

# Concerto features - Details

## Corporate Package

Licenses are available under a custom Corporate Agreement to members of a corporation that has arranged a Corporate Agreement with ICS. Standard corporate agreement conditions apply.

## Custom Features

Available upon agreement, as supported by available data structures.

## Webseat Licenses are available

Licenses are available as 'Dedicated' or as "Webseat" seats.

With **Dedicated** (Single User) licenses, each individual seat is 'locked' to the PC it resides on (however a seat may be transferred to another PC, such as a notebook PC, without the need for ICS involvement).

With **Webseats**, the 'dispenser' for the seats resides on the Internet, making this a very flexible system where seats can be shared, but the user can work away from the office.

Webseats may be more economical if users can time-share seats and fewer seats are required. (E.g. two or three operations people may require only one shared seat). Webseats are 'portable' which means that the users need not always be connected to the network.

## Maestro Navigation module

Each Concerto package comes with a Maestro Navigation module. Maestro is the module that starts up the other available modules.

Maestro must be left running while other modules are operating, or those other modules may also be terminated.

In addition to serving as the launch pad, Maestro also manages projects, database access and choices, and other aspects of the site.

## Database Manager

Each Concerto package comes with a Database Manager module. It is the module that creates and maintains databases. A single person can be assigned to maintain the site's master database, which is then 'published' at the site so all users can get updated from this master database.

## Admin Manager

Each Concerto package comes with an Administration Manager module. It is used to manage the private site factors, set up templates, and assign new users.

A special user name and password are required to gain access to the ADMIN manager.

Typical users (estimators, designers, ..) may be given limited access to the ADMIN manager to change specified privileges or parameters.

When logged in as the "ADMIN Manager", a user cannot estimate - those functions require dedicated access passwords.

## Estimating Module ("SOCC")

Each Concerto package comes with an Estimating module.

### Key parameters of the Estimating module:

- Qty Simultaneous estimates: the number of estimates that can be opened at the same time while estimating is set at two.
- Sales estimates: Different features can apply for different users, as determined by the Administrator.
- Submittal/design estimate, Execution/operations estimate, As Built estimate: Allow the user to handle the 'design' process, using the same database as the estimators.
- Client presentation estimate: This function allows an estimator to first create a true or net-cost estimate, and then automatically modify that estimate to reflect cost factors that can be shared with a client.

## Program Options

The following optional features are available:

- Estimate Viewer: Only 1 viewer license is required per site to allow an unlimited number of users at that site to view estimates and print reports. Activated via a special user name and password. Users with a Viewer license cannot change any values in the estimate, except for Booking Modules.
- Booking Package: captures project data and produces reports related to booking a project.
- Order Module: Order estimated material on a PO. (availability to be announced)
- Export module: Various values can be exported from the sales/design estimate, e.g. project planning, accounting data, sales proposals, etc.

## Templates

The Concerto site's administrator can perform a 'one-time' set up of **templates**, thus defining various values that are used to create new estimates with a minimum of effort by the estimator.

The purpose of **Multiple templates** is to easily support the need to have, for instance, multiple manpower rates for field work to be done in adjacent jurisdictions like a neighboring state, or for work to be done for specific customers. Other uses may be for in town / out of town rates, special customers like Government work, and any other purpose that may be useful for the contractor.

Each estimator can choose his personal 'default' template from the available templates. If the project has a special need, he can easily select a different template to accommodate that need.

Where the Client Presentation features are active at the site, **Client Presentation Rates templates** are available. The purpose of these templates is to provide different rates for the various template-based values so that a "client" mode estimate can be produced by the estimator clicking a single button that switches all "Net" rates to "client" rates. Each "True Cost" template has a "Client Rate" equivalent.

### Template types:

- Salaried manpower templates: set the labor rates, benefits, overheads, and supervision for the trades that are considered as "*Salaried*": design, drafting, programming, project management, and technician.
- Trade manpower templates: set the labor rates, benefits, overheads, and supervision for the trades that are considered as "*Field Trades*": shop manpower, electrical and mechanical trade labor.
- Expense templates: set the expense costs for Hotel accommodation, meals, vehicle cost and consumables for all trades.
- Travel templates: set the cost factors that calculate travel time, distance to the project, and other travel and distance related costs.
- Overhead templates: set the costs and application methods to determine the cost of overheads to be applied to a variety of cost categories. Overhead costs can be carried as a job cost, or can be added after margins are applied to the net calculated cost.
- Base Units templates: set the factors that calculate site cleanup, administrative support, warranty, nameplate costs, import brokerage and material freight. Also set the default cost escalation factors that can be applied if the project duration is expected to be such that labor or material costs will change during the life of the project.
- Subcontract templates: set the factors that determine whether electrical and/or mechanical work will be performed by company personnel, or should be calculated at subcontractor rates, or should be removed from the estimate altogether. Where applicable, subcontractor labor and markup rates can also be specified to calculate subcontracts.
- Taxes templates: set the applicable tax rates for the location(s) and the categories they should be applied on, and whether they should be in the net cost or added to the project cost after margin has been applied. Templates for many locations can be created where work is done in multiple jurisdictions.
- Margin templates: set the default profit margin values that a new estimate will initially inherit as a 'guide'. Estimators can always modify these values.

## Kits available

Kits are assemblies that have been pre-assembled in the product database so that two or more items that normally go together in a project (e.g. Chiller system), and now can be estimated in one step.

This is a powerful feature, as it not only saves estimating time, but also reduces the risk of forgetting related items.

## Booking Wizard

Similar to the Small Wizard, however this is a 12-screen wizard that doubles as an information gathering vehicle for the project cost calculations as well as the booking functions.

## Launch external programs

Users can launch external programs like MS Word or MS Excel (and others) and automatically load a specified Admin-created template. This simplifies the task of creating documents related to this project. The resulting files can be saved with the project.

## Global Adjustments

These are adjustments that affect the complete estimate. They can depend on the building type, size, height, retrofit condition, or on such factors as your past experience, anticipated difficulties, quality of documentation, etc.

**Building Height Adjustments:** select the height of the building in number of floors, and appropriate adjustments will be made to allow for tool movement, elevator wait time, coffee break time etc. The administrator can adjust the site's height adjustment tables.

**Building Retrofit Adjustments:** if the project is not 100% new construction but contains retrofit work, this allows the user to make easy adjustments for that condition. Each building type may have its own retrofit factors as determined by the administrator.

**Local Proficiency:** allows the administrator to build into the site templates a management determined factor that recognizes a particular strength or weakness in a particular trade area, for the specified building type. Allows the use of standard task tables, while making careful adjustments based on proven experience at this site, for the specified building type. E.g. the office may be particularly weak (or strong) in performing work in hospitals, and that expectation can be built directly into the proficiency factors.

## Contingency Allowance

The user can 'set aside' a cost contingency to accommodate end-of-project costs to finish loose ends and look after non-warranty items. This factor does not add hours to the estimate; rather it takes some hours out of the estimated true costs, and transfers these hours to a special account that is recognized as being a 'reserve' to be used at the end of the project. These contingency hours are not included in planning and scheduling of ongoing work, hence the performance expectation is set that we will outperform the estimate by aiming to save the contingency.

## Areas, Systems

Estimates are divided in Areas and Areas are further subdivided into Systems. There are a maximum of 20 areas and 999 systems.

All estimated items and kits are entered into systems, which are classified into areas. The areas / systems hierarchy assures that estimates are logically structured, and provide a means to get summaries and detail reports that are useful and practical.

### Areas features:

- Labor tasks can be adjusted per each of the 8 labor categories at the area level, which means that a user can make special and easy allowances for work difficulty levels that are location dependent. For instance, all electrical work on systems on the Mechanical Equipment Room may be subject to a 5% increase due to high ceiling work conditions. The rest of the project may use 'standard' factors.
- Areas can be de-activated: this means that all the costs driven by items and kits that reside in systems located in this area, are temporarily treated as being 'absent'. All related direct and indirect costs disappear from the estimate. This allows a user to test the effect of an area's cost on the total cost, or to disable any portion of an estimate for 'alternate cost' purposes.
- Copy areas within estimates: where an area has several systems, and that area is typical for several similar areas, the whole area can be easily copied so data entry is minimized, and accuracy enhanced.
- Copy areas between estimates: you can copy complete areas from one open estimate to another open estimate.
- Assign planning phase by area: a phase code can be created and assigned to an area. New systems created in that area will inherit that phase code. Phase codes are used in planning and scheduling software. They are exported in the booking Export files.

### Systems features:

- Copy systems within estimates: a system, complete with all its estimated items and kits, can be copied (and then perhaps modified or customized) so that repetitive data entry is reduced.
- Copy systems between estimates: you can copy complete systems from one open estimate to another open estimate.
- Systems can be de-activated: this means that all the costs driven by items and kits that reside in this system, are temporarily treated as being 'absent'. All related direct and indirect costs disappear from the estimate. This allows a user to test the effect of an

area's cost on the total cost, or to disable any portion of an estimate for 'alternate cost' purposes.

- Assign planning phase by systems: a phase code can be created and assigned to a system. New systems created in an area that has a planning phase will inherit that area's phase code. Phase codes are used in planning and scheduling software. They are exported in the booking Export files.
- Typical Systems quantity: if a certain system is typical for several identical systems, e.g. heat pump systems, a 'typical quantity' can be entered in that system, which causes the estimated quantity of all the system's items to be multiplied by this typical quantity. **In addition**, automatic labor adjustments can be made in accordance with Administrator determined factors to allow for the reduced task hours that result from learning curve effects after executing the same task many times. (Cobb-Douglas algorithms built into Concerto Suite).
- Automatic Systems Engineering and Programming adjustments: when Typical Systems are applied, there is normally no need to 'redesign' the identical system or 'reprogram' the identical system software codes for the typicals. This feature suppresses the recalculation of System Design and System Programming tasks for repeated systems.
- Electrical and Mechanical subcontract by system: subcontract values can be entered, or even calculated, at the system level (as well as the global or overall level). This means that if systems or areas are temporarily de-activated, the associated subcontract value is also removed from the cost base.
- Tune salaried and trade tasks by system: every system can be individually adjusted when specific degrees of difficulty special conditions exist for that system. Labor can be adjusted for each task, and even subcontracting choices can be made related to those individual systems.
- Assign systems to the Library: when a user decides that the new system he has just estimated could be re-used on future estimates, he can copy that system into the 'Standard systems library' so that it is available for future estimates. He can assign search codes so that the standard system is categorized and can be found via a drill-down search.
- Using standard library systems in an estimate: after standard systems have been added to the library, a user can locate systems he requires for a new estimate in the library using search techniques, and drag it into his new estimate to save time and slash risk.
- Attach external files to a system: files of all types can be attached to a system and saved with the estimate so that important documents can become part of the total project. Examples are Visio or AutoCAD drawings, Word files and Excel files.

## Library Systems

- A major productivity improvement feature, as well as risk reduction element, is the concept of Standard Systems Libraries.
- Libraries contain pre-arranged complete systems. They can contain:
  - The estimated items and kits
  - Attached Drawings, Word and Excel documents, PDF's etc.
  - Any other attachments
- Estimating using proven library systems results in great time savings (minutes to estimate hundreds of thousands of dollars worth of systems). Perhaps more importantly, risk of errors and omissions is virtually eliminated, and a dramatic portion of the design engineering process can be eliminated or reduced.
- Assign systems to the Library: when a user decides that the new system he has just estimated could be re-used on future estimates, he can convert that system into the 'Standard systems library' so that it is available for future estimates. He can assign search codes so that the standard system is categorized and can be found via a drill-down search.
- Using standard library systems in an estimate: after standard systems have been added to the library, a user can locate systems he requires for a new estimate in the library using search techniques, and drag it into his new estimate to save time and slash risk.

## Client Presentation Adjustments

Manpower tasks (hours per task, and cost per hour) and material costs can be adjusted as part of the client presentation estimating mode. Both can be automatically adjusted as follows when the 'client' mode is activated:

**Manpower Task adjustment:** tasks are adjusted in accordance with the adjustment factor set for the associated labor category. I.E. if the client factor for "Design" is set for "1.15", then 15% is added to the task time for all design tasks. Note that in addition to this, the hourly labor rate is also changed in accordance with the 'client' template factors.

**Material Cost adjustment:** the cost of material is adjusted in accordance with the adjustment factor set for the associated material category. I.E. if the client factor for the "Wire/Conduit" material category is set for "1.15", then 15% is added to all the estimated "Wire/Conduit" costs.

## Subcontract Options - Electrical, Mechanical

### Value Entry - Global

An estimator can enter a subcontract value to perform all or part of the electrical or mechanical trade work. He can turn OFF or ON the individual electrical and/or mechanical tasks that are being subcontracted, so that the estimate reflects the proper cost.

### Value Entry by System

The estimator can **enter** a subcontract value, OR **calculate** the subcontracted labor using subcontractor cost and profit rates. At the global estimate level, he may then choose whether to include the system-entered or system-calculated subcontract amounts, OR ignore both and include a globally entered subcontract.

## Project Size-related (Risk) Factors

### **PM Salaried Supervision**

Project Manager supervision is calculated on Electrical and Mechanical trades. The additional 'Salaried Supervision' feature allows the addition of project management based on the total amount of time estimated for the remaining trades: design, drafting, programming, technician, and shop tasks. This accommodates the scenario where project managers are engaged in every step of the project from A to Z, and that they essentially supervise the work of all others.

### **PM Project Duration effect**

The longer a project takes to complete, the more project management time is consumed. This additional calculation adds a variable amount of PM time depending on the project duration.

### **Specify minimum hours on small jobs**

In really small estimates, unreasonably small amounts of time may be automatically calculated. This feature allows the administrator to determine the lowest threshold that is acceptable in any category. For instance, he may decree that (as long as a minimum of 30 minutes is already calculated) a minimum of (e.g.) two hours is to be included in the estimate.

### **Task adjustment due to job size.**

On small jobs, tasks tend on average to take a bit longer than a 'typical job'. On large jobs, tasks tend on average to take a bit less time than a 'typical job'.

This feature allows a gradual adjustment on jobs that are smaller or larger than what's considered 'the norm'. If applied, the estimated hours in each category are adjusted slightly to take the total estimated hours in that category into account.

## Building-Type Factors

An estimator selects the type of building that he is estimating an installation for. Depending on this building type, a number of task adjustments are automatically made to anticipate the true cost effect, in accordance with past experience, that needs to be applied.

### Building Types

Various building types affect different labor categories in different ways. In certain buildings and conditions like retrofit work in correctional facilities or laboratories, field tasks may take significantly more time than in a 'simple' scenario like new construction in an elementary school.

### New/Retrofit adjustment

Retrofit work typically takes more time to complete than new construction buildings due to having to work around occupants and previously installed edifices.

### Ratios by Building Type

Each building type can be assigned its own set of 'ratios' that provide guidance to the estimator, so he can have a yardstick against which to evaluate the current estimate's performance ratios.

### Local Skills Proficiency

If the site administrator decides that there exists a performance level in his office that is higher or lower than the 'norm' as represented in the database, he can assign a 'proficiency' adjustment factor for the corresponding labor category. For instance if it is found that for the considered building type programming seems to take 20% longer than what is driven by the database, and this is considered to be semi-permanent and not fixable with short term training, he may set a 1.20 factor for programming proficiency. In this case, 20% will be added to all estimated programming tasks. The proficiency factor can over time gradually be changed back towards 1.00 if the performance is corrected over time. Each building type can have its own proficiency factors, in recognition of the fact that the proficiency may be building specific.

### Revenue Profiles

Every project type tends to have a native 'cost incurred' profile for each labor category. The Concerto revenue profile system allows an administrator to predetermine for each building type how labor costs are typically incurred (i.e. during what stage of the performance of the project). The resulting profile can be used when exporting planning and scheduling information.

### Redirect Panel Tasks

By default, "Panel" tasks (device and termination tasks) are part of the Electrical or Mechanical trade work. By mounting devices in a panel (and in a panel SHOP), often time can be saved. In addition, sometimes the panel work is performed by other trades. With the "redirection" feature you can re-assign or "re-direct" tasks estimated as "Panel" tasks to one of these other categories:

- Electrical panel tasks can be directed to the Electrical **Shop** category.
- Mechanical panel tasks can be directed to the Mechanical **Shop** category.
- Both electrical and mechanical panel tasks can be directed to the **Technician** (Hardware) category.

### Field / Panel task adjustment

If devices are panel mounted under favorable 'shop' conditions, the device and termination tasks often take less time than when the devices are 'field' mounted. If such a device has its database adjusted to recognize lower panel mounting shop task time, AND the device is directed to be a panel mounted device by the estimator, then fewer task hours will be automatically calculated.

## Data Entry features

### Substitution of Estimated devices

If an estimate contains a certain product 'X' and the estimator decides that product 'Y' may be better suited, he can test that assumption by 'replacing all or part of the 'X' devices with 'Y' devices, using the 'Substitute' feature. He can replace X' devices in any portion of the estimate he chooses.

### Target Search©

A large database can be intimidating to locate a specific device. The Target Search© system lets a user specify the type of device he wants using some key specifications, and the Target Search© filters the database so only the devices matching the specified criteria are shown.

### Valve Sizing

An important element in Building Automation Systems estimating, valve sizing can be time consuming. The Concerto built-in valve sizer function easily sizes valves using known data like fluid flows and pressures, and filters the database to show the valve(s) that match the specified criteria. Close-off pressure can also be considered in the selection process.

### Popup Cost overview in data Entry

Click a single button to immediately view both the total estimated cost (including all adjustments) and the raw (unadjusted) cost for the system the user is currently working on.

### Connect to Multiple Databases

Click a button, and connect to a different database.

This is useful in cases where:

- normally a reduced size database is used, and occasionally a user wants to search the full database.
- Different product types for different business types are kept in backup databases, and need to be occasionally accessed.

### Use Apprentices

Electrical and Mechanical trades can optionally use apprentice labor, which will have its own lower labor rates. Estimators can decide what portion of the total estimated hours can be assigned to the apprentices, and the cost calculations will be done accordingly.

### Use Technician categories 2 - 3

The "Technician" category can optionally be expanded to use two additional Technician categories ("Tech 2 and 3"). In that case, each category has its own labor rate. Estimators can decide what portion of the total estimated technician hours can be assigned to each of the 3 tech categories, and the cost calculations will be done accordingly.

## Miscellaneous Factors

### Variance Summary on-screen

When two estimates are open at the same time, the cost difference (variance) between the two can be examined on-screen. This is useful for instance when a main estimate, and its alternate, are compared.

### Detailed variance reports

Detailed reports can be produced to show the variance between the two open estimates in areas of:

- Financial overview
- Manpower details
- Material cost details

### Overview - warning of Irregularities

When at least one of a number of suspected irregular conditions exists in the estimate, but the condition may not be immediately visible to the user, a WARNING appears in the overview summary screen. Clicking on the warning button causes a message screen to pop up that provides details about the suspected irregularity.

An example of an irregularity is that the distance to the project may be set to zero: this is not usual, and if allowed to exist, it would mean that travel time and expenses are not calculated. The user is alerted about this.

If none of the irregularities is sensed, the warning does not appear.

### Merge 2 estimates

Two open estimates can be merged together in two ways:

1. Temporary, to see the effect of the two estimates being added together at a high financial level. No actual merging of data takes place.
2. Permanent, where one estimate is actually imported into another. Certain merge decisions are taken by the user to direct how the merging should take place.

### Schedule of Values (SOV)

A schedule of values is often useful for such purposes as to support a billing schedule. In some cases, a schedule of values is requested with the original bid. The Concerto SOV system produces a full schedule of values that can be easily skewed to accommodate cashflow concerns. Using standard Crystal Reports functions, the schedule can be exported to Excel.

### Unit pricing

A schedule of all estimated devices is produced, and the complete project sell price is "loaded" in a weighted fashion into each device cost so that the sum of the individual device unit prices adds to the total project price. This may be useful when justifying or evaluating additions to contracts.

### Custom combined reports

Where the administrator decides that certain reports form a useful set in the office, he can pre-package a number of reports into a custom 'combined' report. Selecting the combined report to view or print will cause the complete set to be presented. This is useful in such cases as where a project review meeting requires certain reports to be available, or where internal estimate acceptance reviews are held.

## Specific CONCERTO features to enhance contractor's success

<b>Concerto estimates are based on known and <u>agreed</u> standards</b>	Reduced risk, more reliable productivity prediction. Estimates are understood and supportable, problems can be identified and prevented in the future, and success can be replicated.
<b>Concerto has standardized estimate documentation</b>	Cleaner hand-off from Sales to Operations people. Less over-designing because the estimate is clear to operations people.
<b>With Concerto, corporate support is easier due to shared standards</b>	Users can positively influence sales and operations success by sharing standard systems, pricing, labor standards, etc.
<b>With Concerto, different offices can work in a similar fashion</b>	Large projects can be more easily shared between two or more offices because everyone 'is on the same page'
<b>With Concerto, estimators and operations departments share the same database and assumptions.</b>	Because Concerto also has major benefits in the design/planning stages, Operations people have a vested interest in negotiating realistic cost and labor estimating factors with their Sales partners, and Sales people can count on pro-active cooperation from Operations.
<b>Concerto is understandable, and can be taught to new users easily</b>	Experience of senior people can be channeled in a systematic way to junior people - something that is difficult without a solid framework.
<b>Concerto is continuously and independently maintained, supported and improved</b>	The estimating / operations framework does not become a technological 'orphan', dependent on your (or your main manufacturer's) priorities for ongoing support and existence.
<b>Concerto is not dependent on a single manufacturer's interests and focus.</b>	If you use products from more than one manufacturer, it's useful to have support tools that are not geared exclusively to a single manufacturer's motivations.
<b>Customers can create their own databases</b>	Concerto comes complete with the ability to create and maintain product databases that form the basis for office standardization.
<b>Main line Manufacturer Product databases are available.</b>	Where a relationship exists with a sufficient number of dealers for a main line manufacturer, or a corporate agreement is in place, ICS will maintain at no charge a fully populated database in Concerto format for authorized dealers.
<b>System Accessory Manufacturer Product databases are available.</b>	ICS will make available to customers at a nominal charge, access to all third party databases maintained by ICS.
<b>Concerto is being enhanced with user feedback</b>	Feedback from many users, and technological changes, are driving improvements and additions to the Concerto Suite.
<b>Smaller or larger contractors are not forgotten</b>	Streamlined versions are available for contractors who concentrate on smaller projects. It has suitable capacity and features but shares the same database, and it can be seamlessly upgraded to the full Concerto Suite.
<b>Training is recommended</b>	Concerto Power User training is available to minimize 'time to launch' and maximize return on investment. ICS will run workshops at your location for small groups of users.
<b>Support is available</b>	ICS supports individual clients directly, and supports corporate clients by serving as backup to corporate "first line" standard response team. Train-the-trainer sessions are available for sponsoring corporations.