

## Integration Configuration:

The integration of the SAP modules is sometimes an area where design and configuration is weakest. Project teams are often divided into subteams by modules and sometimes inadequate attention is paid to the way that the modules need to work together. Problems occur for a number of reasons:

- SAP analysts sometimes lack at least a big picture view of the total business requirements
- there is an inadequate understanding of the
  - impacts that decisions in their modules may have on other modules, and
  - the demands that requirements in their area may make on other areas

This section addresses the key integration areas between the SAP modules:

- [Organisation structure](#): the representation of the enterprise in the SAP modules and definition of relationships between elements in the various modules
- [Periodic Processing and Integration](#): (Yes! - relationships or integration can also be defined here!)
- [Automatic Account Determination](#): the definition of how and to what level of detail the modules should post through to the GL accounts
- Account assignments in daily or adhoc transactions - primarily FI to CO.

## Organisation structure and relationships between elements in the various modules

If you are not familiar with the [organisation](#) elements and master data, then you should review those sections first. This section focuses purely on the relationships between the organisation elements.

It is not just the elements that SAP defines as organisation elements (in the IMG...Enterprise Structure / Definition section) that we use to represent our organisation, but also master data. This means that although the "IMG...Enterprise Structure /Assignment" section is our first point of call, when considering integration, there is more to it..

- [Direct assignment of Relationships](#) (ie via "IMG...Enterprise Structure /Assignment"):
- [Indirect Assignment by Substitution or by Master Data](#) (Not all organisation element fields shown on master data control relationship integration - for example orders have requesting costs centres primarily for grouping and reporting purposes.)
- See also [Periodic Integration](#) under the broader integration heading. This may seem like a strange reference for this chapter, because people expect to see up front definition or assignment of relationships. However some mappings are actually done in SAP under the 'Periodic Processing' menus or configuration. In the Periodic Integration chapter I point out the possibilities, however you will need to spend

some time understanding the process functionality to determine whether it will address your requirements.

## Representing your Organisation Structure in SAP

At the start of any project one of the first and most important things to be done is that your current best guess of your businesses organisation structure must be configured in the SAP System. The sooner you do this and the more accurately you do this, the quicker and better the project team can get on with prototyping or configuring the rest of the system. Some functionality is quite dependent on which SAP organisation elements you chose to represent various aspects of your organisation. So to avoid wasting too much time, it is very important to get appropriate skills working on this design ASAP in order to ensure that the initial configuration is reasonably appropriate.

Each module of SAP tends to have its own organisation elements, although some are shared across modules (plant, division etc). If an element is very specific to that module with localised usage, then I have not explained it here. Adequate explanation should be in the R/3 Library.

The organisation structure decisions and issues are presented in the following chapters:

- [Key SAP Organisation Elements / Structures](#)
- [SAP Master data which represents the Organisation Structure](#)
- [Flexibility Considerations](#) - designing for or understanding the implications for organisational change after "go live".

### Key SAP Organisation Elements / Structures:

Following is a summary of the key elements for organisation structure and functionality decisions. Follow the link on each for more detail and guidelines on how to configure. The 'integration' section on this site will provide some further tips.

<b>Element</b>	<b>Owning Module</b>	<b>Brief Description</b>
Company Code	FI	mandatory, used for lowest legal entity
Business Area	FI	optional, used for sub or cross company Balance Sheet reporting
Profit Centres	CO-PCA	optional, used for profit and return on investment reporting. See also module decision on CO-PCA vs CO-PA.
Cost Centres	CO	mandatory for responsibility level overhead expense reporting
Sales Areas	SD	mandatory, actually a combination of the SD elements : Sales Organisation, Distribution Channel and Division
Purchasing	MM	mandatory - could be just one. See R/3 library.

Organisation		
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## Relatively "Uninteresting" SAP Organisation Elements:

Several SAP organisation elements are required purely as the top node of the module providing an 'environment' under which a single set of data exists. Data can usually not be shared across these 'top node' elements. These elements are usually invisible to the users and can often be excluded from training or explanatory diagrams. For that reason I do not see much point in discussing them here - adequate information on their definition and relationship to other elements is in the R/3 library. These elements are:

Controlling Area	CO - Controlling
Operating Concern	CO-PA - Profitability Analysis
Financial Management Area	TR - Treasury
Credit Control Area	FI-AR & SD (Credit Management)

## SAP Master data which represents the Organisation Structure:

In controlling, the Cost Centre and Profit Centre Hierarchies are also used to represent the organisation or enterprise structure. SAP considers these as 'master data' though not as organisation elements. Therefore maintenance of these is not found in the **Enterprise Structure** area of the IMG. However they are worth discussing here. Organisation Structure issues relating to these are presented in two sections :

- [Use of Profit Centres to provide some balance sheet information](#)
- [Cost Centres and Profit Centres - do you need both?](#)

## Flexibility of your organisations representation in SAP

This section discusses the idea of SAP "Flexibility" at an overview level. Senior client management are always worried about this. SAP is supposed to be 'flexible' they say - will it cope with the possible changes coming up for my organisation ?

It is important to understand what areas are very "flexible" and what areas may cause some pain to change. A broad rule of thumb is that if the impending change is going to be painful for the organisation as a whole, then it will probably be a bit painful on any system - just the degrees of pain will be different.

When designing the representation of your organisation in SAP it is worthwhile doing some research into what areas (if any) are likely to change on any regular basis and then considering how that change would have to be implemented.

For example: purely cost centre relationship changes which cause changes in the Cost centre hierarchy or perhaps an alternate hierarchy are relatively easy to implement and could possibly be handled as a master data change directly in production.

However something which causes a change to the SD organisation structure may not be so easy to implement - it may require configuration changes, or additional configuration with the associated risk that not all necessary areas may be created causing operational problems.

For example: if it is a change/addition to Sales Areas - large numbers of customer master records may have to be updated or new segments created.

## History - to change or not to change

You should ensure that there is a clear understanding of

- whether there is any requirement to update historical data to allow comparison with the new organisation,
- what areas of history cannot or should not be updated,
- the impacts or limitations of some changes that the system does allow.

For example:

- Profit and Cost Centre comparison to historical data is relatively easy using alternative hierarchies - leaving the old organisation structure/ hierarchy untouched and just creating a new hierarchy valid for historical times too. There is no need to update historical data.
- The CO-PA Profitability Analysis module has a re-alignment function which allows you to change the historical data to put it in line with the new organisation structure. However you then lose the historical view, including possibly reconciliations to the GL.
- The General Ledger historical data cannot easily and indeed should not be updated. This is your statutory record and you should not mess with it.

## Direct Assignment of Relationships

This section addresses those organisation structure relationships that are directly assigned in the SAP configuration. IE via "IMG...Enterprise Structure /Assignment".

It may not look like it, but this is actually quite easy except for a couple of areas with a lot of flexibility (and remember: flexibility = complexity). Let's get it over with quickly and then get down to the more interesting (difficult or non-obvious ?) integration. To make it even easier I have divided the relationships between the:

- core / essential relationships that you should understand or address as a first priority and the
- secondary relationships (or module specific ) ones you can worry about later if you need to.

I have also grouped the relationships in what I hope is more logical (since FI is where most of the integration is heading (because of the financial postings) I have sorted by FI elements and listed them first. Apart from that you should still be able to follow along fairly easily in the IMG - or if you have the R/3 Library CD ROM follow along there (under Implementation Tools / Implementation guide).

Table of Direct Organisation Structure Relationships maintained by "IMG...Enterprise Structure /Assignment"				
Module/ module	Element 1	Element 2	Relationship	Comment
<b>Core or Primary Relationships:</b>				
Financials, Controlling, Treasury				
FI / CO	Company code	Controlling Area	many to one	This is a no-brainer. However if you have complex currency / organisation reporting requirements then you should probably read the IMG help carefully and test out your scenarios before configurers get too far down the track.
FI / TR	Company code	Financial management area	many to one	Even if you are not really using Treasury, you may want to assign this to use the <a href="#">Basic functions</a> (useful if using AR, AP and doing banking)
CO / CO-PA	Controlling Area	Operating Concern	many to one	Only required if using CO-PA
CO / TR	Controlling Area	Financial management area	many to one, usually only one each though	All company codes assigned to the controlling area must also be assigned to the Financial Management Area. Required if costs etc needed in TR.
Logistics (Materials Management and Sales and Distribution)				
LO / FI	Plant	Company Code	many to one	Required so the system knows which legal entity to post financial stock values.
SD / FI	Sales Organisation	Company Code	many to one	
SD / SD	Distribution	Sales	many to many	

	Channel	Organisation		
LO / SD	Division	Sales Organisation	many to many	
SD / SD	Sales Areas		many to many	This is a unique setup. A sales area is not a new organisation element, but defines a valid combination of Sales Organisation / Distribution Channel / Division. This is how you control what products can be sold by what methods of delivery and by which selling groups. This also has a significant impact on the <a href="#">customer master</a> data requirements.
MM / FI	Purchasing Organisation	Company Code	many to many or none	optional - if the company code is not assigned it will be determined from the plant. This allows the setup of purchasing responsibility <ul style="list-style-type: none"> <li>• corporate wide</li> <li>• by company or</li> <li>• by plant</li> </ul>
<b>Human Resources</b>				
HR / FI	Personnel Area	Company Code	many to one	Required so the system can post financial impact of HR postings. Note that personnel areas in different countries cannot map to the same company code. It is usual that different countries would have different company codes (legal entities) anyway.
<b>Secondary Relationships:</b>				
<b>Financials, Controlling and Integration with FI/CO</b>				
FI	Company code	(group) company	many to one	optional - can do financial statements by group company, however can also just use ranges or selections of company codes.
FI	Company code	Credit Control Area	many to one	optional - only required if using credit management or

				creating the credit management section of the <a href="#">customer master</a> .
FI / EC-CS or FI-LC	Business area	Consolidation business area	many to one	Only required if using the consolidation modules.
FI / SD	Business Area (Rule 1)	Depends on rules chosen for each Sales Area	many to one	<p>Here we have great flexibility = some complexity - worthy of a separate <a href="#">SD/Business Area</a> page to explain what's possible.</p> <p>Briefly for each Sales Area you could specify :</p> <ul style="list-style-type: none"> <li>• Rule 1: By plant and division</li> <li>• Rule 2: By sales area</li> <li>• Rule 3: By sales organisation, distribution channel and item division. Note that the item division could be different from the Division in the Sales Area. Divisions are a little 'strange' in Logistics - they have either a sales SD emphasis or a product MM emphasis.</li> </ul>
LO / FI	If Valuation Level = Company code, then Plant / Valuation Area	Business Area	many to one	Only required to enable automatic business area account assignment. If you are valuing stocks at a company code level, you can map each plant to a business area. Note the Valuation Area is then the company code. It is confusing I know!
LO / FI	If Valuation Level = Plant, then Plant	Business Area	many to one	Only required to enable automatic business area account assignment. If you are valuing stocks at a plant level, you can map each plant and division (essentially groupings of products) to a

				business area
Logistics / Sales and Distribution				
SD / SD	Sales Offices	Sales Areas	many to many	Optional. Used as defaults only. Note sales office is usually a geographical distinction.
SD / SD	Sales Groups	Sales Offices	many to many	Optional. Sales groups are responsibility groupings rather than geographic.
LO / SD	Plants	Sales Organisation / Distribution channel	many to many	Essentially defines which selling organisations can sell, by which methods out of which plants
SD / LO	Shipping Points	Plants	many to many	Defines which plants can ship from which locations
Materials Management				
MM / MM	Purchasing Organisation	Plant	many to many	Allows a variety of purchasing responsibilities and gives control over who can buy for where.
MM / MM	Standard or Reference Purchasing Organisation	Plant	one to many	The system will use the information associated with this purchasing organisation for source determination of materials.
MM / MM	Purchasing Organisation	Standard or Reference Purchasing Organisation	many to one	Allows use of the contracts etc negotiated by this purchasing organisation as a reference if another purchasing organisation is buying.
WM / IM	Warehouse number	Plant / Storage Location	one to one	Defines which storage locations are controlled by the warehouse management system.
Plant Maintenance				
PM / PM	Maintenance Plant	Maintenance Planning Plant	many to one	Defines which plants do the planning of maintenance for other plants.
Human Resources				
HR / FI	Employee subgroup	Employee Group	many to many	Determines the valid combinations for the country groupings



## Determining the FI Business Area from SD - flexibility and therefore complexity

There are 3 ways of determining the business area for an SD posting that is trying to post to FI (ie when the system does the revenue account determination. You can define a different way for each SD Sales Area. This means that you first have to tell the system which 'rule' you want to use for which Sales Area.

<b>Module/ module</b>	<b>Element 1</b>	<b>Element 2</b>	<b>Relationship</b>	<b>Comment</b>
FI / SD	Business Area	Plant / Division	one to one	Rule 1: By plant and division
FI / SD	Business Area	Sales Area	one to one	Rule 2: By sales area
FI / SD	Business Area	Sales Organization, Channel and item Division	one to one	Rule 3: By sales organization, distribution channel and item division. Note that the item division could be different from the Division in the Sales Area. Divisions are a little 'strange' in Logistics - they have either a sales SD emphasis or a product MM emphasis.

So for example we could have the following configuration :

<b>Sales Area (Sales Organisation, Channel, Division)</b>	<b>Rule</b>	<b>Plant or Division</b>	<b>Business Area</b>
1000, 01 (internet), 01 (books)	2 (sales area)	n/a	INET
1000, 01 (internet), 02 (music)	2 (sales area)	n/a	INET
2000, 02 (retail), 03 (electronics)	1 (Plant / division)	Sydney	ELNS (Electronics in Australia)
		Korea	ELVC (Electronics in Korea)
2000, 03 (wholesale), 05 (speciality products)	3 (Sales Organisation / Channel / Item Division)	all item divisions	SPEC (Speciality Products)

It may look complex and cumbersome, but it will only be so if you have a complicated business and of course you want to have business areas. If you have a fairly homogenous organisation, then at worst you will have to put several partially repetitive entries in the configuration table. With a bit of luck and a stable organisation you will never have to come back to this !!

## Indirect Assignment of Relationships

In addition to the organisation structure relationships that are directly defined in the Enterprise Structure / Assignment section of the IMG, there are further ways that one may need to define these relationships. These definitions are still done in the IMG, but are buried in a module somewhere. These are module specific: ie only required if one is using that module.

- [Profit Centre Relationships](#)
- [Relationships created in CO-PA \(Profitability Analysis\)](#)

Is there anything I have forgotten ? Note that pure master data relationships and account determination configuration is covered in other chapters.

## Profit Centre Relationships

When one is using profit centre module and the various logistics modules, then one has to define the relationships in IMG / Enterprise Controlling / Profit Centre Accounting / Assignments to Profit Centres. However before we get too deep into that...

- If you are using SD and **not** using CO-PA (Profitability Analysis) either instead of or in addition to Profit Centres you should have a good business reason. Please see my chapter on [Profit Centres vs CO-PA](#) for more information.
- If you are **not using SD** and using EC-PCA (Profit Centres) for Profit Reporting only, then I suggest you read my chapter on [Profit Reporting](#)

Table Describing how transactions and balances are assigned to profit centres		
Module	Element / Item	Comment
Default	any unassigned item	One of your first steps in PCA configuration is to define the dummy profit centre. If the system at any stage cannot identify a profit centre from your configuration, then it posts to the dummy profit centre instead.
CO	Controlling Area	The first time you do anything in CO (IMG or user menu), the system will prompt you to choose a controlling area. This defines the environment for all further CO work. Profit centres will therefore be created relative to one and only one controlling area.
MM	Plant / Material (see Sales Order)	The profit centre is defined on the material master record in the Sales: General/Plant or Storage views. Don't panic - there are tools to do 'fast assignment' of material

	substitutions too)	by plant and then by material type, a material group or a product hierarchy. See II  These assignments are used :  <ul style="list-style-type: none"> <li>to propose a default profit centre when you create a sales order item or a production order (to eventually post the revenue or costs); or</li> <li>to derive the profit center from the material master for internal goods movements (such as stock transfers or goods issues) and profit-related postings in Material Management (such as inventory differences) if no other assignment is available</li> <li>when material stocks (raw material, finished and semi-finished goods) are transferred to Profit Center Accounting (PCA can do some balance sheet reporting at period end).</li> </ul>
SD	Sales Order substitutions	The sales order default is taken from the profit centre on the delivering plant / material master combination. If you do not want this, you can define substitutions to override. A substitution is basically where the system allows you to specify your own piece of conditional logic to determine which profit centre to post to. You can base your conditions on a variety of fields available on the Sales Order. Usually used if you base your mapping on Sales elements rather than on products.
	Business Transactions - ignore !!	The next 4 menu options in the IMG are to do with assigning an individual business transaction to the profit centre. This is something that should happen at the time of entering the business transaction if it cannot be determined from the default. This is for configuration purposes, I suggest you <b>ignore</b> the " <i>assign to sales orders, production orders, process orders, CO Production orders</i> ".
Master data assignments:		The next 6 menu options in the IMG relate to master data assignment to a Profit Centre. Basically the profit centre should be assigned when you create the master data record. Some special comments :
	Cost Centre	If not done manually, there is a 'create profit centres' from cost centres program which will create an equivalent hierarchy for you - only really possible at start up of the system and thereafter manually maintained. I suggest that if you do have such a one to one mapping then the following is probable:  <ul style="list-style-type: none"> <li>you have <i>too many profit centres</i> or <i>not enough cost centres</i> - their business definitions should be different</li> <li>if you are not using SD, then maybe you <u>don't need profit centres?</u></li> </ul>
	Fixed Assets	Implicitly assigned by assigning every asset to a cost centre.
Assignments needed for Balance Sheet Items in Profit centres		
FI	AR Debt	System will determine from the assignments made on the Sales Order - similar to the area processing.
FI	AP Payables	are assigned to the profit center of the material ordered for purchase orders to which and to the profit center of the posting for orders which receive direct postings.
FI	Other Balance Sheet Items not in a submodule	The profit centre is actually specified by individual GL journal line item (like the balance sheet area). It is not possible (other than by substitution) to assign a GL account to a profit centre.

CO	Work in process	Assigned via the relevant project or order.
AM/IM	Assets	Implicitly assigned by assigning every asset to a cost centre.
MM	Material stocks	Assigned to profit centers via their master records (see above)

## Relationships created in CO-PA (Profitability Analysis):

In CO-PA it is possible to 'derive' relationships for use in CO-PA. This could be useful for groupings that are only required for CO-PA reporting.

The derivation could be of entirely new elements or fields that are not being used elsewhere, or perhaps using an existing SAP field that is not being used by other modules. The derivation can be based on any or a combination of fields in the data that is being passed to CO-PA. A sophisticated example might be a derivation based on the SD Customer hierarchy.

It is not a good idea to try 'overwriting' values assigned in other modules as this would be confusing and complicate any reconciliation attempts.

See the configuration documentation on CO-PA for more information. Note that there are 'standard derivations' that the system does too. We were talking here about creating new derivations.

## Integration and Periodic Processing:

In this chapter I point out the periodic process that run across modules and the organisation structure relationships that can be defined by the setup of the periodic process. This is taking an **'integration' perspective** and therefore does not include periodic processes **within all modules** (that is addressed on a module by module basis).

Module to Module	Process	Comment
HR-Payroll to FI & CO	Payroll Run	Posts payroll (salary, wages, expenses, bonus etc) related costs to the appropriate GL accounts and cost collectors (cost centres, projects etc).
MM to FI & CO	Inventory Revaluation	Any changes to Stock Valuations
PP to FI	Work in Process	
PP to FI & CO-PA	Production Variances	Posts variances from the production (product cost) estimates or standards to the GL accounts and to Profitability Analysis if real costs are required (vs standard costs). Standard cost figures would have been used to update Stock and Cost of Goods sold

		figures when finished stock was issued from the production runs.
CO to CO-PA	Assessments	Allocates costs from cost centres to profitability segments
AA to FI & CO	Depreciation	Posts asset depreciation values to the GL accounts and to the owning cost centres.
FI to PCA	Profit Centre adjustment	Required if profit centres could not always be determined (as with taxes etc); same as business area adjustment
	Transfer of Balance Sheet Items	Posts periodic 'point in time' balances to profit centres for 'return on investment' type reporting (optional)
FI to PCA or CO-PA	Profitability Segment adjustment	Required if cash discount and exchange rate differences posted after revenue had already gone to CO-PA, is required to be in CO-PA too.
CO to FI	Reconciliation Adjustments	Only required if <ol style="list-style-type: none"> <li>1. You have allowed the use of cost transfer or repost transactions, periodic reposting or distributions in CO and,</li> <li>2. you wish to reconcile CO to FI</li> </ol>

Periodic Processes can also define some relationships between organisation elements. These are largely in the CO area.

Possible Organisation structure relationships in periodic processes that are not already covered in master data.				
Module	Sender	Receiver	Periodic Process	
CO	<ul style="list-style-type: none"> <li>• internal order</li> <li>• maintenance order</li> <li>• CO production order</li> <li>• capital-investment order</li> <li>• network header</li> <li>• network activity</li> </ul>	<ul style="list-style-type: none"> <li>• G/L account</li> <li>• cost center</li> <li>• orders</li> <li>• project</li> <li>• asset</li> <li>• network activity</li> <li>• profitability segment</li> <li>• sales order</li> <li>• cost object</li> <li>• order item</li> </ul>	Settlement of costs and/or revenues periodically or at end of order specified by sender to one or many receivers.	See settlement configuration documentation in IMG for details and notes on restrictions

	<ul style="list-style-type: none"> <li>• cost object</li> <li>• production order</li> <li>• sales order,make-to-order production</li> <li>• project settlement order item</li> </ul>			
CO	<p>one or many of :</p> <ul style="list-style-type: none"> <li>• Cost centers,</li> <li>• orders,</li> <li>• WBS elements, and</li> <li>• cost objects</li> </ul> <p>per allocation segment.</p>	Configurable - basically single values or groups of CO objects (cost centres etc)	Cost Assessment, Distribution or Periodic reposting. This can be done for Processes (In activity based costing) too. This is not the same as activity allocation below.	See allocations configuration documentation in IMG for details and notes on restrictions
CO	Cost Centre	Cost Centres and/or Orders	Activity Allocation - passes costs on using activity quantities	See IMG - this is a large area.

## Automatic Account Determination

This is perhaps the part that causes the most heartache for the FI Configurer. For some reason, although it is an integration area, the FI team always ends up with responsibility for it. To do a good job you need a reasonable understanding of :

1. the business processes in the source modules
2. the FI account postings that they should be generating (what sort of account should be debited or credited etc)
3. the organisation structure and its relationships between the source modules
4. the reporting requirements that are expected from the General Ledger or Profit Centre Accounting
5. your chart of accounts

Sounds daunting doesn't it ? Here is a suggested approach ...

The IMG section under **GL / business transactions / integration** will take you through all the necessary account determination for the automatic postings that the system may need to post. You may not need all of these. You could maintain on an **as needed** basis. As the project teams test or prototype their expanding functionality, the SAP system will look for the accounts to which it should post. The error message and the SAP documentation and configuration does not always explain clearly which piece of account determination is used for which type of functionality, so it is sometimes difficult to be pro-active.

Being reactive has the benefit that hopefully each side (eg: MM and FI) can develop an understanding of what the business transaction is and therefore where it should be posting. Otherwise the MM person may not even be aware that he has generated a certain type of posting! (You'd be amazed at some of the lack of ownership from a logistics consultant for the financial postings that they generate).

I will be explaining each account determination area simply and clearly with posting examples

- [SD to FI Account Determination \(aka revenue account determination\)](#). This and MM seem to confuse people the most.
- **More later - This may take a while to complete.....**

In the meantime, some general warnings:

- Whenever you change the field status settings for an account, ensure that you have verified that any automatic postings will be able to meet the requirements. EG: do not make business area mandatory if your system may make a posting which cannot determine and post the business area.
- Consider specifying that accounts that are posted to automatically can **only** be posted to automatically. This will simplify reconciliation between the source module and the GL account should you need to do this.

## SD-FI Account Determination and Postings

This is known in the IMG as "revenue account determination", but it covers a lot more than that (discounts, taxes etc). This is what determines how the financial impact of your SD **Billing document** is posted into the FI General Ledger.

The integration is controlled both in SD and in FI.

In SD there is a awesome area of configuration called the **pricing procedures**. The pricing procedure determines the final price quoted to the customer for a particular product. This could be a complicated calculation taking into account the base price, any special prices or discounts that may apply to that scenario, taxes, freight charges etc. These prices or charges are called 'condition types'. This [condition technique](#) is used in a number of areas of SAP.

For now all we need to know is that each **condition type** is assigned to an **account key** (or in the case of rebates two account keys). You can assign multiple condition types to the

same account key. There are a number of account keys that are pre-defined in the system. For example:

- ERF freight revenues
- ERL revenues
- ERS sales deductions
- EVV cash settlement
- MWS sales tax

Now we start getting to the integration by mapping the account keys to GL accounts. But it is not as simple as that. It can be as flexible (ie: as complex) as you want. Start off with the most simple approach. Generally if one is using a good sales / revenue reporting tool (eg: CO-PA) then one does not need a lot of flexibility and variety in the GL accounts that are posted to. The level of detail that you need in GL should be determined by your financial statement reporting requirements - you may end up with only one Revenue account - it is a good bet!

So, taking the simple approach we would ignore most of the configuration possibilities : procedures, access sequences, condition tables etc *(Yes it is that 'condition technique' kicking in again. Once you have worked through it once in one area and encounter it in another then hopefully you will be comfortable in knowing that most of the standard configuration can be left as is.)*

We have to decide which access sequences we want to use (Five access sequences are defined in the standard SAP R/3 System). To keep it simple, let us assume we just use one - for example: the access sequence "chart of accounts/sales org./account keys".

The chart of accounts part is standard in all account determinations, so let us look at the rest. This access sequence allows us to specify different GL accounts for different Sales Organisations.

So if we had a billing document line item where the customer had some special deductions for one of the products he purchased, we could map accounts by Sales Organisation. To make it even simpler a document is within one Sales Organisation so we have an overall mapping as follows:

<b>SD Line Item</b>	<b>Condition type</b>	<b>SD Amount</b>	<b>Account Key</b>	<b>Sales Organisation</b>	<b>GL Account</b>
1	Sales deduction for being such a nice guy	\$10	ERS	1000	800010 - Sales deductions for 1000
	Sales deduction for special promotion on particular product	\$15	ERS		
	Base Revenue	\$200	ERL		800000 - Revenue for Sales Org 1000



	Total for item 1	\$175			
2	Base Revenue	\$100	ERL	1000	800000 - Revenue for Sales Org 1000
	Total for item 2	\$ 100			
Document Total		\$ 275			

So the invoice that the customer gets (and that you can view in SD) will look something like:

Item (Note this is the SD Invoice line item)	Amount
Item 1:	\$175
Item 2:	\$100
<b>Total owing , 30 days terms etc:</b>	<b>\$275</b>

The GL document posting that the system will make to FI will look something like this though:

FI Line Item	Debit / Credit	Account	Amount
1	Debit (PK=01)	Customer (AR Account)	\$ 275
2	Credit (PK=50)	Revenue (GL Account)	-\$ 300
3	Debit (PK=40)	Sales Deduction (GL Account)	\$25
<i>Balancing to 0 as all GL documents must....</i>			<i>\$0</i>

Note : There is **no direct relation between an SD Line item and an FI Line Item** - they are different things.

#### Other considerations:

- Remember that if you are using business areas, then depending on your configuration there, the system may create additional FI line items if it needs to post to different business areas. This may be even more of a reason why you do not need additional GL accounts. If your Sales Organisations already map to different business areas, you could use the GL accounts for all Sales Organisations.
- Different access sequences will allow a broader variety of GL accounts (for example: by customer account) group. I strongly suggest having a good understanding of the reporting requirements expected to be supported from the General Ledger vs the

SIS (Sales Information System) or CO-PA (Profitability Analysis) or (CO-PCA) Profit Centre modules before you create too many GL accounts. At the risk of repeating myself, the SD to FI account determination should only be as detailed as your statutory reporting requirements. The reporting from other tools like Profitability Analysis are so much more flexible and powerful, you may never look at the General Ledger for internal profit reporting again except to do a reconciliation check.

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## Treasury Cash Management module

The **Treasury / cash management / basic functions** sub module contains functionality that you may expect to find in FI:

Functionality	Comment
Cheque deposit	This transaction can be used to record cheques received, print deposit slips and makes appropriate postings to the GL (Bank clearing accounts and AR customer accounts. Configuration is partially shared with the bank statement load.
Cheques cashed (manual entry or automatic entry upload)	This program updates the payment documents with cashed information and makes appropriate GL postings for cash flow forecasting.
Bank Statement Load (manual entry or automatic entry upload)	This transaction or program reconciles the bank statement with the incomings and outgoings that have been entered via the payment program, cheque deposit or manual transactions entered.
Cash Position and Forecast	<p>This transaction can provide a view of all Bank and financial (loan etc) accounts, customer and vendor expected incomings and outgoings, as well as commitments (purchase orders) and possible sales. Memo items can be added to complete the picture. These can all be classified by degree of certainty of payment date and you could configure the option to 'distribute' amounts over time periods for 'uncertain' groupings.</p> <p>This is actually surprising easy to implement once you understand how it works. Surprise your client - or at least the treasurer - and deliver more than expected. The design and configuration is best done when you first set up your customer, vendor and GL accounts anyway so that the appropriate settings are made - no rework.</p>

Before you implement any of the above, you need to have an understanding of the terminology and the GL accounts that the SAP TR module expects in this area, and how they are meant to work together. This section was previously available free of charge, however now to offset costs, a small charge is being levied for a package. Packages available to purchase in the **'Knowledge Shop'** in this section are:

### Cash Forecast

[Describes how to use and configure the Cash Position and Forecast transaction.](#)

### Cheque Deposit

[Describes how to use and configure the Cheque Deposit \(payment receipt\) transaction.](#)

Note : Bank Statement reconciliation configuration is very similar to cheque deposit configuration.

## Cash Position and Forecast

The Cash position and forecast enquiry is usually used by the Treasurer or whoever is responsible for ensuring that the company has adequate funds for expected outgoings.

The Cash Position input data is the known balances:

- Postings in cash and bank accounts (any GL account relevant to cash management), the unreconciled entries in the GL bank clearing accounts (uncashed cheques etc), and
- any memo records which may have been manually entered (planning advices) as relevant to a cash position
- cashflows from transactions managed in Treasury Management

Examples are:

- bank balances
- outgoing checks posted to the bank clearing account
- outgoing transfers posted to the bank clearing account
- maturing deposits and loans
- notified incoming payments posted to the bank account
- incoming payments with a value date

The Cash Forecast input data is the summary of the expected financial incomings and outgoings in the subledgers:

- Accounts receivable and Payable open items (as expected incoming and outgoing payments),
- SD Sales Orders and MM Purchase Orders (also as expected incoming and outgoing payments),
- Special GL transactions as required,
- Memo records (planning advices).
- Planned payments of wages and salaries
- Planned payables for taxes on sales and purchases

It is possible to use the one enquiry to cover both position and forecast. The configuration is the same. For simplicity I will often refer to cash forecast to cover both the cash position and forecast.

A guide covering the following can be purchased at the [Knowledge Shop](#).

## Banks

Describes the terminology and set up of banks in SAP, specifically the relationship between bank accounts, banks, house banks, bank directory, cash management account name and the General Ledger bank accounts.

## GL Bank Accounts

Describes how GL bank and bank clearing accounts are used in the Treasury / Accounts Receivable/Payable functionality. Uses the SAP standard bank accounts as an example to explain the intended purpose of each bank related GL account and what the entries in those accounts should indicate - specifically the uncleared entries.

## Running the Cash Position or Forecast Enquiry

Guidelines on executing the cash position and forecast if they have already been configured

## Understanding the Business Requirements

Describes the information that you should gather about your company's operations in this area to adequately configure it.

## Dates and the Cash Forecast

The Cash position and forecast is all about amounts and dates. The section explains how the dates are determined for the various inputs.

## Cash Forecast Terminology

Explains the key terms that are encountered in the configuration. Must be read before embarking on the configuration section.

## Cash Forecast Configuration

Guidelines on configuring the Cash Position and Forecast - presented in two sections - essential and then advanced configuration.

## Related Configuration / Processing areas

Describes some of the related configuration and processing areas that impact or feed data to the cash forecast.

## Preparing test data

Presents some hints on preparing test data directly without having to run the feeder programs.

This guide can be purchased at the [Knowledge Shop](#)

## Cheque Deposit Receipt Processing

This functionality should more accurately be called the 'payment receipt recording and processing transaction' since it can also be used to record and process cash receipts. However it is primarily intended to process the receipt of cheques.

The functionality is useful if the organisation receives a reasonably large number of payments in cheque form directly. These payments have to be recorded and then deposited as quickly as possible at the bank (usually on a daily basis). The payments then need to be applied to the customers account.

The functionality :

- facilitates the recording of the payments in a variety of customisable fast entry screens;
- can produce a printed deposit slip listing the cheques just recorded when can then be used to deposit at the bank directly;
- can generate clearing transactions to find the customer and attempt to match the payments against the open invoices based on whatever data has been entered (Customer Name, invoice numbers etc);
- allows segregation of duties between say a cashier who simply records the payment using this transaction and an accounts receivable clerk who is responsible for following up on the application of the funds to the customers account if the system was not able to process the payment automatically. This segregation of duties may be an audit control requirement in your organisation to minimise fraud.

Without this functionality you would be processing the payments individually using standard GL document entry transactions.

With normal configuration and use, the Cheque Deposit transaction when completed will print a deposit list and generate two SBDC (Batch Input) sessions :

- a bank session. This will typically post a standard GL document/s which debit a 'Payments received Clearing' account and credits a 'Unallocated payments Clearing' account.
- a subledger or clearing session. This will typically attempt to post clearing transactions (one per payment entered) which debit the 'Unallocated payments Clearing' account and credit the customers accounts. It is possible or even likely depending on the nature of your business that not all of these will be able to be processed automatically and therefore some manual post processing of transactions in 'error' sessions may be required.

The clearing accounts help confirm that transactions were completely processed:

- If the matching transactions in both sessions complete successfully then the 'Unallocated payments clearing' account will offset to zero indicating that all payments have been successfully applied.
- When the bank statement is loaded, it should credit any deposits made to the 'Payments received Clearing' account. This will offset the entry made by the bank session, indicating that all payments were successfully deposited to the bank.

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## Recording the received payments manually

Guidelines on executing the cheque deposit transaction.

## Understanding the Business Requirements

Describes the information that you should gather about your company's operations in this area to adequately configure it.

## Cheque Deposit Terminology

Explains the key terms that are encountered in the configuration. Must be read before embarking on the configuration section.

## Cheque Deposit Configuration

Guidelines on configuring the Cheque deposit. Some of this configuration is common to the manual and electronic bank statement configuration.

## Preparing test data

Presents some hints on preparing test data.

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# Financials and Controlling Design and Configuration

The aim of this section is not to present a detailed step by step 'how to configure' SAP FI and CO. The basics of FI/CO configuration can be got through fairly easily by following the IMG, using standard configuration wherever possible. The intention here is to :

- present a few guidelines or hints for the new configurer;
- focus on the more important, less obvious or less well explained areas of FI/CO (If you would like to see other aspects covered in more detail, please add them to the wishlist in this website); and to
- draw attention to some possibilities that may not be immediately obvious.

Subjects addressed thus far are:

- [FI/CO Minimum Configuration](#) to get a new company code going
- [Implementing Balance Sheets by SBU \(Strategic Business Unit\) or Division](#) (ie: any level other than legal entity)
- [Profit & Loss Reporting](#)
- [Statistical versus real assignments in CO](#), or Reconciliation between CO and FI
- ['Did you knows'](#) - pointing out some possibilities you may not have been aware of

## Enough FI/CO configuration to get going...

FI the Financials module can be thought as the 'core' of any integrated SAP System because everything that has a monetary impact in the other modules (where the 'real' business operates) flows through to FI - usually in real time and automatically through the configuration. Usually there is pressure to get going with the prototyping asap. When the other modules start prototyping their transactions, the SAP system is going to want to post the financial impact to FI. Thus the sooner that you (the FI/CO configurer) can get some core FI/CO configuration going the better for all.

Remember all SAP configuration is essentially maintaining entries in a variety of linked tables. Usually you need to maintain each little link or entry step by step. Some new SAP configurers expect the transactions to be as 'complete' as a user transaction - configuration is different. In R/2 days we had to just know what tables to maintain - count yourself lucky that you have the IMG now!

Following are some guidelines (in increasing levels of functionality) to the FI minimum configuration or master data setup for a new company code. Follow the logical path in the IMG.

1. [Minimum configuration to post a journal in FI](#)
2. [Minimum configuration to see expenses by cost centre / post through to the CO Module](#)
3. [Minimum configuration to post to subledgers \(AR, AP\)](#)
4. [Minimum configuration to post from logistics modules to FI/CO \(similar concept for other modules\)](#)

## 1. Minimum configuration to post a journal in FI:

(The assumption is that you do not want to copy either the standard SAP company or an existing company code because it will copy across too much that is not similar or not required and therefore too much cleanup will be required).

### Initial Business Decisions Required:

Item to be decided	Comment
Code of company code (4 Digit Alphanumeric)	You could setup new one later, copying the configuration
Code of Chart of Accounts	Not very visible, but the maintainers of the chart may want to decide this name
Length of the GL A/c number and the account number range guidelines, possibly also the numbers of some key accounts required for automatic postings (see below)	SAP allows 10 digits, however 5-7 appears to be the normal range. Typically the number of accounts should be in the low hundreds. Decide on the ranges of numbers for each type of account as much as you can so that the team can start getting used to them. EG: standard SAP usually has 4xxxxx as expense accounts, 11xxxx as Bank Related accounts etc.

### Configuration steps:

Step	Comment
Define the company code	IMG
Define the name for a chart of accounts	IMG
Maintain the global parameters	IMG - Use standard SAP variants for the parameters to start with & update later
Define the default amount tolerances	IMG - Define for a blank group - so any new test user can post during prototyping
Define document number ranges	IMG - Copy from the standard ranges

<p>Create some of the minimum accounts needed to start off with.</p>	<p>GL Master data: A/R and A/P control a/cs, a petty cash or suspense a/c to hold sundry offset postings while debugging, a revenue account, some expense accounts. This list will expand as you go - see the section on account determination.</p> <p>Suggest you create with reference from the standard chart and company code and use those specifications (account groups, fields status groups etc) for now, so that these accounts will be reasonably appropriately setup.</p>
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Now you should at least be able to post a GL journal. To test I suggest you use balance sheet accounts only, since you will not have setup the cost elements for the expense accounts. All projects would at least be using the Cost centre and Cost Element functionality of CO as a minimum. So - on to the next step.

## 2. Minimum configuration to see expenses by cost centre / post through to the CO Module

### Initial Business Decisions Required:

Item to be decided	Comment
Structure of standard cost centre hierarchy	The structure should follow the organisations intended responsibility reporting hierarchy (the budgetary responsibility). Allow the appropriate number of levels.
Hierarchy node name coding	The coding of the nodes is quite important because they can be used to report on the levels in the standard reports, and so will be very visible to the users
Cost Centre Naming Standards	Useful to begin following the intended standards ASAP so that test data looks as real as possible.

### Configuration steps:

Step	Comment
Define the controlling area	IMG, not very visible to users, if you are only going to have one, you could <a href="#">default</a> it later
Assign the company code to the controlling area	IMG
Create the beginnings of the standard cost centre hierarchy	CO - Cost Centre Master data
Create a representative set of cost centres, assigning them to the appropriate node in the cost centre hierarchy	CO - Cost Centre Master data

Create all the expense accounts as primary cost elements	Either in the IMG - for all GL accounts in a specific range, or individually in the CO - Cost Centre Master data
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Now you should be able to post a GL document (journal) to an expense account and code it to the cost centre. The posting should then be viewable via Cost Centre reporting and GL Account line Item Display.

### 3. Minimum configuration to post to subledgers (AR, AP)

#### Initial Business Decisions Required:

Item to be decided	Comment
GL Account Number of Control accounts	see account number range comments above

#### Configuration steps:

Step	Comment
Create the AP and AR Control accounts in the GL	see account creation comments above
Create a couple of customer and vendor accounts	If using SD and MM too, inform the SD and MM analysts so that they can complete the account creation on the SD/MM side for the customer and vendor respectively.

Now you should be able to post a FI-AR customer invoice and an FI-AP vendor invoice.

### 4. Minimum configuration to post from logistics modules to FI/CO (similar concept for other modules)

So far it was relatively easy going, now it starts getting a little more difficult. Following are the very broad steps - for more detail see the sections on [Organisation structure](#) and [Integration](#).

#### Initial Business Decisions Required:

Item to be decided	Comment
SD and MM organisation structure and relationship to the FI/CO elements	Not a trivial decision, and may require rework, so at this stage, decide on a simple best guess with the SD/MM team to get you going

#### Configuration steps:

Step	Comment
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Assign the SD and MM <u>organisation elements</u> to the FI/CO elements	IMG; to get prototyping going you need at least 1 set of working relationships that the whole team can work with (EG: 1 Sales Area, 1 Purchasing Organisation, 1 Plant etc)
Maintain the basic <u>automatic account determination</u> for each module	IMG; For example : Revenue Account Determination for SD. As the modules test or prototype expanded functionality, the SAP will look for the accounts to which it should post. You could maintain on an as needed basis. The SAP documentation and configuration does not always explain clearly which piece of account determination is used for which type of functionality, so it is sometimes difficult to be pro-active. being reactive has the benefit that hopefully each side (eg: MM and FI) can develop an understanding of what the business transaction is and therefore where it should be posting. Otherwise the MM person may not even be aware that he has generated a certain type of posting ! (You'd be amazed at some of the lack of ownership from a logistics consultant for the financial postings that they generate).

Now the other modules will be able to process a thin 'path' using agreed organisation elements and base functionality, all the way through to FI.

Congratulations - you now have enough absolutely mandatory FI configured for the start of prototyping !

## Need to produce 'Financial Statements' by other than legal entity?

A common requirement which seems to be of concern to some, is to be able to produce Financial Statements, specifically Balance Sheets by some entity other than the legal entity (I shall call this the SBU - Strategic Business Unit). These SBU's are either below the legal entity or sometimes run across the legal entities.

If this is a requirement on your project, the first step is not to take this 'stated' requirement entirely at face value. Dig a little deeper - ask for examples of current reporting, use "what-ifs", to determine the real or practical requirement. Sometimes it is not a full Balance Sheet that is required, especially if the SBU's are not fully autonomous, but more specifically the ability to report some Balance Type information by SBU in order. For example to provide some ROI type reporting.

If this is the case, the options are broader and implementation and use may be simpler.

The options in SAP are to implement the SBU's as :

1. SAP Business Areas

2. SAP Company Codes, if they do not run across legal entities
3. SAP Profit Centres

These options are discussed below. Note that requirements or impacts in other modules must also be considered and may influence this decision. [Organisation Structure](#) and [Integration](#) must be properly understood.

## 1. SAP Business Areas

The SAP Business Area is an FI organisational element which is intended to provide Financial Statements below or across company codes. The standard GL, financial statement functionality and reporting all support this.

However it is important to understand how SAP implements this, because it is by no means the same as the company code. The following points must be noted:

- SAP company code will always be in balance, all the time, document by document. The SAP Business Area will not. IE: it is possible to post a DR to one Business Area and a CR to another, or to leave one line item with a blank business area.
- Business Area is not a mandatory field. It is dangerous to attempt to force this. It is not always possible for the system to determine the appropriate business area, it will then post a blank business area (unless you have 'forced' a substitution, which often just has the effect of replacing 'blank' with some other default).
- SAP 'rectifies' this out of balance situation by providing period end programs which 'clean up' and post adjusting journals or inter-business area journals depending on the situation. See the documentation on these period end programs in the GL module.
- Reporting by Business Area is available during the month (albeit out of balance) and visible within GL accounts. Compare with Profit Centre implementation below.

## 2. SAP Company Codes, if they do not run across legal entities

This is potentially a dangerous route, because of the possible across the board impact on day to day operational transactions, not just in FI, but in other modules. 'Test' all scenarios. SAP intends the SAP company code to be implemented as the legal entity and thus there is fairly 'rigorous' functionality around the company code. If you decide to implement SBU's as SAP company codes, you want to be sure that the majority and the key business transactions will be within one SBU.

In order not to compromise legal entity reporting, you should only take this option if the SBU's are subsets of a single legal entity. You can then use the standard multi- company summarisation reporting, or the consolidation functionality to provide your legal entity reporting.

## 3. SAP Profit Centres

This could be a good option if you do not require full/rigorous balance sheet by SBU, but are looking for some ROI type information. Standard configuration exists to :

- flow revenues and expenses automatically through to Profit Centres. (Expenses via cost centres, and revenues through a fairly complex 'assignment to profit centre' configuration logic)
- transfer at period end balance sheet info such as payable, receivable, fixed assets, material stocks and work in process
- allow specification of additional Balance Sheet accounts to be transferred. You must then ensure that a profit centre has been nominated on all the line items, or else a default profit centre will be used. The issues with some accounts here will be the same as with attempting to force or identify a business area. See above.

Standard reporting is available to do ROI reporting, however this will of course only be available after the period end programs have been.

## Profit Reporting

This section addresses the requirement to provide profit reporting. The main decision which typically has to be made is which module to use.

- If your company is using the SD module, then the question is often between the [CO-PA Profitability module and EC-PCA the Profit Centre module](#).
- If your company is a financial or government organisation and/or you are not using SD, then you are probably considering the EC-PCA Profit centre module. You should consider the [CO-CCA vs EC-PCA discussion](#) to determine whether perhaps you could get away with just using the CO-CCA Cost Centre module.
- Limited Profit Reporting by Legal Entity and Business Area is available via the standard FI Financial Statement Reporting.
- You should also review the [Period based vs Cost of Sales Based Accounting](#) section.

## Profit Reporting via Profitability Analysis or Profit Centre Accounting

Which module to use is a question that I often get asked by people unfamiliar with the operation of one or both.

Some rule of thumb guidelines to help you get a feel for which way you should be going are as follows:

<b>Profit Centre Module</b>	<b>Profitability Analysis</b>
<ul style="list-style-type: none"><li>• is aimed at Profit reporting by internal responsibility lines or SBU's</li></ul>	<ul style="list-style-type: none"><li>• is aimed at external market segment reporting for example by customer and customer groupings (industries ?),</li></ul>

	geographical areas.
<ul style="list-style-type: none"> <li>is limited to reporting by the profit centre hierarchies that you can setup.</li> </ul>	<ul style="list-style-type: none"> <li>can slice &amp; dice your information by a variety of dynamic hierarchies (a 'rubik's' cube is often used to symbolise this idea.</li> </ul>
<ul style="list-style-type: none"> <li>can be reconciled easily back to the GL</li> </ul>	<ul style="list-style-type: none"> <li>has 2 'styles' <ul style="list-style-type: none"> <li>Account based which will reconcile to the GL</li> <li>Costing Based which Allows approximations, estimations or standards to be posted, which may make reconciliation difficult to explainm to the user</li> </ul> </li> </ul>

## Profit Centre Accounting (EC-PCA module) vs Cost Centre Accounting (CO-CCA)

This section addresses the question: "Do you really need to use Profit Centres ? OR How can I have revenue in my Cost centres?"

If you are not using SD and MM (*perhaps you do not have logistic operations but are in a government or finance type industry*) or are not using CO-PA for some reason (SD and CO-PA usually go together), you will probably have been looking at using Profit Centre accounting. If you are only doing this for Profit Reporting and are not using the [Balance Sheet related functionality](#), then you should consider possible only using Cost Centres. This will simplify data setup and maintenance and reduce the data volume.

How ? Well there are a couple of options:

### 1. Revenue as 'negative' expenses

- Create your revenue accounts as primary cost elements (same as your expense accounts). Basically ignore the revenue element option.
- Create appropriate cost element groups to report appropriate subtotals etc.

Standard Cost centre reporting will then provide profit/loss reporting by cost centre and cost centre group.

### 2. Allow 'revenue' posting to Cost Centres:



Set the appropriate indicators in each cost centre master record for which you wish to see revenue postings. Note however the system regards revenue element postings to Cost Centres as "statistical postings" and therefore this revenue information will not be as visible in the standard reports as with option 1.

## Statistical vs Real CO account assignments

Why does SAP talk about statistical assignments in CO - why are these different from real Cost Accounting assignments ?

The reason is to facilitate reconciliation between FI and CO. The sum of all 'real' assignments in CO should add up to the sum of all expense and revenue postings (where cost/revenue elements have been created for the GL account of course) in FI. A normal expense invoice posting to expense accounts / cost elements will be a 'real' posting. If the system is displaying an error message insisting on a 'cost accounting assignment' and you think you have entered one, then possibly you have specified a statistical assignment. A common error is in thinking that the business area will do - Business areas are FI elements not CO elements.

*Note that the word 'statistical' occurs in a number of different contexts which can be confusing. We are not talking about key figures here.*

So how do 'statistical' postings come about? Strictly speaking the whole document is not 'statistical' but one or several of the cost accounting assignments on a line item may be statistical. SAP have defined a number of 'rules' which determine what is statistical and what is not. Briefly these are as follows:

All Profit Centre assignments are statistical	EC-PCA is defined as statistical, therefore if posting to a revenue element, the system will insist on a real cost accounting assignment even if profit centre is specified. A cost centre will not do, since revenue elements are statistical in cost centres. The system will accept the following as 'real' : CO-PA profitability segment, sales order, customer project or a revenue bearing order.
An assignment to a statistical internal order will be 'statistical' - sounds obvious doesn't it!	The system will continue to demand a cost accounting assignment until a non-statistical assignment is made. For example a cost centre as well as the statistical order.
Revenue elements assigned to cost centres will always be statistical	'Revenue' when defined to the system by setting up a revenue element is always statistical in a cost centre. If however you have setup your revenue accounts as primary cost elements then the assignment will be 'real'.
Specifying multiple 'real' cost accounting assignments	If you assign to more than one 'real' account assignment objects (usually only allowed where one is a cost centre), then one of them will be made statistical - the cost centre

The CO cost and revenue element module is where you find the reconciliation ledger. There are some standard reports that will list by 'object type' (cost centre, order etc) the CO postings (real assignments) against the FI postings for a cost element.

Any differences should be due to the use of CO reposts, or distributions, or late setup of cost elements once postings have been made to a GL expense account.

## Period Based Accounting versus Cost of Sales Accounting

These terms come up in the SAP documentation fairly often and I frequently get asked what the difference is. There are a number of ways of explaining the differences.

For the accountants it is usually enough to say the 'Period Based Accounting' is Accrual Accounting and 'Cost of Sales' is 'Cost of Goods Sold' Accounting. In CO-PA one has the option to choose or use either Account based or Costing Based CO-PA. This choice impacts the level of detail and the frequency (monthly, weekly or realtime) of reporting.

What does this mean effectively to us non-accountants and practically in the SAP system?

### Period based Accounting

"Period based" means that during the month or period, all and only actual events / transactions are posted in the appropriate period. At the end of the period estimated accruals and deferrals are made and posted to that posting period to give a more accurate view of profit. IE any expected revenues and expenditures that should relate to the current period are accrued for and equally any prepaid expenses or revenues are deferred to the next period. (Accruals and Deferrals are posted temporarily, usually to special accounts, and reversed prior to the next period end.)

These accruals and deferrals are usually done at a fairly high level of summarisation (eg: at company or business area). The FI Ledgers and financial statements etc are always period based.

### Cost of Sales Accounting

Cost of Sales in SAP means that we attempt to record or rather report the "costs of sales" against the actual sale at as low a level as possible and during the period. (In CO-PA this is down to a transaction level.) This enables the company to get a reasonably accurate view of profitability on a real time basis.

This is done by using either standards or estimates for many of the components that make up the "cost of goods sold". Any variations from the standards are usually posted through to the cost of sales system either at monthend or when they occur.

For example: A product cost estimate might be used to calculate and post a manufactured cost through to CO-PA when every sale goes through. The actual production orders variances from the product cost estimate can then be settled to a separate line in CO-PA. This has the benefits that

- a reasonably accurate gross profit could be reported in real time at a transaction level and of course therefore at all the characteristic levels in CO-PA.
- the impact of any abnormal variances in production can quite clearly be seen and analysed separately from the normal profitability of a product.

## Table comparison

	GL (Period Based)		CO-PA (Cost of Sales)	
	During the Month	At Month End	During the Month	At Month End
Manufactured Cost	goods issued from stock to "cost of goods sold" at stock valuation	plus any stock valuation adjustments	Production Estimate / unit or Stock valuation / unit applied to the number of units sold	Variances can be posted as they occur preferably to a separate line for analysis
Delivery Costs	actual freight invoices etc posted to the period whenever they come in	plus any accruals or deferrals	Freight etc estimate or charge applied to each sales invoice line item	Actuals can be allocated in for comparison or different m/end reporting
Gross Profit	not useful yet		useful for profitability analysis	
Overhead Costs	actual invoices received & posted	plus any accruals or deferrals	Overhead Cost Estimate used. Actuals recorded in CO, not available yet in CO-PA	Actuals can be allocated in to a separate line item for comparison

				to Estimated Cost used
Net Profit	definitely not useful yet	Accurate Financial Statement for company or business area	useful for profitability analysis during the month	May have an additional report for m/end that shows actuals / variances

## FI and CO Did you know? s :

Following are some random items that were 'news' to some of my clients and occasionally even to me! Sometimes due to the setup of the system you are working on, fields or possibilities have been hidden to simplify screens or are enterable due to a combination of configuration. Thus you may not be aware that there is additional or alternative functionality there. It pays to explore if you have the access and the time, especially if it makes sense to you that such functionality should be available - often it is.

Module	Item	Description
FI	Line item display performance using sort keys to populate the allocation field on GL, AR and AP accounts	Sort keys often place redundant data (ie data that is already on the line item) in the allocation field, and so appear unnecessary at times. However the account line item display uses index tables to provide fast display of line items where all the data required by the line layout is in the index table. Index tables are BSIS, BSID, BSIK (Open items for GL, AR, AP respectively), and BSAS, BSAD, BSAK (cleared items). The line items in the index tables are sorted by, amongst other fields, the allocation field. So judicious use of the sort key to define the most popular sorting of the line items should improve display speed. This should be taken into account when creating custom line layouts.
FI	A 'Duplicate record' check can be switched on for customer and vendor masters in AR & AP	See the " <b>change message control</b> " configuration under AR/AP master record creation in the IMG. Insert a new entry, click the dropdown on the message number field and choose the appropriate message. This will enable a duplicate check by address. The address has to be exactly the same.
FI	Descriptive text on master records	See " <b>Define Text ID's...</b> " under AR/AP master record creation in the IMG. Here you can define classifications or types of comments that will be allowed for the various sections of the master records.  To edit / view the texts from the master record (both in

		general or company code (accounting) section, follow menu " <b>Extras/texts</b> ". First line of each will be displayed. Double click to get into wordprocessing mode to enter more text.
FI	Standard line item texts or formats for the line item text field can be defined	Define under <b>IMG / FI Global settings / Document / Line Item / Define Text for line items</b> (transaction OB56). The 4 digit abbreviation (abbr) can then be used when entering a journal line item either by typing "=abbr" or clicking on the dropdown arrow in the text field.
FI	Long text for FI documents can also be used	Useful for detailed explanations of reasons for documents or adjustment postings etc. Define under <b>IMG / FI Global settings / Document / Document Header / Define Text ID's for documents</b> . See also for master records above.
FI	Remove document entry fields for functionality that you do not need	Your document entry screens can be <a href="#">simplified for you personally</a> , by eliminating fields used for functionality you do not use (special GL, inter company, foreign currency etc).
FI	'Automatic' Worklists	<p>If your users would like to use worklists but maintenance when new customers or vendors are added, is a pain or forgotten, you could setup automatic worklists. These are updated automatically when a new master record with the appropriate criteria is added. Unfortunately this only works on the 'group key' or 'alternate payer' fields, but could nonetheless be useful.</p> <p>Follow menu: <b>GL/Environment/Current Settings</b>. Instead of clicking on 'create' follow menu: <b>edit/auto worklist</b>. Specify the prefix,offset &amp; length of the part of the field you want to use to include a record in the worklist. EG: XYZ, 0,3 will include all customers with XYZ in the first 3 digits of the group field. Note that you will not see the worklist listed until you have some master records with the appropriate data.</p>
FI	Treasury functionality you might expect in the FI module	<p>Even if you are not 'officially' implementing Treasury, you may want to consider implementing some of the basic functions :</p> <ul style="list-style-type: none"> <li>• Cheque deposit (records cheques received, prints deposit slips and makes appropriate postings to the Gl and AR accounts)</li> <li>• Cheques cashed (manual entry or automatic entry upload) - updates the payment documents with cashed information and makes appropriate GL postings for cash flow forecasting</li> </ul>

		<ul style="list-style-type: none"> <li>• Bank Statement Load - reconciles bank with incomings and outgoings</li> <li>• Cash Position and Forecast. This is actually really easy to implement (surprise your client - or at least the treasurer - deliver more than expected!). The design and configuration is best done when you first setup your customer, vendor and GL accounts anyway so that the appropriate settings are made - no rework.</li> </ul>
CO	Cost Centre Currencies can be individually specified	When one sets the controlling area currency to the company code currency in CO maintenance, the currency field in the cost centre master can be entered (normally defaults from company code), and so you could run cost centres on their own currencies.
CO	Standard Cost element groups for standard reports	Specify the cost element groups that the standard reports should use via transaction " <b>ORKS</b> - Determine Valid Cost Element Groups".

## Useful Transaction codes:

Sometimes it is quicker and faster to [use transaction codes](#) than to work through the menus - especially the IMG. This section presents some transaction codes that may be useful to the configurer or the experienced user.

Use	Transaction or menu path	Comment
How to find the SAP transaction codes?	System/Status SE93 SE43	<p>The usual way to find the transaction code is to click menu : <b>System/Status</b> while in the transaction. If you can't find the transaction then searching by what you think it is called - all transaction codes can be found by running transaction <b>SE93</b> and using it to query on the transaction description. Configurers don't always know about the Abap/4 Workbench which is where many useful debugging and cross checking transactions are found.</p> <p>Comment from John Arendsen: "Instead of transaction SE93 you can also use search_sap_menu or search_user_menu. These transactions provides you with information about transaction codes but also info about the nodes</p>

		<p>(path where the transaction is located in the sap-menu or the user-menu).</p> <p>There are also usually several configuration menu transactions which are quicker to work through than ploughing through the IMG each time.</p>
The Configuration Main menu	SPRO	<p>Hit F5 to get the full SAP Reference IMG to be sure of seeing all configuration menu options. Did you know you can use the find function, ask for a 'hit list' and then select an option 'in the structure' to look for a configuration option you know exists, but can't remember or find where it is?</p>
Table Maintenance aka "Dealing with error messages that tell you 'entry missing in table T999"	SM31 or System/Services/ Table Maintenance	<p>Since all configuration is really about maintaining tables, this transaction can sometimes be used to help you out when you get that error message about 'entry missing in table T999' and the long text does not take you to the appropriate piece of configuration and you have no idea what how to find the transaction to maintain that table. Try running table maintenance or view maintenance on the table name referred to in the error message.</p>
The Data Dictionary	SE11	<p>Allows you to explore what fields are used where. Can be useful if you are thinking of using or mis-using a particular field for your own nefarious purposes.</p>
The Data Browser	SE16 or Abap/4 Workbench / Overview / data browser	<p>This allows you to 'browse' the contents of a table in a fairly user friendly fashion. It allows you to select data by the fields in the table and to choose which fields you wish displayed. This can be useful if you are trying to understand what your data is doing or find more data with similar values in a prototyping or debugging situation.</p> <ul style="list-style-type: none"> <li>• If you see the technical field names, go to '<b>settings/user parameters</b>' and select field text instead.</li> <li>• When you execute the transaction, you may be presented with a list of fields to use as selection criteria. You can choose other fields to</li> </ul>

		<p>select by.</p> <ul style="list-style-type: none"> <li>You can also select the whole record to display it vertically. You can display the check tables for the fields.</li> </ul>
Configuration menus	<ul style="list-style-type: none"> <li>ORFB - FI Configuration</li> <li>ORKS - CO Configuration</li> </ul>	<p>Instead of plowing through the IMG menu each time, you can go directly to a submenu which contains most of the configuration of the module</p>
Comparing Configuration in clients	<p>OY19 or Utilities / Compare / Other Client or System.</p>	<p>When you are actually in a configuration transaction - looking at the table you are maintaining, click <b>Utilities / Compare / Other Client or System</b> This will compare the tables in the two clients, lining up the records with the same table keys so you can check the settings. Click on a line and then the detail icon to display the whole line vertically. As is often the case in the SAP transactions, there is quite a bit of functionality in this 'compare' functionality, so explore !</p>



## SAP Queries:

If you have a specific problem or query try the User Forums, Knowledge Bases and Discussion Groups in the [SAP links](#) section; If you have put a meaningful subject line and described your problem well, indicating what you have investigated already, you may be lucky enough to get a timely answer. Good Luck !

## Selected SAP Links:

<b>SAP</b>	
<a href="http://www.sap.com">http://www.sap.com</a>	The official SAP Webpage
<a href="http://help.sap.com">http://help.sap.com</a>	The official SAP Help Portal



<a href="http://sapnet.sap-ag.de">http://sapnet.sap-ag.de</a>	SAPNet - OSS online etc (Note: OSS id required)
<b>SAP Related Sites</b>	
  <p><u><a href="http://searchSAP.com">searchSAP.com</a></u>: <u>Awarded by</u></p> <p style="text-align: center;">&lt;/A&lt; td&gt;</p>	SearchSAP.com gave me this neat little icon to put on my site as a 'Best web links' award for SAPScene. So thanks for the compliment!
<a href="http://www.ficoexpertonline.com">http://www.ficoexpertonline.com</a>	SAP Journal
<a href="http://www.sappro.com">http://www.sappro.com</a>	SAP Journal
<a href="http://www.sapinsider.com">http://www.sapinsider.com</a>	SAP Journal
<a href="http://sap.ITtoolbox.com">http://sap.ITtoolbox.com</a>	has a forum
<a href="http://www.sapfans.com">http://www.sapfans.com</a>	
<a href="http://www.sap-professional.org/">http://www.sap-professional.org/</a>	has a forum
<a href="http://www.sapinfo.net/">http://www.sapinfo.net/</a>	has a forum
<a href="http://www.sapclub.com">http://www.sapclub.com</a>	
<a href="http://www.sapfaq.com/">http://www.sapfaq.com/</a>	has an email based discussion forum
<a href="http://www.sappro.com/">http://www.sappro.com/</a>	
<a href="http://www.surrex.com/sap/">http://www.surrex.com/sap/</a>	IT Resource Center for SAP
<a href="http://www.saplinks.net">http://www.saplinks.net</a>	Ivan Wongs site on SAP information
<a href="http://www.learnix.com.au/">http://www.learnix.com.au/</a>	Online SAP training
<a href="http://www.sapbasisadministration.com">http://www.sapbasisadministration.com</a>	SAP resources, Basis Administration information, SAP Books, tips, links, discussion forums and much more.
<a href="http://www.intelinfo.com/newly_researched_free_training/SAP.html">http://www.intelinfo.com/newly_researched_free_training/SAP.html</a>	List of links re free SAP info
<a href="http://education.itresourcecenter.hp.com/">http://education.itresourcecenter.hp.com/</a>	Sells SAP training courses