

# Infor LN Project User Guide for Project Estimation

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# **Table of Contents**

#### **About this document**

Chapter 1 Introduction	7
Chapter 2 Project Estimating Concepts	9
Understanding the estimating process	9
Project Estimates	9
Estimate types	9
Leading Estimate Types	9
Budget types for launching estimates	10
Estimate Version	10
Estimate Version Structures	10
Estimate Series	10
Bid	10
Chapter 3 Project Estimation Processes	11
To define an estimate	11
Prerequisite	11
Defining an estimate version	11
Copying structures from Project	11
Defining estimate lines	12
Calculating the estimates	12
Scheduling the estimates	12
Launching the estimate	12
To use estimate line levels	13
To use a leading estimate type	14
To structure the estimate	14
Estimate lines	15
Estimate details	17
To use level types	18
Top-down level types	18

Bottom-up level types	19
Leading estimate type (LET) calculations	19
Total level type calculation	19
To use an estimate version	20
To create an estimate version	20
To use estimate structures	21
To launch an estimate to a budget	22
To launch an estimate to a top-down budget	23
To launch an estimate to a bottom-up budget	23
To use a bid	24

## About this document

#### **Objectives**

The objectives of this book are to describe the purpose of project estimation, what you can accomplish using estimate structures, and how to create and use estimates for projects.

#### Intended Audience

This book is intended for those who want to learn how to use estimates, estimate lines, estimate structures, estimate versions, and bidding in the way that best serves their purposes. Both end users and users on administrator level will find the information they require.

#### **Assumed Knowledge**

Familiarity with the business processes involved in creating estimates in projects, and general knowledge of the Infor LN functionality will help you understand this book. In addition, Project training courses are also available.

#### **Document summary**

The first chapter, *Introduction*, describes the purpose and the general characteristics of estimates.

The following chapters deal with the estimate setup, describes how to create estimate lines and versions.

This book describes procedures that users carry out using project estimates, and provides some information on the underlying processes that Infor LN carries out. The most important session windows and fields involved are discussed, but a full description of all software components is outside the scope of this book. For details, refer to the online Help.

#### How to read this document

This document was assembled from online Help topics. As a result, references to other sections in the manual are presented as shown in the following example:

Please refer to the Table of Contents to locate the referred section.

Underlined terms indicate a link to a glossary definition. If you view this document online and you click on underlined text, you jump to the glossary definition at the end of this document. Non-underlined references do not represent a link to glossary definitions or other elements.

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Estimating is a cost engineering process used to determine an estimate for a project using the estimate types, versions, structures, and the budget types to prepare a bid or proposal for the project. An estimate can include parts, assemblies, operations, subcontracting effort, equipment, and other direct and indirect costs. The use of estimating as part of LN Project is optional.

# Understanding the estimating process

This chapter provides you with an overview of estimates for a project and the various related processes.

## **Project Estimates**

An estimate is a statement of probable cost and sales value for supplying certain goods or services. An estimate is created in anticipation of receiving an order. Project Estimating is used for the preparation of tenders/quotations to calculate the costing for the project, in order to arrive at an estimate.

## Estimate types

An estimate type is calculated using either a top down or a bottom up structure.

- Top down: When calculating the cost or sales amount in a top down structure, you distribute a top amount to the lower level elements.
- Bottom up: When calculating the cost or sales amount in a bottom up structure, you enter the exact amounts for the lowest level elements and aggregate the same to calculate top amount.

## **Leading Estimate Types**

The estimate type of the structural elements of the project are the leading estimating types. If the leading estimate type is bottom up, Infor LN calculates the total leading estimate type (LET) amount by adding all the estimate line amounts with the same level type. If the leading estimate type for the top structural element is top down, the total LET is the structural element amount that is defined as top down. Top-down structural elements are only checked to determine if the estimate amounts do not exceed the parent amount; However, these elements are not used when calculating the total estimate.

## Budget types for launching estimates

You can select one of the following budget types when launching an estimate to a budget:

- Top-down budget.
- Bottom-up budget (activity budget).
- Bottom-up budget (element budget).

#### **Estimate Version**

Estimate versions are part of an estimate project and use structural elements to define the structure of an estimate. Versions can be used to differentiate between various approaches or internal or external requests for a price calculation.

#### **Estimate Version Structures**

Estimate version structures are used to order or to classify the estimate. In many cases, multiple estimate-version structures enable you to create different classifications of the estimate data. An estimate-version structure can be an imported activity structure, element structure, cost component structure, or an extension assigned to the structure. These structures are imported from an existing project. You can also link a user-defined structure to an estimate version. It is optional to use structures in the estimating phase.

#### **Estimate Series**

The estimate series is used to create a unique project number. Organizations can have separate project ranges for estimating projects or use estimating as a phase of a project, and include estimating in the project used for execution. Estimate series are ideally used to create a project number.

#### Bid

The objective of the estimation process is to prepare a quotation or bid that comprises of the sales price information of the deliverables (primary structural elements).

## To define an estimate

The estimate process is used to prepare a proposal, a quotation, or a bid. An estimate compromises of the sales price and information on the proposed scope, the project schedule, and the contract.

## Prerequisite

Create a project in the Projects (tppdm6100m000) session. You can use an activity or element structure.

## Defining an estimate version

Create an estimate version using the Estimate Versions (tpest1100m000) session. Using various estimate versions, you can create different estimates. For example, to compare alternative estimates, create contract extensions, or handle any additional scope of the estimate. Each estimate version is unique and is not related to or derived-from another version.

## Copying structures from **Project**

You can link structures to the estimate version. However, you can also create an estimate without using a structure. To create a structure code, in the Estimate Versions (tpest1100m000) session, on the Specific menu, select Estimate Structures ( **Note**: A new structure code requires structural elements). On the Specific menu, select **Generate Structural Elements**.

In the Generate Structural Elements (tpest1220m000) session, you can copy the structural elements from the project-specific activities, elements, extension lists, or cost components. You can view the new elements in the Estimate Structures (tpest1110m000) session. You can link up to eight structures to one estimate version. Having multiple structures in an estimate enables you to classify your estimate as required.

For example, a customer sends a request for a quotation for ten ships. The estimate project is activity based. In the version, you use an activity structure with activities such as System Engineering and Component Production. In case, you do not want the customer to view this level of detail, on the bid, you also link a less detailed element structure to the estimate lines. When you prepare the bid, you only

use the linked elements such as Hold, Deck House, and Navigation. Consequently, the bid will only display what you want the customer to view.

## Defining estimate lines

The Estimate Lines (tpest2100m000) session is crucial to the estimating functionality. In the Estimate Versions (tpest1100m000) session, on the Specific menu, select **Estimate Lines**. Specify the lines for the estimate version. An estimate line contains a cost price or a sales price. You can also use a combination of sales and cost price.

You can define a sales estimate from a cost estimate or use the various estimate versions. The estimate lines can be either top down or bottom up (or a combination of both estimate types). Bottom-up estimate lines are summed up to provide the overall estimate. Top-down estimate lines are always related to a primary structure. Using estimate lines, the total estimate value is distributed over the estimate version structure.

## Calculating the estimates

Using the estimate sessions, you can calculate the estimate for a project. However, you can also use Microsoft Excel integration to calculate the estimate. To use Microsoft Excel integration, in the Estimate Lines (tpest2100m000) session, right-click an estimate line, go to Action > Send to. The following templates are available:

- Estimate-Line.xlt: calculates all field values of estimate lines.
- Quantity-Calculations.xlt: calculates estimate quantities.
- Amounts.xlt: calculates surcharge, escalation, and contingency amounts.
- CostPrice-Calculation.xlt: calculates the cost price.
- SalesPrice-Calculation-Mark Up.xlt: calculates sales prices and markup.
- SalesPrice-Calculation-Target.xlt: calculates sales prices with target pricing.

## Scheduling the estimates

You can export the start date and end date of the activity to the related estimate lines. Click **Modify Utilities** on the Specific menu, and select the Update Estimate Line Dates from Activities (tpest2204m000) session, the date of the incurred cost and expected sales is updated.

## Launching the estimate

Use the Launch Estimate to Budget (tpest2200m000) session to launch your estimate to the Budgeting module. For example, if the bid is accepted by the customer or (part of) the work must start.

For the estimate process, the structures can be blank. If you launch your estimate to a project budget, you must specify a default element, activity, extension, or cost component to which you can copy the lines. You can set the version and/or estimate lines status to **Final** to ensure the estimates are launched on time.

When the bid is successful, these options are available:

- You can launch the estimate as a project.
- You can start a new project by copying the estimate project in the **Copy Projects** (**tppdm7840m000**) session. Consequently, the Project Status in Estimating module is set to **Blocked**. Using this process, you can separate estimate projects from projects, for a customer contract. In the new project, you can launch the copied estimate to a budget. You can close an estimate project version by changing the status from **Free** to **Closed**.

## To use estimate line levels

Use the estimate level type to determine which lines must be used in aggregating the total for a bottom-up structure. An estimate level type is used to calculate the top-down amount, based on the structural element. An estimate level type is also used to determine which estimate line must be launched to the budget. Using the Structural Elements (tpest1120m000) session, you can define the parameters for the level types.

For the Top Down estimate type, amounts can not be aggregated. Therefore, the different level types can only be used to check the primary structure for consistency. The available level types are:

- Total: Only one estimate line of a structural element can be linked to the Total level type. The child element estimate lines amount cannot exceed the parent's top-down amount.
- Cost type: Only five cost type lines are allowed, each cost type can be used only once. The consistency check is done to determine, if the Total level type amount of the same structural element exceeds the cost type amounts.
- Other structures: This structure may not exist when you create an estimate; however, it can be linked any time before the preparation of the bid, the analysis, or the launch. The consistency check is done to determine, if the amount of the line exceeds the amount of the structural element and the Total level type.
- Detail: The consistency check is done to validate, if lines with the same cost type are less than or equal to the cost type amount and the Total level type of the related structural element.

For the Bottom Up estimate type, only the Total and Detail level types are applicable. These level types are used to aggregate total lines or detailed lines for costs and sales, and to launch estimate lines to a budget.

The total line can be used to include the cost and/or sales effort that are yet to be defined. Often the total line will be replaced with several detail lines. For example, an estimate must include the cost for producing a piece of equipment. However, the details initially are not known. A total line is included for the total guesstimated cost. When the engineering of the equipment is done and the detailed effort in labor and materials is known, these detailed lines will be added to the estimate and flagged as being in scope. The total line can be retained for comparison but the In Scope option is no longer applicable.

Only the Total and Detail level types can be used to view the difference in estimate lines, because a bottom-up estimate, linked with amounts, does not have a structure relationship. You can enter and add

the costs because a consistency check is not required. For a bottom-up detailed line, a primary structure element is not mandatory.

# To use a leading estimate type

Estimate types enable you to switch between top-down estimates and bottom-up estimates. Initially, project estimation is determined using a top down structure as detailed information of project costs are not available.

As a part of estimating, you create a feasible bid for your customer. You then calculate the approximate target cost price for your project. You can use this cost amount to allocate the estimate for the required work or the departments involved.

For example, a customer requests for the approximate cost for a luxurious yacht. The shipyard evaluates the request for the quotation. The sales price is determined to be approximately EURO 65 million. The yacht must be built, using the expertise of the of the Project Management (PM) and the Construction department. The PM department is required for redesigning an existing CAD drawing of a ship, which costs EURO 9 million. The Construction department requires approximately EURO 50 million to build the yacht and a subcontractor is assigned for the yacht's decor.

Specify the following estimates in the Estimate Versions (tpest1100m000) session:

Version: 1a Estimate Yacht

Version amount: EURO 65 million

Profit fee: EURO 5 million

Management reserve: EURO 0 million
Undistributed amount: EURO 60 million

Distributed amount: EURO 0 million

Top down: Define an amount for the TOP of EUR 60 million. The distributed amount is EURO 60 million.

The activity structure for building the ship:

- TOP = The yacht
- 01 = Redesigning
- 02 = Building ship
- 03 = Decorating

01, 02, and 03 are linked as child activities to the TOP.

#### To structure the estimate

To create an estimate, the structural element with a top-down leading estimate type is required. In the Structural Elements (tpest1120m000) session, you can define the estimate type as top down or bottom up. The leading estimate type of a structural element determines the method of calculation of the estimate and you can also modify the estimate type.

Enter your top-down estimate in the Estimate Lines (tpest2100m000) session such as the line number, activity, description, estimate type, line level type, and amount in EURO.

Line 5	TOP	Yacht	Top down	Total	60 million
Line 10	01	Redesign- ing	Top down	Total	9 million
Line 20	02	Building ship	Top down	Total	50 million
Line 25	03	Decorating	Top down	Total	1 million

Element 03, Line 25, is subcontracted to another company. A request for a quotation is sent to the subcontractor, but the estimate for the cost is EURO 1 million.

#### **Estimate lines**

You must specify detailed estimate lines and you must define the entire estimate structure. Child activities, for which more bottom-up information is available, use the Bottom-Up leading estimate type option:

Structural Element	t LET	Lunch Level Type	Cost Level Type	Sales Level Type
TOP = The yacht	top down	detail	total	total
01 = Redesigning	top down	detail	total	total
02 = Building	top down	detail	total	total
03 = Decorating	top down	detail	total	total
011= CAD rework	top down	detail	total	total
021= Steel	bottom up	detail	detail	total
022= Yard work	bottom up	detail	detail	total
023= Engine	bottom up	detail	detail	total

The structural element 011 is linked to 01. The structural element 021, 022, and 023 are linked to 02. Based on the linking, the 02 Building ship parent activity remains a top-down activity because of expected overhead costs.

Line number	Activity	Estimate Type	Line Level Type	Amount in EURO
30	021	top down	total	30 million
35	022	top down	total	15 million
40	023	top down	total	2 million
45	011	top down	total	5 million
50	011	top down	detail	3 million
55	011	top down	detail	2 million
60	02	top down	cost type (labor)	4 million
65	02	top down	cost type (materia	l) 46 million

## Estimate details

In the example, a top-down estimate is used and amounts are allocated. However, the two internal departments involved in this project provide their own estimates for building the yacht. Based on their evaluation, they provide a more detailed calculation. Specify these lines and the related details in the estimate version.

Line number	Activity	Estimate Type	Line Level Type	Amount in EURO
70	011	bottom up	total	5 million
80	011	bottom up	detail	3 million
85	023	bottom up	detail	1 million
90	022	bottom up	detail	15 million
95	021	bottom up	total	40 million
100	03	bottom up	detail	0.5 million

If you view the details of the activity 011, a top-down total of EURO 5 million is expected. However, if you add the two bottom-up detail lines of 011, that part of the ship adds up to EURO 3 million or 5 million. This depends on the level type. If all required estimate lines are specified, you can aggregate the totals and view the estimate amounts for the leading estimate type. For the formulas, refer to the online Help in the Estimate Lines (tpest2100m000) session.

## To use level types

If the leading estimate type (LET) in the Structural Elements (tpest1120m000) session is Bottom Up, you can calculate estimate totals for Total and Detail level types. If the leading estimate type is Top Down for a structural element, you cannot apply level type aggregation, but you can use level types to check the consistency of top-down lines.

Level types for a top-down estimate line:

- Total
- Cost Type
- Detail
- Other Structures

## Top-down level types

In the User Profiles (tppdm0101s000) session, you can define the settings for a consistency check. You can also define, if the check of the Verify Top-Down Estimate Consistency (tpest2220m000) session is performed for each field or each record. Using the Level field types entered in the Estimate Lines (tpest2100m000) session, the check is performed in this order:

■ Total: For the Total level type, the consistency check is done to determine, if the parent's structural element amount exceeds the structural element amount. Example, Line 10 + Line

- 20 + Line 25 must be less than or equal to Line 5. In top-down estimating, you must always use the Total line amount.
- Cost type: For the Cost Type level type, the consistency check is done to determine, if the amount does not exceed the Total amount of the same structural element. Example, Line 60 + Line 65 must be less than or equal to Line 20.
- Detail: For the Detail option, the consistency check is performed to determine, if the line amounts of the same cost type do not exceed the Cost Type amount with the Total level type. For example, Line 50 + Line 55 must be less than or equal to Line 45.
- Other Structures: For the Other Structures level type, the consistency check is performed to determine, if the line amount does not exceed the amount of the structural element with the Total level type.

#### Note

The Cost Type - Detail lines amount check is only performed if you run the Verify Top-Down Estimate Consistency (tpest2220m000) session.

## Bottom-up level types

A bottom-up line can only have two level types: Total and Detail. Enter and add the costs, in the Structural Elements (tpest1120m000) session you can determine which level type must be used in the bottom-up estimate. The values of the Cost Level and Sales Level fields determine the lines that are aggregated for cost or sales. The Launch field's level type determines which estimate lines linked to the defined level type are launched. If the level type is set to Total, all estimate lines of that level type are launched to the project budget.

## Leading estimate type (LET) calculations

Click **Aggregate Totals** in the Estimate Lines (tpest2100m000) session, the structural elements' total amount of the leading estimate type is calculated using the estimate lines. The amount is displayed in the various LET Total fields. If you use bottom-up estimating, the calculation also depends on the settings of the level type in the Structural Elements (tpest1120m000) session. For example, the LET of element 011 is top down and you have three top-down lines for 011 and two bottom-up lines. Consequently, only the top-down lines are used in the LET calculation.

## Total level type calculation

In the Estimate Lines (tpest2100m000) session, in the **Cost Details** tab, the calculations of estimate lines totals are displayed. For example, the LET is EURO 60 million; the amount displayed is based on the setting of the view. When the setting of the view is TOP element, the value is displayed in the Top Down Total: EURO 60 million.

The calculation of the Bottom Up structure differs. The structural elements amounts are added (011 + 023 + 022 = 5 + 15 + 1 = EURO 21 million) and the Cost Level field type is used to determine the selected amounts.

For the bottom-up estimating, you can also calculate a total with the Detail level type. If Cost Level field type in the Structural Elements (tpest1120m000) session is set to Detail, the following result is displayed: 3 + 1 + 0 + 15 + 0.5 = EUR 19.5 million.

If you view the bottom-up lines of 011, there is a difference in amount; the Total line amount is an approximate amount, whereas the Detail lines are accurate labor hours. If the Cost Level field type is Detail, the total for 011 is 3 million and the other detail lines for 011, if available.

Detail level-type calculation for leading estimate type (LET):

- LET of 01 = top down => estimate is EURO 9 million.
- LET of 021 = bottom up => estimate is EURO 40 or EURO 30 million, depending on the Cost Level field.
- LET of 03 = top down => estimate is EURO 1 million.

You can use the LET total and the cost total to calculate and recalculate different estimates before you send a bid. The aim is to create a cost estimate. With the same estimate, you can present a sales estimate with the required level of detail.

## To use an estimate version

The estimate versions are defined using structural elements. A structure can be an imported activity structure, element structure, cost component structure, or the related extensions. These structures are imported from an existing project. You can also link a user-defined structure to an estimate version. In case, the project-structure data for the estimate version is not defined, you can use the estimate version without a linked structure.

#### To create an estimate version

You can create an estimate version using the Estimate Versions (tpest1100m000) session:

- Specify the Version for the estimate.
- Specify information such as the Estimate Date, Exchange Rate Type (Costs), Currency and the Exchange Rate Type (Sales).
- Specify the Version Amount. Note: The Profit Fee+ Management Reserve value must be less than or equal to the version amount.
- Define the structures for the estimate version. Infor LN allows you to define two types of structures:
  - Primary Structure: This is structure is linked to the estimate version and can be used to calculate the estimate. This structure is used to check the top-down constraints (if any). The primary structure is one of two structures that you can use to sort estimate lines. Alternatively, you can use the sort structure to sort estimate lines.
  - Additional Structure: The additional structures are used next to the primary structure. If you enter an additional structure code in the sort structure field, you can use the structure in the Estimate Lines (tpest2100m000) session as an alternative view on the estimate.

An estimate can have various versions. Each version is unique and is not derived from the previous version. Use the Copy Estimate Version (tpest1201m000) session to copy a version.

## To use estimate structures

Estimate-version structures are used to order or to classify the estimate. Multiple estimate-version structures enable you to create different classifications of the estimate data.

For example, you create an estimate to build a ship for a customer. The estimate has an element-based primary structure that must contain the costs for the bid, and an additional sort structure with the planned activities for building the ship. The estimate depends on the data listed in the Estimate Lines (tpest2100m000) session. In this case, the estimate lines for the cost of the element and work planning are linked to an additional activity structure.

The following views enable you to sort the activity lines:

- by Project.
- Version, Estimating.
- Sorting Structural Element; if the sort structure code in the Estimate Versions (tpest1100m000) session and the code of the additional activity structure are the same, you can sort the activity lines.

#### To create an estimate-version structure:

- 1. Create a structure for the estimate version.
- 2. Select the structure.
- 3. In the Generate Structural Elements (tpest1220m000) session, create the structural element or generate elements from an existing project structure.
- 4. Link the generated structures to the estimate version.

#### Note

If your estimate-version structure is not user-defined, you can only add structural elements to the estimate-version structure in the project-related-structure session, for example, the Activities (tppss2100m000) session. Enter a new structural element and run the Generate Structural Elements (tpest1220m000) session again. Your estimate-version structure is updated.

Structures are important when you launch the estimate to a budget.

You can use the following structure types for launching:

- Activity
- Element

#### Note

Only the Activity structure type contains scheduling functionality that you can use in the estimate process.

- You cannot use more than one structure of the same type.
- You cannot use a user-defined structure, because these structures are not project related, and are not used to launch an estimate to a budget.

# To launch an estimate to a budget

You can launch an estimate to a project when:

- The work can start.
- The bid is accepted.
- Long-lead-time items must be ordered.

You launch an estimate to create project budget lines from the estimate line.

You can either launch:

- A complete project structure with all the estimate lines or a selection of estimate lines.
- Part of the structure. If the selected structure is hierarchical, you must specify a node. As a result, all structural elements and estimate lines linked to this node's structural element are launched. If the hierarchy is not defined, a flat structure evolves and you can specify a range of elements and/or estimate-line sequence numbers. All estimate lines within the range are launched.
- If the structural element has the Bottom Up estimate type and the activity types is either a WBS element or a planning package, the structural element cannot be launched to a budget. For the Top Down estimate type the same rule applies, in case you use an activity structure as the primary structure.
- Estimate lines that are launched. In this case, you must delete the estimate/budget lines launched earlier, else the duplicate budget lines appear.

#### Note

There is no relation between the estimate lines and the budget lines, after the estimate is launched to the budget.

When you use the indirect cost/surcharges in an estimate version, you must either change the value of the surcharge amount on your budget lines to zero or change the estimate lines with indirect cost to direct costs, when you launch an estimate. Else, the surcharge is calculated and added to the indirect cost of the actual project, which generates an inaccurate budget. For better estimating, use sundry costs to update the budget with surcharges. In the **Launch as Sundry Lines** group box, select the check boxes to balance the total value of the estimate and the budget.

To launch an estimate to a budget, you can use the following budget types:

- Top-down budget.
- Bottom-up budget (activity budget).
- Bottom-up budget (element budget).

#### Note

The launched top-down budget and the bottom-up budget are not related. You can also copy or generate lines to a top-down budget after the launch.

## To launch an estimate to a top-down budget

You can launch a top-down budget, only if:

- The primary structure is activity-based. You can launch a top-down estimate to a top-down budget.
- The top down budget version status must be Free. If you use a version for the project budget, you can launch an estimate to a new top-down budget version.
- The project status must be Free or Active.
- If the project status is Active, the project plan must be the project's leading plan.
- Verify the consistency of the structure, before the launch. If the estimate-version structure deviates from the project activity structure, you will receive an error message in the Message Log (tpest0505m000) session.
- If the leading plan does not exist for the actual project, the project is updated with the launch plan which is the target plan in the Launch Estimate to Budget (tpest2200m000) session. If an activity structure does not exist for the launch plan, the estimate-version structure for the plan is copied to the budget.

## To launch an estimate to a bottom-up budget

For each selected estimate line, the information on the budget line is populated based on these rules:

- If the estimate-version structure is copied to the budget, ensure that the element or activity structure is linked to the estimate version.
- If, during the launch to an element budget, element codes are not used on an estimate line, the default element is used. Consequently, an estimate line is launched with this default element. The same logic is applicable for activities.
- If the activity is of the type WBS element activity or a planning package activity, the activity can be used for estimating but cannot be launched to the budget.
- A bottom-up estimate line with the Total level type (level types are determined in the Structural Elements (tpest1120m000) session) can have a cost amount although a cost type is not defined. In this case, to launch the estimate line, a default cost type and the corresponding default cost object are used from the Launch Estimate to Budget (tpest2200m000) session. If the cost object is of the type Control Code and all check boxes are selected, a new cost object is generated in the session and is used on the budget line. Otherwise, the estimate line's cost object is used on the budget line. The cost object description that is used on the budget line is the standard cost object description.
- If the cost object is not defined for the estimate line and if all the check boxes in the Cost Object Not Filled field are selected, a generated code is used on the budget line. Otherwise, the cost type's default cost object is used.

- If any of the **Cost Control Levels** for Cost Component check boxes in the Project Cost Control Levels (tppdm6102m000) session is selected for the project, and if a cost component is defined as one of the structural elements, the cost component is used for the budget line. Otherwise, the cost object's cost component is used for the budget line.
- If an extension is present as one of the structural elements, the extension is used on the budget line. If the Target Extension field is specified, this target extension overwrites the structural-element and target extension used in the budget.
- The sales price is only specified on the budget line, if the extension type is Quantities-to-be-Settled and the invoicing method is Budgeted Costs.
- You can launch surcharge-, contingency-, and/or escalation amounts as sundry cost lines.

#### Note on sequence numbers

If you selected one of the Cost Object check boxes in the Launch Estimate to Budget (tpest2200m000) session, the corresponding values entered in the Sequence Number group box of the General Parameters (tppdm0100s000) session are used.

If a control code is linked to an estimate line, a new cost object code is generated by adding a sequence number to the control code.

The length of the sequence number depends on the value that indicates the maximum length in the General Parameters (tppdm0100s000) session, and the length of the cost object code that is defined in the data dictionary. If the range of the sequence numbers has already been used, a new series is generated starting with ZZZ00001.

For example, Control code 20 appears twice and the length of the sequence is 2. As a result, the codes 2001 and 2002 are generated. For the equipment code, the maximum number of positions is 10. To assign a sequence number, the original code that is entered in the Estimate Lines (tpest2100m000) session must be less than 10 characters. Infor LN assigns the next free sequence number to the control code.

## To use a bid

The objective of the estimate process is to prepare a proposal, a quotation, or a bid consisting of the sales price information of elements, the project schedule, and invoicing information.

You can prepare the estimate using the integration with Microsoft Word. The relevant information required to prepare the bid is transferred from a Infor LN estimate to a Microsoft Word template. Although Infor LN provides standard templates, you can also customize the templates.

For the preparation of a bid, you must select particular lines of an estimate version. To store the documents that are relevant for an estimate in Infor LN, use the standard document management functionality. These templates can include the Microsoft Word template, Project Plan, CAD drawings, Microsoft Excel calculation sheets, or any other documents related to the estimate.

A bid contains the details of the estimate process and the deliverables for the customer, such as:

Scope documents

- Summary sheets
- Agreements
- Schedules
- Sales price estimates

#### The documents result from:

- Reports
- Microsoft Excel sheets
- Microsoft Word documents
- Microsoft Project plans

In Project, you can link all documents to a bid.

An estimate version can have one or more bids. You can use multiple bids to:

- Provide alternative offers.
- Bid for multiple customers in the project.

You can also define bid lines. Bid lines are the selected estimate lines for a given bid. The estimate lines are generated by the Prepare Bid (tpest3210m000) session or inserted manually using the Insert Bid Lines option.

Project Estimation Processes	