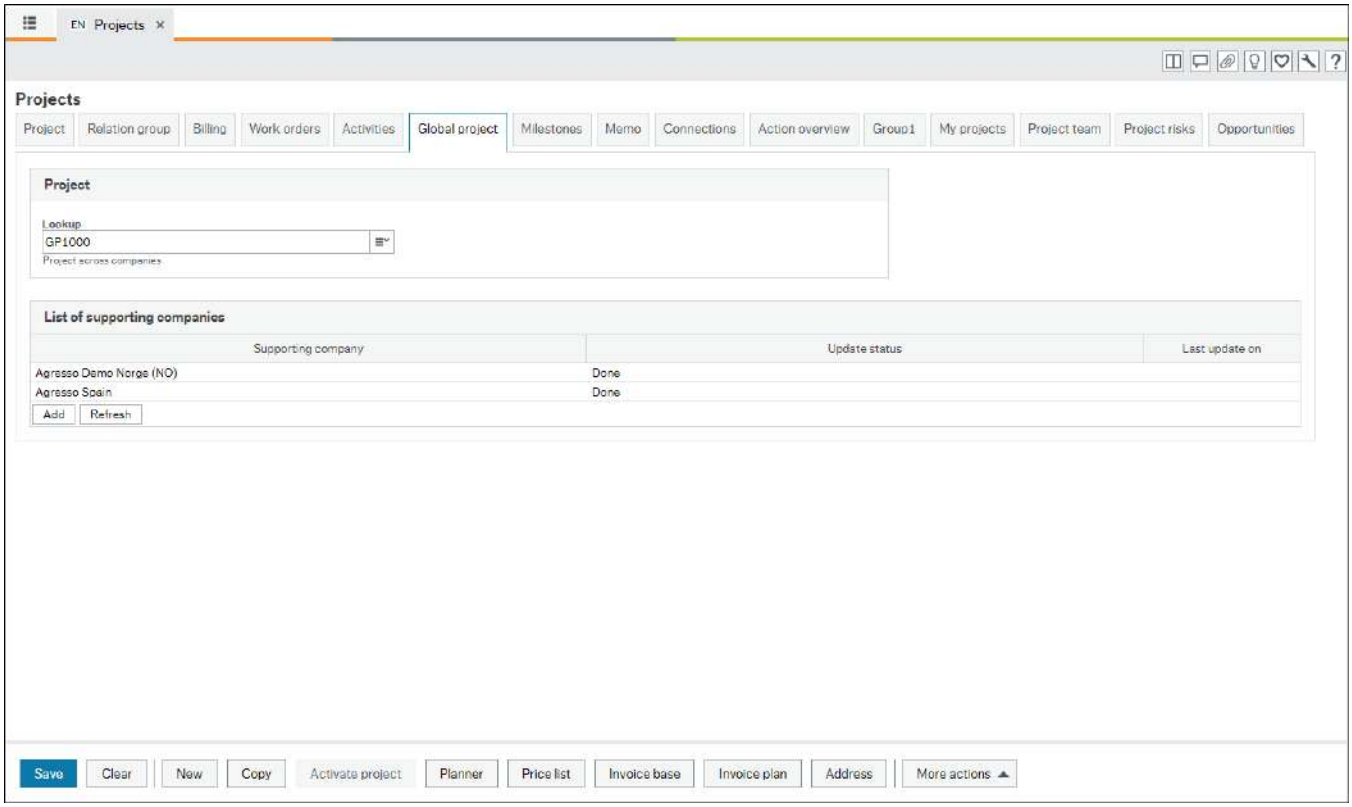
☒- The project includes workforce from other companies (the list of supporting companies is defined in the *Global project* tab).

☐ - The project does not include workforce from other companies.

> **Note:** You must grant access to the check box in the window **Menu access** (XAG003).

Tab Global project

This tab is enabled when the **Global project** check box is selected in the **Project** tab.



In this tab, the users can manually select the supporting companies related to that specific project, or automatically by entering a default list of supporting companies with the system parameter GP_DEFAULT_COMPANIES.

When the changes are saved, it triggers the server process **TS77 - Update supporting projects** so the project is made available in those supporting companies. Users can see as well the status of this copy and the date when it was performed.

Additionally, a **Refresh** button is available so the *Update status* column can show the most up-to-date results of the server process.

> **Tip:** To avoid issues when sending information across systems, it is recommended to use the same attribute length in all companies, and align mandatory relations.

Leading company setup (TTS031)

Window usage

Use this window to define which companies (clients) are providing service to your company's global projects as supporting companies.

You can define here as well which GL accounts are used for the registration of intercompany supplier invoices. Specifically, you can specify different accounts for hours transactions, expense types, and other invoice elements.

> **Note:** Remember that the expense type codes in the supporting and leading company must match, for the expense transactions to be correctly processed. Therefore, make sure to agree about them in advance with your supporting companies.

To set up successfully your leading company, you must fill all the fields in those sections:

Basic setup

Supporting company

The company (client) under which is registered the company which provides service to your global projects.

Supplier

The supplier in your company to whom all the incoming invoices from the supporting company will be linked to.

Account setup for hours and other invoice elements

Account setup for hours

The GL account where intercompany hours transactions will be registered to.

Account setup for other invoice elements:

The GL account where all the intercompany transactions corresponding to other invoice elements than hours or expenses will be registered to.

> **Note:** Expenses without an expense type indicated in the transaction will be also included in this account.

Account setup for expenses

Expense types

The expense type.

Account

The GL account where intercompany transactions corresponding to each expense type will be registered to.

> **Note:** Make sure that the selected accounts in this window have the correct rule configuration regarding supplier invoice registration. For example:
>
> - if attribute COSTC is relevant for the workflow that the supplier invoice approval will follow, then make sure that COSTC is a mandatory attribute in the account rule,
> - make sure that attribute PROJECT is mandatory as well,
> - make sure that *Currency* has a *Fixed* user input only if you expect all the incoming invoices to use the same currency. If you expect to receive invoices in different currencies, then *Mandatory* should be selected instead,
> - make sure that *Tax code* and *Tax system* have the flexibility to support the different expected tax rates coming in the supplier invoices.

Supporting company setup (TTS030)

Window usage

Use this window to define the default information for the supporting project copied from the Leading company's global project. In the table of this window, you must fill in all those fields:

Leading company
The client under which is registered the company which owns the global project.

Customer
The company which owns the global project (and becomes the customer of the supporting company).

Project type
The project type to assign to the supporting company project.

Invoice rule
The invoice rule to assign to the supporting company project.

Cost centre
The cost centre to assign to the supporting company project.

What would you like to do?

Set up your leading company to manage the global project

1. Log in to Unit4 ERP as the leading company.
2. Go to the **Leading company setup** window (TTS031).
3. In **Basic setup**, click **Add** and:
    a. Select the *Supporting company*,
    b. Select the associated *Supplier*,
4. In **Account setup for hours and other invoice elements**:
    a. Select the account to register the intercompany transactions corresponding to hours
    b. Select the account to register the intercompany transactions about other invoice elements than hours or expenses
5. In **Account setup for expenses**, click **Add** and:
    a. Include a new expense type,
    b. Specify the GL account to register the intercompany transactions corresponding to that expense type.
6. Click **Save**.

Set up your company to support a global project

1. Login to Unit4 ERP as the supporting company.
2. Go to the **Supporting company setup** window (TTS030).
3. Select the *Leading company* of the global project's company.
4. Select the *Customer* which owns the global project.

5. Select the *Project type*, *Invoice rule*, and *Cost centre* to assign to your supporting project.
6. Click **Save**.

Set up a Global project

1. Login to Unit4 ERP as the leading company.
2. Go to the **Projects** masterfile window (TTS001).
3. Select the project requiring work force from supporting companies.
4. Check the *Global project* check box in the **Project** tab.
5. Go to the *Global project* tab and add the *Supporting companies*.
6. Click **Save**.

> **Note:** When you click **Save**, the server process **Update supporting projects** (TS77) automatically copies the leading project's information in the supporting companies.

Server processes

Update supporting projects (TS77)

Window usage

This server process copies the Leading company's global project in the Supporting companies (or updates it if it already exists there). Once the server process is successfully completed, the same *Project ID* exists in the Leading and Supporting companies.

> **Note:** Projects with status **Draft** are not copied in the Supporting companies.

Prerequisites

In the leading company	• Select the *Global project* check box in Projects (TTS001) and add the supporting companies involved in the Global project tab.
In the supporting company	• Parameter TS_CUR_TYPE must be correctly configured. • The supporting companies must have configured the **Supporting company setup** (TTS030) to properly copy the Leading project information. • Configure *IC resources* for Global projects to be able to populate the project and work order managers when copying the project in the Supporting company. • The relational value must exist. • No other relation marked as **Mandatory**.

In both companies	• Parameters FIXED_ACTIVITY and FIXED_ACT_DESCR values must be aligned.
	• Same *Activity* codes must exist in both companies.
	• The Project/Work orders' relations configuration must be aligned:
	  ◦ In the window **Attributes** (TGL004), the check box *Dates* must have the same configuration.
	  ◦ In the window **Relations** (TGL006), the check box *Duplicates* must have the same configuration.

When does this server process run?

Creation

When the Global project is created and saved for the first time.

Updates

When any of the following fields are modified or added to the leading project in **Projects** master file (TTS001):

Projects master file tab	Action on the fields
Project information	• Modify the *Project name*. • Modify the *Project manager*. • Modify the *Start date*. • Modify the *End date*. • Modify the *Status*. • Modify the checkbox *Work order*. • Modify the checkbox *Activities*. • Modify the *Final completion date*. • Modify the *Timesheet completion date*.
Relations	• Modify a Mandatory relation **Note:** If the relational values are not aligned between companies, TS77 will not populate the new value in the Supporting company.
Activities	• Add a new *Activity* to the leading project. • Modify the *Description*[1]. • Modify the *Start date*. • Modify the *End date*. • Modify the *Status*.
Work orders	• Add a new *Work order* to the leading project. • Modify the *Work order name*. • Modify the *Work order manager*. • Modify the *Start date*. • Modify the *End date*. • Modify the *Status*.

[1] Only if the parameter FIXED_ACT_DESCR is not active.

Projects master file tab	Action on the fields
	• Modify the *Timesheet completion date*[1]. **Note:** Modifying the fields mentioned above or creating new work orders from **Work orders** (TTS047) will trigger as well the server process when indicating that it belongs to a Global project.

Relations

This is how TS77 behaves when creating and updating relation in the Supporting company:

- At Project level:
  - It creates and updates mandatory relations with same values as in the Leading company.
- At Work order level:
  - The work order's *Relation group* tab inherits the Supporting project's relations when creating the work order in the Supporting company. (The *Relation group* tab has the same behaviour as when we create a work order in a regular project).
  - TS77 does not update work order relations.
  - That means Supporting work order relations are only included when creating the work order in the Supporting company:
    - If any mandatory relation is missing, TS77 won't stop,
    - If further changes are needed, then users must do so manually. Those work order relations won't be overwritten in case the Leading company triggers a rerun of TS77.

Therefore, it is recommended that all the mandatory relations of a work order be mandatory as well at Project level to ensure TS77 detects any possible issue.

If an additional mandatory relation is required from the Supporting company:

- At Project level: Error message is always displayed.
- At Work order level: Mandatory relation is skipped and the work order is created/ updated with that mandatory relation empty.

Duplicates

- If the Supporting company does not allow duplicates, TS77 shows an error accordingly.
- If the Supporting company allows duplicates, the data is transferred without errors.
- Adding a second relation triggers TS77.

[1] Field available only in **Work orders** (TTS047).

- Deleting a duplicate relation does not trigger TS77. If deleted, an error is displayed in TS77 when run.
    - Workaround: Delete manually the relation in the Supporting company.

Dates

- If the Supporting company does not allow dates, TS77 shows an error accordingly.
- Changing the dates triggers TS77.
- Adding a second relation triggers TS77.
- Deleting a second relation leads to an error of duplicates when running TS77:
    - Workaround: Delete manually the relation in the Supporting company.
    - Recommended use: Don't delete a relation, change the value it contains.

Percentage/ Unit

- Percentage/ Unit information is not populated in the Supporting company.
- Changes don't trigger TS77 nor are populated in the Supporting company.

Known issues

- Any change in the Leading company's Work order relations tab triggers TS77, but does not update Supporting Work order relations.
- When updating the Work order's manager, the Work order's resource relation is not updated (this already happened in previous versions).

> **Note:**
> The defaulted relations are not considered mandatory in the code. In case the Leading company changes the values of these defaulted relations, they won't be populated in the Supporting company, nor trigger TS77. The defaulted relations are the following ones: **Project**, **Project type**, **Resource**, **Customer**, **Cost centre**,

Outcome

Project information

When the information of a Leading project is copied in the Supporting companies, the following fields are defaulted:

Based on the Supporting company setup	Based on *Customer*	Based on *Invoice rule*	Based on *IC resource*
• Project type	• Currency	• Invoice level	• Project manager

Based on the Supporting company setup	Based on *Customer*	Based on *Invoice rule*	Based on *IC resource*
• Cost centre • Customer • Invoice rule	• Reference • Payment terms • Tax system • Address	• *Invoice rule* tab information	

Also, take into account that the fields in the following tabs are **not** copied:

Project tab	*Billing* tab	*Relation group* tab	*Global project / Milestone / Memo / Connections / Flexi-fields* tabs
• Probability (%) • Completion (%) • Dim fields * • Global project checkbox	• External ref • Tax code • Invoice header • Invoice footer	• Non-defaulted relations • Relations not indicated as **Mandatory** in the Leading company **Note:** Defaulted relations are: • Cost centre • Project • Project type • Manager • Customer	• None of the fields of these tabs are copied.

Note: None of the fields that are not copied (for example Flexi-fields) should be set as mandatory in the Supporting company. Otherwise, TS77 will stop.

Some other fields are overwritten with the following values, regardless of the one indicated in the Leading project:

- **Main project**: The copied project ID.
- **Billable status**: Billable
- **Currency type**: According to value indicated in parameter TS_CUR_TYPE

Work orders

The related work orders are also copied. The following fields are defaulted:

From setup	From Invoice rule	From Customer	From IC resource
• Customer • Invoice rule • Cost centre	• Invoice level • Invoice rule details	• Currency • Reference	• WO manager

Take into account that the fields in the following tabs are ignored:

Work order	Billing	Relation group	Memo / Flexi-fields
• Completion (%) • Dim values	• External ref • Tax code • Invoice header text • Invoice footer text • Invoice specification • Payment terms • Tax system • Address	• Non-defaulted relations • Relations not indicated as **Mandatory** in the Leading company **Note:** Defaulted relations are: ◦ Cost centre ◦ Project ◦ Project type ◦ Manager ◦ Customer	• None of the fields of these tabs are copied.

Note: None of the fields that are not copied (for example Flexi-fields) should be set as mandatory in the Supporting company. Otherwise, TS77 will stop.

The following fields are overwritten:

- *Separate invoice* checkbox: not checked.
- *Billable status*: Billable.

Activities

Activities are also copied in the Supporting company and the following fields are overwritten:

- *Billable* checkbox: checked
- *Invoice rule*: blank
- *Description*:
  - When the parameter FIXED_ACT_DESCR is active, it displays the attribute value description.
  - When the parameter FIXED_ACT_DESCR is not active, it displays the same description as in the Leading company.

Transfer intercompany timesheets (TS78)

Window usage

This server process transfers to each leading company all the time transactions corresponding to global projects that have made it to the invoice base in the supporting company.

This transfer consists of the registration of the hours into the leading company's timesheet maintenance, which are allocated to their corresponding *IC resource* in the Leading company.

In case any of the time entries contains a narrative, this information will be transferred to the Leading company as well.

In case the Leading company has configured the free attribute values (system parameters TS_FLD_1-4_ID), then the free attribute values will be included as well in the transfer. If, besides the free attributes parameters, the system parameter TS_FLD_RES_REL is also active, then the transferred information will be based on the IC resource relations in the Leading company.

This server process is automatically triggered by **TS03 Process time and expenses** in the event that there is at least one supporting project in the company running it.

TS78 can also be launched manually, if, for some reason, the transfer has not been made available to the leading company on previous runs, by selecting the Batch ID previously processed by TS03 that contains the intercompany time transactions and expenses that will be transferred to the leading company.

Prerequisites

In the leading company	• Resources from the Supporting company must have their corresponding intercompany resource available in the Leading company
	• To include the free attribute values based on the IC resource relations:
	  ◦ System parameters TS_FLD_1-4_ID are correctly configured.
	  ◦ System parameter TS_FLD_RES_REL is active.
	  ◦ IC resources have a valid relational value for attributes indicated in the system parameters TS_FLD_1-4_ID.

In the supporting company	• The time transactions must be billable in order to be transferred to the leading company.
In both companies	• The Invoice element *Hours* must have the same **Unit** in the invoice rule used in the project. • The income categories of the supporting company time transactions must exist in the leading company as active attribute values in the transactions' period.

	• If ACE transactions are included, the same *ACE* code must exist in the Leading company. • If the Leading project is Billable, the same unit must be used in the Supporting projects for Invoice element *Time*. • The configuration of the system parameters TS_FLD_1-4_ID is aligned.

When does this server process run?

Right after **TS03 Process time and expense** runs, if there are any supporting global projects set up

Outcome

For every time transaction corresponding to a supporting global project correctly processed by **TS03 Process time and expenses** that reaches the supporting company's invoice base, TS78 will generate one record in the leading company's timesheet maintenance, with the following information:

- *ACE*: the same as in the original transaction in the Supporting company, which meets the following conditions:
  - *Split* checkbox is not selected.
  - *Unit* is related to time units (for example: Hours).
- *Cost category*: it will be taken from the resource that the leading company has set up to hold the intercompany time transactions.
- *Cost department*: if system parameter DEF_PROJECT_DEP is active, it will be taken from the project or the work order. If not, it will be taken from the resource that the leading company has set up to hold the intercompany time transactions.
- *Income category*: the same as in the original transaction in the supporting company.
- *Resource*: the corresponding *IC resource* in the leading company.
- *Time code*: the same as in the original transaction in the supporting company. If it does not exist in the leading company, it will take the one specified by the system parameter DUMMY_TIMECODE, if active.
- *Time unit*: the same as in the original transaction in the supporting company.
- *Time value*: the same as in the original transaction in the supporting company.
- *Free attribute values*:
  - If the system parameter TS_FLD_RES_REL is active:
    - the same value as indicated in the relation for the corresponding IC resource in the Leading company.
  - If the system parameter TS_FLD_RES_REL is not active:
    - the same value as indicated in the Time entry in the Supporting company
    - The free attribute value is retrieved from the Leading Work order, if the value from the Supporting company does not exist in the Leading company, or if the Free attribute field is empty in the Time entry entered in the Supporting company

> **Note:** In case the time entry does not include a Work order, then the information is retrieved from the Project.

Transfer intercompany expenses (TS80)

Window usage

This server process transfers to each leading company all the expense transactions corresponding to global projects that have made it to the invoice base in the supporting company. This transfer consists of the registration of the expenses into the leading company's project expenses, allocated to their corresponding IC resource in the Leading company.

This server process is automatically triggered by **TS03 Process time and expenses** in the event that there is:

- At least one supporting project in the company running it
- The supporting project contains expenses

TS80 can also be launched manually, if, for some reason, the transfer has not been made available to the leading company on previous runs, by selecting the *Batch ID* previously processed by TS03 that contains the intercompany expense transactions that will be transferred to the leading company.

Prerequisites

In the leading company	• When the resource is indicated in the transaction, resources in the Supporting company must have their corresponding intercompany resource available in the Leading company. • In the **Leading company setup** window (TTS031), assign the relevant local information to the incoming expense.
In the supporting company	• Parameter WEB_EXP_VOUCHER_TYPE must be active.
In both companies	• If the expense type is indicated in the transaction of the Supporting company, the same expense type must be available in the Leading company.

When does this server process run?

Right after **TS03 Process time and expenses** runs, if there are any supporting global projects set up.

Outcome

For every expense transaction corresponding to a supporting global project correctly processed by **TS03 Process time and expenses** that reaches the supporting company's invoice base, TS80 will generate one record in the leading company's project expenses with the following information:

- *Resource*: the corresponding IC resource in the leading company.
- *Account*: the one indicated for the expense type in **Leading company setup**.
- *Supplier*: The one indicated for the Supporting company in **Leading company setup**.

- *Transaction number*: the corresponding value according to the transaction type indicated in the parameter WEB_EXP_VOUCHER_TYPE.

Process time and expenses (TS03)

Running TS03 from a Leading company

The company from which you run server process may be a Leading company, involved in a Global project.

In that case, when TS03 is run from a Leading company, it can consider as intercompany costs the invoice base transactions resulting from the supporting company's processed time, instead of its own hourly costs configuration. This way the anticipation of those costs prior to receiving the actual invoice from the supporting company will be more accurate.

To do that, simply activate the system parameter TS03_IC_COSTS.

> **Note:** Any changes manually made to the supporting company's invoice base will not take any effect on the costs retrieval from the Leading company by TS03.

Prerequisites

For the resource in the Leading company to whom the global projects transferred time has been allocated to:

- An active hourly cost with cost component *BP* must be set up
- Any other hourly cost than *BP* must be equal to zero

Intercompany billing (TS79)

Window usage

The **Intercompany billing (TS79)** server process is automatically triggered in the supporting company every time that the users run **TS02 Generate invoices** in order to generate any invoices.

It will detect which of those invoices correspond to global projects, and will make available some information related to them for the leading company, so that they can automatically register those intercompany supplier invoices.

Additionally, if the parameter TS79_CANCEL_COSTS is active, all the information related to the element type *Hours* includes its cost cancellation.

TS79 can also be launched manually for those invoices which, for some reason, have not been made available to the leading company on previous runs. This is done by selecting the Batch ID previously processed by **TS02 generate invoices** that contains the intercompany invoices that will be made available for the leading company in order to be automatically imported.

This is how TS79 works

- It reads the supporting company's invoice history.
- It detects which of those invoices correspond to a global project and have not been processed yet by itself.
- If the parameter TS79_CANCEL_COSTS is active, it detects which of the invoice details are corresponding to the element type Hours to cancel its costs[1],
- And then it creates the XML files with some information corresponding to those invoices, one file per Batch ID and leading company, and places them under the **Data Import** folder.

> **Note:** Bear in mind that if the XML file generation for one leading company fails for one Batch ID for any reason, then none of the XML files corresponding to other leading companies in the same Batch ID will be created. In other words, "all or none" of the XML files corresponding to one specific Batch ID will be generated.

Once this is complete, each leading company can import those invoices' information by launching the server process **EI02 Import of invoices**. This can be done manually, or a recurrent event can be set up to do this import automatically, by using **Intellagent** for example. This will only register the intercompany supplier invoices in the leading company, meaning that the posting needs to be done later, following the supplier invoices approval

[1]The cost cancellation accounts are taken from the configuration made for the cost component *Base pay* in the **Posting rules for cost components** window, based on the Leading company information for *Project type* and *Resource type*.

workflow. Then a PDF file could be attached by using the **Document Archive** functionality, but this needs to be done manually.

TS79 process works equally for crediting invoices.

When **TS25 Credit invoices** is run in the supporting company, TS79 is equally triggered and it processes the transactions accordingly.

> **Note:** Expenses are not included in the XML file when you run the server process TS25.

Prerequisites

In the leading company	• IC resource template linked to the Leading company must be configured in the **IC resources setup** window (XGR001). • Configure the **Leading company setup** window (TTS031) to assign the relevant GL accounts.
In the supporting company	• System parameter **TS_REUSE_BATCHID** must be set to "Off" for the server process to run.

When does this server process run?

TS79 is automatically triggered in the supporting company every time that they run TS02 in order to generate any invoices

Outcome

TS79 creates one XML file per processed Batch ID and leading company, and these are placed under the **Data Import** folder.

> **Note:** The XML is generated based on the XML schema **ABWInvoice schema 2011/11/14/**.

What will you get on the XML file?

- Invoice number, date, currency and the supporting company as a supplier ID.
- Lines of the original invoices will be aggregated by project and work order, and in case of expenses transactions, also by expense type. This way different expense types can be later be posted to different accounts in the leading company. Transactions corresponding to hours will always be posted to the same account, and same applies for other invoice elements. If the parameter TS79_INCLUDE_RESID is active, and the transaction includes the Resource ID, it includes the Resource ID in the following aggregation level:
  - Project
  - Work order

- Resource
- Invoice element: Hour, Expense type, other invoice elements…

> **Note:** The Resource ID displayed in the IC Billing is the corresponding IC resource in the Leading company.

- Lines for the cost cancellations (only if TS79_CANCEL_COSTS is active). For each aggregation corresponding to the element type **Hours**, two new lines are included: they correspond to the *Cost* account and its correlative *Balance* account. These accounts are selected according to the definition in **Posting rules for costs components (TS13)** for the project type in the leading company. Also, the resource type is based on the one of the *IC resource template* defined in the **IC resources setup** (XGR001) window.

> **Note:** When the system parameter TS79_INCLUDE_RESID is active, the cancellation of cost won't be grouped by Resource ID. Therefore, it is recommended that all the IC resources in the Leading company have the same Resource type as the IC resource template.

- Each aggregated line will contain amount, tax, total amount, account for GL posting, and of course the project and work order.
- Expense transactions that don't include an expense type will be treated as any other invoice element.

What will you not get on the XML file?

- The employee name,
- The description of the transactions,
- The number of hours for time transaction lines,
- Activities,
- Expense types,
- PDF document with the physical invoice.

Exceptions

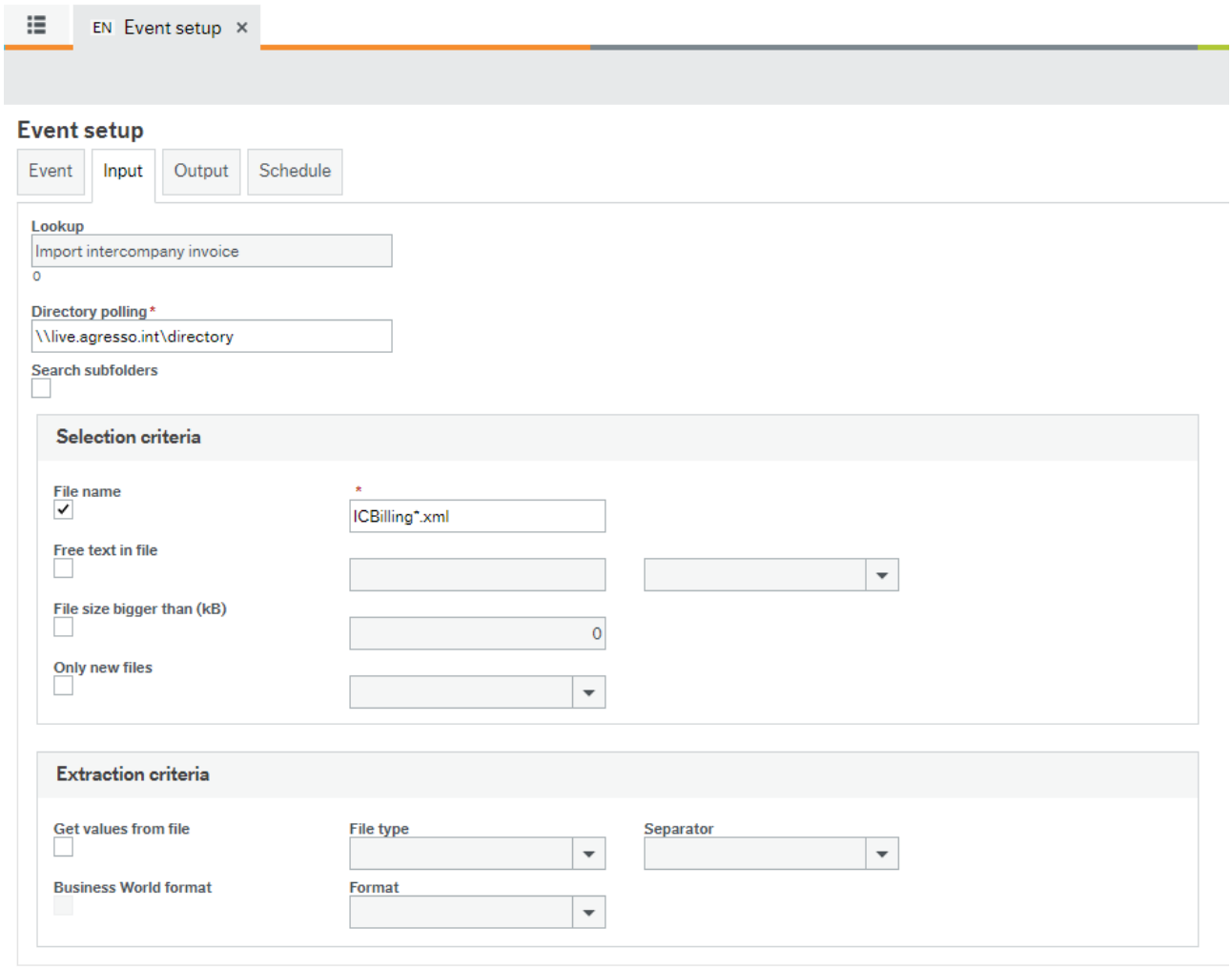
In general, the **Intercompany billing** server process generates XML files that contain tax information for the invoices on them.

However, there is one scenario under which the tax included on the XML will be set to zero: this is when a special tax treatment is specified at the leading company for the supporting company as a supplier, by using the functionality related to system parameter **EI_FORCE_TAX**.

Recommendations

In principle, **Intercompany billing** processes invoices in any currency. However, if the leading company currency is used, reconciliation between supporting company's AR and leading company's AP will be simpler.

Import of invoices can be automatically triggered in the leading company with the **Event setup** (TIN003) window. A prefix can be used to identify all the XML files that need to be imported to register intercompany invoices. Example:



> **Tip:** You can find more information to configure **Event setup** in the **IntellAgent** reference manual and online help.

It is recommended to use the system parameter **TS79_CANCEL_COSTS** when:

- The parameter **TS03_IC_COSTS** is also active,
- The server process **Post timesheets (TS04)** is run in the leading company.

This way, the cost reconciliations will match the values from Intercompany billing and the processed time entries.

Intercompany accounting

To get efficient intercompany accounting and reconciliation we have some recommendations. There are different options of configuration and processes. Therefore there will be a separate implementation guide with examples of different configurations.

Reconciliation purposes

On related entities, the intercompany balances on both sets of books should be identical.

For example, what one company gives, the other receives, so they should always match and upon reconciliation these two balances would net to zero. To achieve this and ensure it is easy to identify that you have a balance we recommended to establish separate intercompany accounts for accounts payable and accounts receivable.

To identify the IC company the transaction origins from you can use the IC customers and IC suppliers.

Recharging cost

Revenue recognition principles require that the cost and the income should be shown gross in your profit and loss account. That means that you account for the recharge as part of your income and your costs as part of your overhead in the profit and loss account.

- Establish separate intercompany accounts for revenue and cost.
- It could be useful to separate IC time cost from other IC cost based on the chosen process for posting of IC cost and revenue,

Categories on Intercompany transactions

- Project and work order will be global and can be used in all involved companies.
- Resources can also be included in some posting across companies if IC resources keep the resource ID from the master resource.

Processes for IC accounting

- The configuration allows some different approaches to the IC accounting:
    - You can configure IC time cost and an IC AP accrual to be posted when you post timesheets and balance the accrual when the incoming invoice arrives to the leading company.
    - You could use Intercompany triggers to post IC revenue in the supporting company when IC cost is posted in the leading company or vice versa.
    - You can set up internal IC cost accounts to be used in the project P&L that has a net effect of zero on the company P&L. This cost can be balanced when incoming invoice arrives to the leading company.
- Ensure that the same process is implemented in all companies. Since intercompany cost should be reflected as intercompany revenue in the billing company it is important to align the process in the different companies to ensure you always get a balance if you have a consolidated view.

PCB Reports and enquiries

Introduction

In this part of the document, you will find some of the options available with particular reporting tools in Project Costing and Billing (PCB). The focus is on what is known to be the most common data analysis needs of customers.

The document mentions how to use the various enquiry windows and standard reports in PCB, but it is not a complete description of all possibilities. What report variants and specific enquiries to define at a concrete site must be part of the discussions at the start of the implementation process.

Advanced enquiries not treated here

Although this document describes the enquiry options specific for PCB, it is not meant to be a reference for Unit4 ERP Enquiry tools. For information about more advanced options such as trees, analyser, database views and third party tools, please refer to the relevant documentation.

PCB Report needs

Four main types of analysis

PCB provides a variety of data analysis options. The most common needs in companies using the product lies in the following four categories:

- Follow-up analysis
- Project-oriented analysis
- Resource-oriented analysis
- Management analysis

The PCB enquiry windows are not single purpose, several of them may be used for most of these types of analysis.

Follow-up analysis

These are enquiries or reports designed to track specific information on a detailed level for a specific type of user:

Audit-oriented users, wanting to track a transaction backwards to find errors in posting or calculation, ensuring that timesheets are registered correctly, that costs and income for the employee is posted correctly, or checking for missing data or delayed processes, such as timesheets not entered, or expenses registered but not posted, or time validated but not invoiced.

Customer and AP/AR-oriented users, wanting to make sure that invoices are sent containing correct information, and that open posts are systematically matched in due time, ensuring also that expense claims are registered and posted, and the claimant reimbursed.

Employee users, wanting to look up their own time, or check that they have used the right project or work order, or whether they have any hours to take off.

Project-oriented analysis

Project managers want to stay informed about the status of the project. They may want to know how much time has been used on a project, work order or activity compared to what was budgeted, or analyse other aspects of the project, such as how much has been invoiced or status versus planned milestones.

Resource-oriented analysis

Many companies want to track the financial performance of their resources by monitoring their margin on costs versus revenue, or the percentage of hours worked on billable versus non-billable projects. Or just have a look at what the resources spend their time on - for instance the percentage of administrative work versus core function activities.

Management-oriented analysis

PCB also connects to the overall reporting requirements of the customer. This is where margins on the cost centres are looked at and compared with budgets and expectations.

Enquiries

These enquiries exist:

Window	Usage
Expenses (TS14)	Enquiries about and amendments of expense items posted in General Ledger and transferred to PCB for invoicing
Timesheet details (TS83)	Enquiries about personal timesheet rows regardless of whether or not they are approved
Invoiced details (TS41)	Enquiries about invoiced hour items, ACEs and fixed prices
Hours enquiries command in Project master file (TS01) on the Desktop.	Enquiries about hours registered on the project. Note that on Unit4 ERP Web you must create a separate enquiry and make it globally accessible.
Project master file (TTS001/TS01)	Enquiries about key data related to a project.
Time transactions (TS36)	Enquiries about registered time transactions, both open, validated and historical items
Balance table enquiry (GL30)	Enquiries to the General Ledger from Common

Reports

Many of the standard reports that come with Unit4 ERP are part of follow-up procedures during data entry and data processing. Among others , these reports exist:

- TS21 Work order print-out.
- TS55 Create missing timesheets.

PCB Balance tables

Introduction

These are the pre-defined balance tables using the amount types created by PCB: TSAGG, TSPROPLAN and TSBAL. In the following, some basic information useful for understanding particular aspects of enquiries with these balance tables is provided.

For a general introduction to Unit4 ERP balance tables, please see Financials documentation.

How to get it right

Description

When reviewing a customer's reporting requirements, it is important to understand which processes update which tables in order to determine when and where in the process the reports (enquiries) should be made. This section contains brief descriptions of connections between tables, server processes and database transactions.

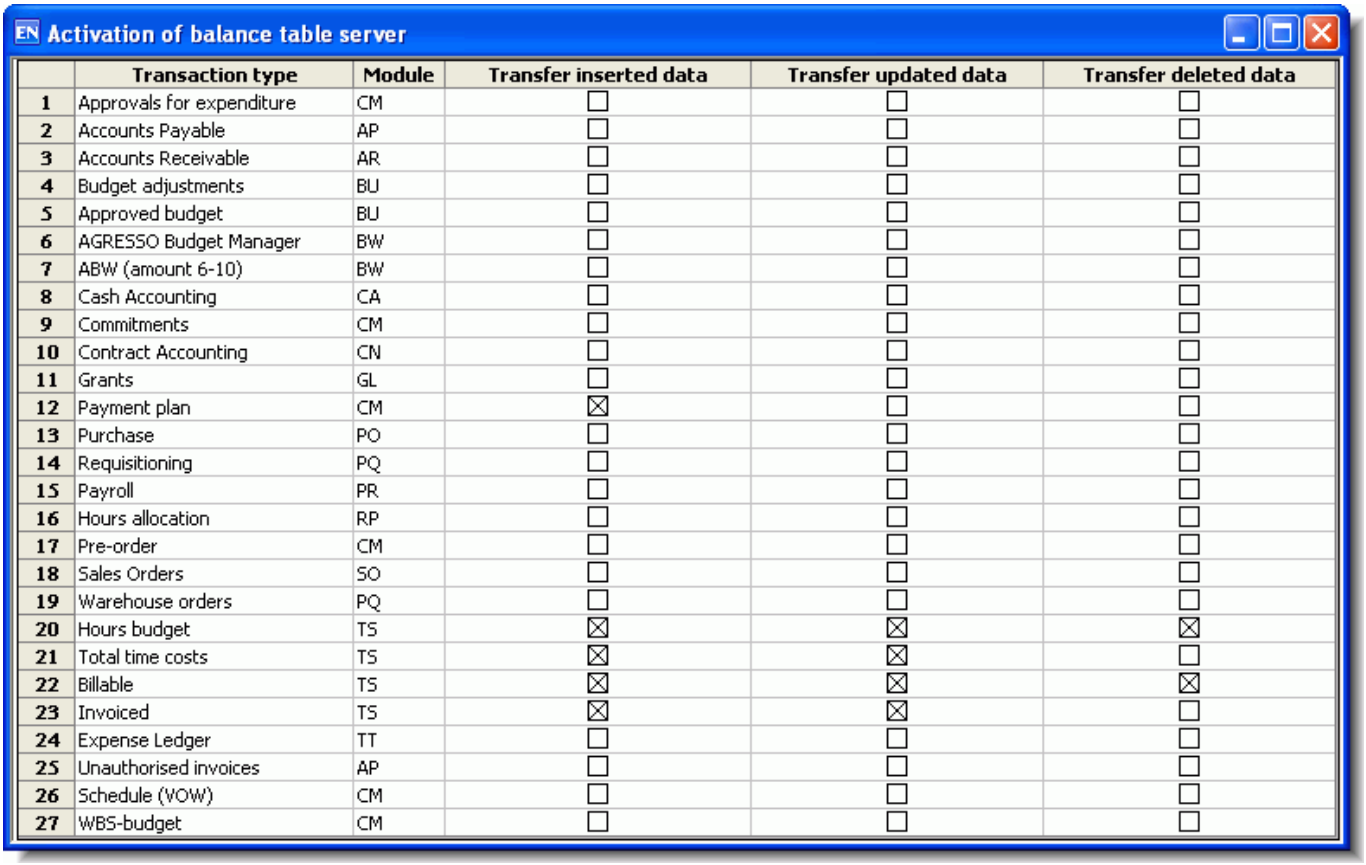
PCB amount types

Amount types generated by PCB, with their corresponding transaction types, table names and contents:

Amount type	Transaction type	Table name	Content
Billable curr.expenses	TH	atsinvtrans	Invoice base, validated hours
Billable expenses	TH	atsinvtrans	Invoice base, validated hours
Billable hours	TH	atsinvtrans	Invoice base, validated hours
Billable time amount	TH	atsinvtrans	Invoice base, validated hours
Budget hours	TB	atsbuddetail	Budget on project
Budget amount	TB	atsbuddetail	Budget on project
Costs	TC	atstrans	Validated timesheets and expenses
Hours	TC	atstrans	Validated timesheets and expenses
Non-billable costs	TC	atstrans	Validated timesheets and expenses
Non-billable hours	TC	atstrans	Validated timesheets and expenses
Invoiced expenses	TI	atsinvhistr	Invoiced transactions
Invoiced hours amount	TI	atsinvhistr	Invoiced transactions
Invoiced hours	TI	atsinvhistr	Invoiced transactions

Activation of balance table servers

For PCB balance tables to work, the database servers must be activated. This is the correct setup of the **Activation of balance table server** window, with the four relevant transaction types under the TS module:



	Transaction type	Module	Transfer inserted data	Transfer updated data	Transfer deleted data
1	Approvals for expenditure	CM	☐	☐	☐
2	Accounts Payable	AP	☐	☐	☐
3	Accounts Receivable	AR	☐	☐	☐
4	Budget adjustments	BU	☐	☐	☐
5	Approved budget	BU	☐	☐	☐
6	AGRESSO Budget Manager	BW	☐	☐	☐
7	ABW (amount 6-10)	BW	☐	☐	☐
8	Cash Accounting	CA	☐	☐	☐
9	Commitments	CM	☐	☐	☐
10	Contract Accounting	CN	☐	☐	☐
11	Grants	GL	☐	☐	☐
12	Payment plan	CM	☒	☐	☐
13	Purchase	PO	☐	☐	☐
14	Requisitioning	PQ	☐	☐	☐
15	Payroll	PR	☐	☐	☐
16	Hours allocation	RP	☐	☐	☐
17	Pre-order	CM	☐	☐	☐
18	Sales Orders	SO	☐	☐	☐
19	Warehouse orders	PQ	☐	☐	☐
20	Hours budget	TS	☒	☒	☒
21	Total time costs	TS	☒	☒	☐
22	Billable	TS	☒	☒	☒
23	Invoiced	TS	☒	☒	☐
24	Expense Ledger	TT	☐	☐	☐
25	Unauthorised invoices	AP	☐	☐	☐
26	Schedule (VOW)	CM	☐	☐	☐
27	WBS-budget	CM	☐	☐	☐

Transaction type

The four transaction type codes correspond to the following descriptions in the window above. They are updated by the AGRDWS, after the relevant server process has run, as shown in this table:

Transaction type	Description	Updated by AGRDWS after
TB	Hours budget	PP01 Transfer estimate to budget and TS18 Copying a budget is run.
TC	Total time costs	TS03 Process time and expenses is run.
TH	Billable	TS03 Process time and expenses is run.
TI	Invoiced	TS02 Generate invoices is run.

Balance table TSAGG - some issues

Function

This pre-defined aggregated balance table is used with the **Balance table enquiries** window. It draws data from all General Ledger transactions with category 2 on the transaction string (project is indicated). More information is found in the online help.

Posting and update

For TSAGG, posting attributes ACCOUNT (A0) and PROJECT (B0) must be filled out. Attributes RESNO (C0) and ACTIVITY (B1) can be blank.

Definition

This figure shows the **Balance table definition** window with TSAGG selected. It shows how PROJECT and ACCOUNT need to be filled in to include a transaction in the balance table, while the remaining attributes are not needed. The amounts include a variety of budget types.

Budget types available

All three budget types for project are in use in TSAGG:

Budget type	Name
BB	Budget
BR	Revised budget (budget 2)
BF	Forecast

Enquiries

For enquiry possibilities, please see the Balance table enquiries (TSAGG) section in the succeeding Balance table enquiries chapter.

Balance table TSBAL - some issues

Introduction

TSBAL draws data from all PCB tables, and is accessed through the **Cost and income analysis enquiry** window. It can also be accessed directly in the General Ledger, but only for data previously posted in the PCB module. This balance table is a very delicate tool, and it is not advisable to amend its SQL. If special needs arise, a better option is to make a separate balance table.

Not really a balance table

TSBAL is officially an aggregated balance table updated by the AGRTPS for most transactions, except budget data, which is updated by the **PP01 Transfer estimates to budget** and the **TS18 Copy a budget** server processes. However, it is better to think of TSBAL as a transactional balance table with special features for two important reasons:

- The database definition of the balance table is different from that in Unit4 ERP and includes non-standard column names.
- Balance table enquiry cannot be used on it, a dedicated enquiry window is provided instead.

Activation

These are the most important points to ensure that TSBAL will be updated by the AGRDWS:

- Balance table servers must be activated for the four transaction types (TB, TC, TH, TI) used in TSBAL.
- To make data available, the **AG01 Balance table update** server process needs to be run once for each of the four transaction types after some time transactions have been processed fully.
- For subsequent updating of budget data, the server processes indicated above will update the various columns.

Columns

The following columns are found in TBAL:

Column	Transaction type	Selected from
Costs	TC	atstrans.amount
Billable hours (orig)	TC	atstrans.used_hrs (atstrans.status not T)
Hours	TC	atstrans.used_hrs
Billable amount	TH	atsinvtrans.to_invoice
Billable hours	TH	atsinvtrans.inv_value
Invoiced amount	TI	atsinvhistr.amount
Non-billable costs	-	If accounting period is 0 in atstrans, or if invoice rule is set to non-billable.
Non billable hours	-	If accounting period is 0 in atstrans, or if invoice rule is set to non-billable
Budget hours	TB	atsbuddetail/budget hours
Budget amount	TB	atsbuddetail/budget amount
Amount (GL)		Not in use

Some things to consider

The following is a list of potential areas of confusion or problems with TSBAL:

Potential problem	Explanation and tips
Only revised budget shown	Although TSBAL has a column called Budget amount, this column really draws data from budget type BR, which is the Revised budget type in PCB. To have access to budget data in this balance table, it is advisable to always have the current budget data placed in the revised budget, too.
Only updated if provided with GL-period	Only transactions period with GL-period different from 0 - zero - will be updated. This means that all transactions in atstrans should be processed with Post timesheets (TS04) before (AG01) is ordered for these transaction types.
Do not restore this balance table!	Because the database definition of this balance table is different from the Unit4 ERP definition, the Restore command on the Tools menu in the Balance table definition window will only recreate the columns mentioned in the Unit4 ERP setup. Restoring the balance table will therefore result in the dedicated enquiry window NOT working anymore.
Do not delete and redefine this balance table!	TSBAL has additional amount columns not appearing in the balance table definition window. The hidden columns are lost if the balance table is deleted and redefined with the amount columns seen in the original table. After this operation, the dedicated enquiry window will no longer work, while the General Ledger balance table enquiry window will, albeit only with the columns that are redefined.
Use caution	Because the column names and the standard amount types used in TSBAL do not always coincide (asysamounttype.col_02 disagrees with column names), online help for column names in Excelerator and

Potential problem	Explanation and tips
with third-party reporting tools	Crystal report do not necessarily give the correct information about TSBAL.

Enquiries

For enquiry possibilities, please see the Cost and income analysis (TSBAL) section in the succeeding Balance table enquiries chapter.

Balance table enquiries

Introduction

In addition to the set of standard reports within Project Costing and Billing, ad-hoc enquiries and reporting on the balance tables is also possible, using the standard enquiry tool or the Unit4 ERP Browser and Analyzer.

This kind of reporting is very important to most organizations, and is used extensively as a way to quickly analyse income, costs, and time transactions.

As with other Unit4 ERP modules, it is possible to make individual printouts from enquiry windows or select areas and transfer the items to a spreadsheet or word processing program. Both the result and the enquiry set up can be distributed to others via electronic mail. When enquiring into the different registers, the user can, as a rule, select what fields to see. Sub-totalling and sort order can also be specified.

Requirements analysis needed

These tools allow information to be analysed at different points in the processing e.g. it is possible to look at the number of hours registered against an Activity/Work-Order/Project immediately following the **TS13 Transfer timesheets process**.

Cost and income analysis (TSBAL)

Function

This window can show all data on a project posted through the Project family of modules. It uses the pre-defined TSBAL balance table. The window can be used both with setup, browser and analyser.

Costs and income analyse

In the **Cost and income analysis** window you can compare actual costs and income on a project with what was estimated in the budget. It can also be used to enquire about overall use of time in an project and to show totals of hours per resource in a given period, with comparisons between total hours, non-billable and billable hours, as well as the calculated costs and income for each row. Margin calculations could have been added as well.

Balance table enquiries (TSAGG)

Function

This enquiry window uses the TSAGG balance table, and thus can draw data from anywhere in the company as long as the transaction has been posted to the General Ledger and has a project indicated.

System parameters in PCB

Introduction

This part of the document provides a listing of system parameters used in Project Costing and Billing. The table below shows an abbreviated description of the system parameters. Please refer to online help for the complete description.

System parameters

System parameters	Abbreviated description
ATTR_ID_INV_SPLIT	Use to distribute invoice amount on several customers. **Warning:** TS_INV_ROUNDING must not be active at the same time, or the TS01 report stops.
CONTRACT_PRICE	Use to retrieve cost price for consultants.
DEF_AUTH_LEVEL	Use to define default authorisation level for project registration.
DEF_HOURS_PER_DAY	Use to define number of hours per work day.
DEF_HOURS_PER_WEEK	Use to define number of hours per work weeks.
DEF_INV_STATUS	Use to set default invoice status for invoice base rows.
DEF_PROJECT_DEP	Use to define default cost centre for time registration.
DEF_WORKORDER_MANAGER	Use to define which resource will be used as the default value for the manager of the work order.
DISPOSABLE_ACCOUNT	Use to define account for remaining costs (when forecasting).
DUMMY_TIMECODE	Use to define default time code for time registration.

System parameters	Abbreviated description
EMPLOYEE_VALUE	Use to decide cost rate for cost element BP (base pay).
EMPLOYEE_VALUE_CALC	Use to set formula for calculation of hourly costs.
EXP_CHECK_TIMESHEET	Use to control expenses connected with timesheets.
EXPENSE_ACCOUNT	Use to define account for expenses (when forecasting).
FIXED_ACT_DESCR	Use to set a fixed description for activities.
FIXED_ACTIVITY	Use to define if activities must be an attribute value.
FLEXI_TIMECODE	Use to set time code used for flexi-time.
GP_DEFAULT_COMPANIES	Use to set the default list of Supporting companies to be automatically added in the Global project tab when a project is marked as Global in **Projects** (TTS001).
HRS_ACCOUNT	Use to set account for hours (for forecasting or time transactions)
INV_ON_DATE	Use to set if customer invoices should be sent daily or periodically.
INV_VALUE_NO_ROUNDING	Use to define rounding or decimal values for timesheet hours.
OLD_PRICE_STATUS	Use to save historical prices.
PERIOD	Use to set week or month as timesheet unit.
POSITION_VALIDATION	Use to define validation routine for positions in timesheet.
PRE_ADV_AR_ACCOUNT	Use to set AR account for Adv. paym field in **Customer group**.
PROJECT_ATT_1-7_ID	Use to define account analysis template for projects.
PROMPT_VOUCHER	Use to set if timesheet trans_no should be confirmed.

System parameters	Abbreviated description
REG_VOUCHER_TYPE	Use to set transaction number series for timesheets.
START_INV_ON_EXP	Use to define invoice rows influenced by *Start invoicing* field.
TIMECODETRANS	Use to define holiday reporting during timesheet validation.
TIMECODE_UNPAID	Use to define payment & deduction code for invalid absence.
TIMECODE_UNPAID_STATUS	Use to define status for timesheets containing invalid absence.
TIMESHEET_DESCR	Use to control the text of column *Description* in the timesheet row. Possible values: • **P** - Project description (default value). • **W** - Work order description. If no work order is stated, the activity description will be proposed. • **B** - Blank description.
TRANSFER_CHANGE_FIELDS	Use to automatically update the work orders fields with the changes done on a project, in Projects masterfile.
TRANSFER_CHANGE_RELATIONS	Use to automatically update the work orders relations with the changes done on a project, in Projects masterfile.
TS_BALANCE_VARIANT	Use to define distribution of hours deviating from normal hours.
TS_BATCH_SIZE	Use to control number of transaction loaded for price calculation.
TS_CHK_VOUCHER_DATE	Use to stop TS25 and TS12 if dates entered go beyond posting period.
TS_CN_UNIT	Use for unit description for hours in TS16.
TS_CONNECT_ACT	Use to set when activity registration on the **ConnContr** tab is allowed.
TS_CONTRACT_AMT	Use for retentions, to set maximum project amount (i.e. the attribute used for storing the contract amount per project).
TS_CP_ELEMENT	Use to set cost components when invoicing customers based on cost.

System parameters	Abbreviated description
TS_CUR_TYPE	Use to define default values for the *Currency* field in TS01.
TS_DEF_AMT_VAR	Use to define budget variant for registration or maintenance of budgets.
TS_DEFAULT_PERIOD	Use to set default time period in **Timesheets-standard**.
TS_DEFAULT_DIA	Use for DIA functionality settings in **Timesheets-maintenance**.
TS_ENFORCE_DATE	Use to set *Date* field to mandatory in **Timesheets - maintenance**.
TS_EXPENSE_PAY	Use for reimbursement settings for expenses.
TS_EXPR_A4	Use to set customer relations in **Value reference rates**.
TS_EXPR_B0	Use to set project relations in **Value reference rates**.
TS_EXPR_C0	Use to set resource relations in **Value reference rates**.
TS_EXPR_D0	Use to set product relations in **Value reference rates**.
TS_EXTRA_VAR	Use to set cost component for variable extra pay transactions.
TS_FINANCING_INV_ROUNDING	Use to enable the rounding differences correction in **TS01 Creation of invoice proposals** server process, that are caused by the Project financing split rules.
TS_FLD_1-4_ID	Use to define free attributes for registration of projects and work orders.
TS_FLD_RES_REL	Use to transfer the free attribute values when running the server process **TS78 Transfer intercompany timesheets**, based on the IC resource relations in the Leading company.
TS_HRS_AMT_VAR	Use to define budget variant for hours when forecasting.
TS_INC_ATTR_ID	Use for settings of minimum calculations of billable hours.
TS_INC_REL_ATTR_ID	Use for settings of minimum calculations of billable hours.
TS_INT_CUST	Use to set a customer group for internal invoicing.
TS_INV_ACCOUNT	Use to set dummy account for invoice rows.

System parameters	Abbreviated description
TS_INV_HRS	Use to set if *Number* field in TTS008 should be amendable.
TS_INV_PROP_DOCTYPE	Use to set document type for invoices in TTS008 and TTS108.
TS_INV_RATE	Use to set if rates or price lists are used to calculate income on invoices.
TS_INV_ROUNDING	Use to define rounding routine for invoices in TS01. **Warning:** ATTR_ID_INV_SPLIT must not be active at the same time, or the TS01 report stops.
TS_INV_VALUE	Use to ensure that billable time is equal to hours worked.
TS_INV_PROP_HEADER	Use to enable the approval of invoice proposals at header level.
TS_KEEP_SO_GL	Use to define where to take GL Analysis from for invoices in TS27.
TS_NO_OF_DECIMALS	Use to activate rounding on customer invoices, and define rounding settings.
TS_PART_INVOICE	Use to allow partial invoicing. **Warning:** TS_PART_INVOICE can't be active at the same time as TTS027_ENABLE_TOOLS.
TS_PO_ELEMENT	Use to set default invoice element for products from a purchase order.
TS_PO_TRANSF	Use to include *PCB Invoicing* check box in **Entry/Am. of purchase order**.
TS_PERF_RESSCHED_UNIONS	Use to improve performance in **Timesheet approval**.
TS_PRICE_DECIMALS	Use to define number of decimals for prices in **Invoice base**.
TS_RATE	Use to activate rate functionality in PCB.
TS_RATE_METH	Use to set attribute for rate functionality (a valid PD code).
TS_RATE_PERS	Use to activate rate functionality in **Timesheets - standard**.
TS_RESOURCE_SUPPLIER	Use to define resources as suppliers for e.g. reimbursement.
TS_REUSE_	Use to define settings for system checks of batch IDs in TS01.

System parameters	Abbreviated description
BATCHID	
TS_SO_ELEMENT	Use to set default invoice element for product transactions from sales orders.
TS_SO_TRANSF	Use to include *PCB Invoicing* check box in **Entry/Am. of sales order**.
TS_TAX_BASE_ DECIMALS	Use to set no. of decimals for base amount used for tax calculation.
TS_TAX_BASE_ ROUNDING	Use to set no. of decimals for posting of VAT from TS02 and TS25.
TS_USE_REL_IN_ GL_ANAL	Use to allow usage of relation values for posting to General Ledger.
TS_VT_PRE_REG	Use to set transaction type for internal supplier invoices.
TS_WAIT_FOR_ DOCUMENT	Use to make end user aware of TS56 running in the background.
TS_WITHDRAWN	Use for retentions, to set maximum amount that will be held back (i.e. the attribute used for storing the percentage amount of contract value to be retained).
TS_WORK_TYPE	Use to set if job type should be used in timesheet registration.
TS_ZERO_HRS_ APPR_FIELDS	Use to define display settings for approval fields in TS01.
TS01_ CHARGECODE	Use to insert *Charge code* column in TS01, **Connection** tab.
TS01_HIDE_ APPR_FIELDS	Use to hide approval fields in TS01.
TS01_VARIANT	Use to set report variant for TS01 server process from **Invoice base** (TTS027).
TS02_VARIANT	Use to set report variant for TS02 server process from **Invoice proposal maintenance**on Unit4 ERP Web.
TS03_CHK_ PRICE	Use to set TS03 treatment of rows with no prices from Invoice base.
TS03_DISABLE_ PRICE_CALC	Use to set if TS03 should include price calculations.
TS03_IC_COSTS	Use it (in the leading company) to define if, for global projects transactions transferred from the

System parameters	Abbreviated description
	supporting company, TS03 should consider as costs the invoice base transactions resulting from the supporting company's processed time, instead of its own hourly costs configuration.
TS03_ONLY_POSTED_EXP	Use to define settings for TS03 transfer of expenses to **Invoice base**.
TS04_SHOW_REL	Use to set if TS04 should display extra relations for a resource.
TS04_LIMIT_CONTROL	Use to set if TS04 should use limit control.
TTS025_VIEW_FILE	Use to show/hide **Print preview** button in **Timesheets - standard**.
TS25_AUTO_MATCH	Use for automatic matching of original invoice and credit invoice.
TS27_USE_ACT	Use to set if activity is mandatory for fixed price rows in **Invoice base**.
TS29_VARIANT	Use to set report variant for TS29 server process from **Invoice base**on Unit4 ERP Web.
TS56_VARIANT	Use to set report variant for TS56 server process.
TS79_CANCEL_COSTS	Use to set if the cost associated to *Hours* should be cancelled when generating the Intercompany billing server process for a **Global Project**.
TS79_INCLUDE_RESID	Use to enable in the server process **Intercompany billing** (TS79) the aggregation of data by Resource ID, in case the transaction includes that information.
TTS027_ENABLE_TOOLS	Use it to enable in the Invoice base (TTS027) window (tab **Time and ACE**): • the button **Change subtotal**, • and the fields *Inv price - amount* and *Inv price - Write up/down (%)* in **Change values**. See Invoice base - Editing fields for more info about all the changes implied when you activate this system parameter. **Warning:** TTS027_ENABLE_TOOLS can't be active at the same time as TS_PART_INVOICE.
TTS121_VIEW_ALL	Use to set if project details should be displayed in TTS121
USE_ACTIVITY_RULE	Use to set if activity-specific invoice rule should be used for billable projects.
USE_UNRO_TAX	Use to calculate total taxes decimal rounding. When active, the total of the invoice taxes is

System parameters	Abbreviated description
	calculated with the unrounded taxes of each item. Then, the total is rounded according to the number of decimals specified in the **Currency code** (TCR032) window. When inactive, the total of the invoice taxes is calculated with the rounded taxes of each item.
VOUCHER_TYPE	Use to set transaction type for transaction numbers in TS13 and TTS004.
WEB_EXP_ VOUCHER_TYPE	Use to set the Expense transaction type to use when saving an expense entry. The default value is **TE**.
WORKORDER_ ATT_1-7_ID_	Use to define account analysis template for work orders.
WTS_NO_OF_ DECIMALS	Use to set no. of decimals displayed for rates in specific windows.