inPlan

Plant Maintenance Budgeting Overview

Version 0.3

October 2013

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1 Introduction

The purpose of this document is to provide a functional overview of inPlan for Plant Maintenance.

1.1 Background Information:

inPlan is an add-on enhancement to the SAP ECC system that has been developed in ABAP to bridge the gap between the Controlling (CO) module and Logistics planning (PM, PP & MM) in the areas of operational budget planning, forecasting and actuals tracking.

The purpose of inPlan is to provide a dynamic input, tracking and analysis tool within the SAP ECC system to:

- Simulate budgeting and forecasting of costs for the following elements:
  - Planned, Scheduled Maintenance
  - Planned, Un-Scheduled Maintenance
  - Unplanned, or Ad hoc Maintenance
- Provide a range of tools to enable flexible cost modelling and scenario planning techniques.
- Populate CO planning and FI planning with the relevant budget input data.
- Provide a database for reporting the actual cost results versus a simulation and/or budget version for a completely user-defined set of characteristics.

inPlan effectively allows maintenance budgeting to be treated and managed from an end-user perspective as a fundamental part of work order management and maintenance planning.

The following business scenarios are relevant for the application and use of inPlan:

Business Scenario	Scenario Type	Data Types	# of periods	Frequency.	Timing	Version
Annual budget	Simulation	Planned	12-month fixed	Annually	6-months prior to budget year	000
Regular forecast	Forecast simulation	Actual-to-date Planned forecast	Up to 12-months fixed	Monthly / quarterly	End of each period	101 – 112
Scenarios	Forecast simulation	Planned forecast	Annual	Ad-hoc	Ad-hoc	201 – 999
Actuals	Actual Costs	Actual Costs	Annual	Real Time	Real Time	000

Each of the preceding business scenarios is the combined result of the individual planning scenarios:

- PM – Maintenance and Availability Planning.
- CO – Variable Cost Planning.

1.2 Technical Details

The software has been developed under a unique namespace, reserved with SAP for its use in new developments and upgrades. Namespaces are IDs assigned exclusively by SAP to prevent the occurrence of naming conflicts when new complementary products are introduced into a SAP system and SAP further enhances the base ECC product in future releases.

inPlan is installed on your SAP system via standard transport maintenance. All User Exit inclusions are manually inserted at installation eliminating the possibility of inPlan overwriting existing user-exit code.

inPlan does not require any modifications of standard SAP programs, screens or reports. All inPlan components are either separate stand-alone programs, or built around standard user exits. This means that users will not know the difference between inPlan and their normal SAP environment.

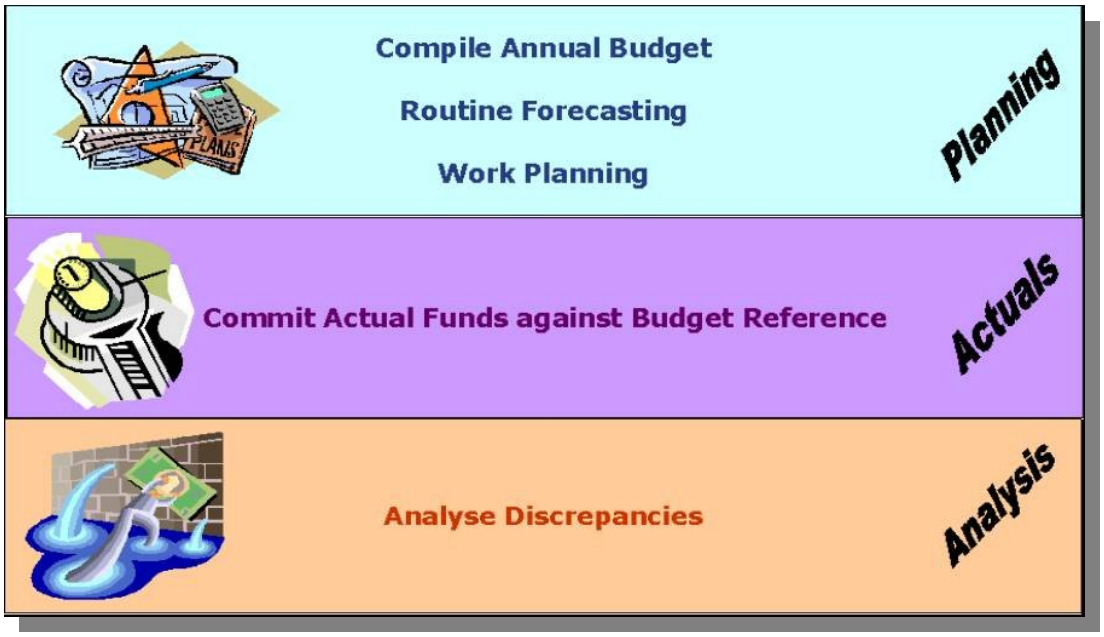
1.3 Configuration

Although budgeting is a relatively standard business process, all organisations go about preparation and management of budgets in different ways. To this end we have designed inPlan to be a 95% fit requiring a small amount of set-up and configuration to suit business requirements. In addition, many organisations often require specific reports or minor modifications, a service which Stream Technologies can provide as part of the implementation service.
To cater for unique requirements inPlan itself allows for the development of user exits, these can be developed outside of the Namespace and managed via configuration settings.

2 Overview

inPlan is a fully inclusive budgeting tool providing solutions for all three critical aspects of maintenance budgeting covering ALL types of maintenance expenditure, these are as follows:

- Planning and Re-forecasting
- Controlling actual expenditure against budget
- Analysis and reporting



2.1 Maintenance Budgeting

2.1.1 Success Factors

The following aspects are critical to a successful maintenance budget process:

- Integrated Budgeting Process – All aspects of the planning and execution of the maintenance budget should be integrated into the business process system.
- Reliable Forecasting – A successful maintenance budget system must provide forecasting and scenario planning capabilities.
- Bottom-up process – Maintenance budget figures should be based on forecasted work with the resultant costs determined, and not only on costs regardless of work.
- Real time – Forecasts must be based on real time future costs for labour and materials.
- Continuous Improvement – A successful budget tool must facilitate planning and tracking to allow continuous improvement of budget allocations and work forecasting.
- Performance tracking – It must be possible to track actual expenditure against budget or forecast.

2.1.2 Proposed Solutions

Traditionally, maintenance budgets were developed and managed on the "pool of money" principal; budget funds for a work centre were made available with the amount based on historical figures escalated proportional for inflation. Other more elaborate solutions based on external systems, spreadsheets or databases have also been used with varying degrees of success.

A solution to maintenance budgeting in ECC that is widely used is based on the use of statistical WBS elements to provide a budget allocation structure, and budget orders to plan and allocate budget costs to the structure. This solution, although functionally good, is cumbersome to set up and manage, and is proving extremely unfriendly for users. It also relies on a high level of dedication and effort to keep the budget system in synchronization with maintenance planning elements.

2.1.3 Problems with other solutions

- Most data is from external sources – Data used to manage maintenance budgets is extracted from several external sources with doubtful integrity.

- Little integration of interdependent data – Elements that effect maintenance budget figures are often viewed in isolation or even ignored. This leads to an inaccurate base for forecasting and requires a duplication of effort to manage planning and budgeting data.

- Lack of forecasting capability – Because budget figures are not based on maintenance planning elements and real time future costs, accurate costs cannot be forecasted.

- Different budgets performed in isolation – Often each department or workshop develops their own budgets in isolation resulting in gaps or overlaps, or even conflicts.

- Mostly manual with little automation – Interrogation or planning in external systems is often a manual task.

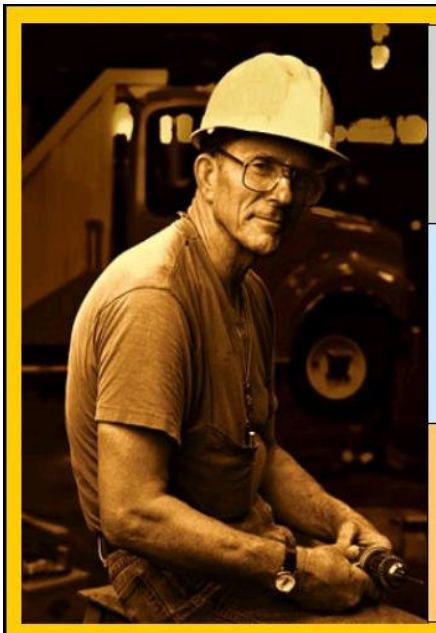
- Difficult to set a zero base – Typical organisations attempt to develop a zero based budget, but due to some of the problems already mentioned, the budget is soon viewed with reference to previous periods or years, and subsequent budgets are copied from current figures adjusted for inflation.

- The "Spend it all" syndrome – Maintenance personnel often attempt to spend their entire budget to ensure equal or additional funds for the following year. This often results in unnecessary major spending towards the end of a financial year.

- User friendliness – Many maintenance budget solutions are cumbersome and difficult to set up and to manage with the result that users exploit loopholes and shortcuts.

2.1.4 Components of a Maintenance Budget

A comprehensive maintenance budget should provide forecasting and tracking facilities for both planned or scheduled work as well as for unplanned or ad-hoc work. An effective work plan must also allow for work that cannot be scheduled or accurately predicted but must be budgeted for and tracked individually.



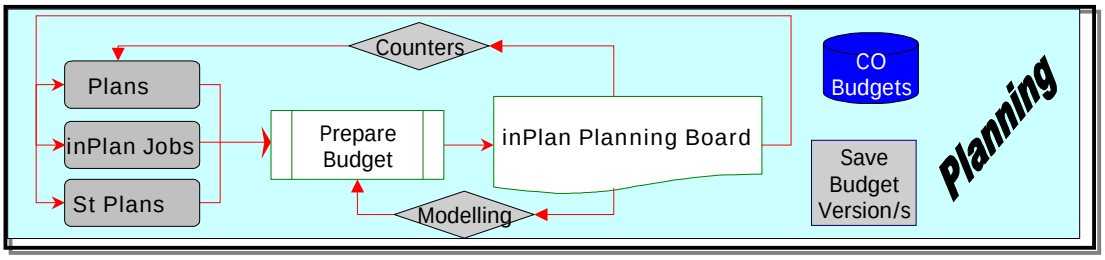
Planned Scheduled	•Maintenance Plans •Predictable •Proactive
Planned Un-Scheduled	•Maintenance Plans •Contingent but expected •Reactive
Unplanned Un-Scheduled	•Notification based •Unexpected •Reactive

3 Planning & Forecasting

3.1 Budget Formulation

inPlan provides 3 methods of adding new budget items, namely:

1. Input from maintenance plans – Planned and Scheduled work
2. Input from statistical plans – Planned but Unscheduled work
3. inPlan Jobs – Ad-hoc, unplanned work



3.1.1 Budgeting for Planned Work

Maintenance plans and task lists form the basis of system-generated work. The plan with its task list contains information on the work centre, the maintenance object (with it's settlement cost centre), the maintenance activity type, and the cost elements for expenses. System generated orders are automatically generated from maintenance plans based on time or counters, these orders are subsequently released and attract actual expenditure. inPlan extrapolates the maintenance plan into the nodes as detailed above. Actual expenditure for corresponding jobs (plans) is then tracked against budget or forecast costs via the tool.

As there is an already established link between the maintenance plan and the subsequent system generated work order, comparison for tracking and analysis purposes is relatively simple.

3.1.2 Budgeting for Unplanned Work

Although provision must be made for this form of expenditure, the actual occurrence and execution of unplanned work is random by nature. inPlan allows unplanned maintenance to be budgeted using one of the following two methods

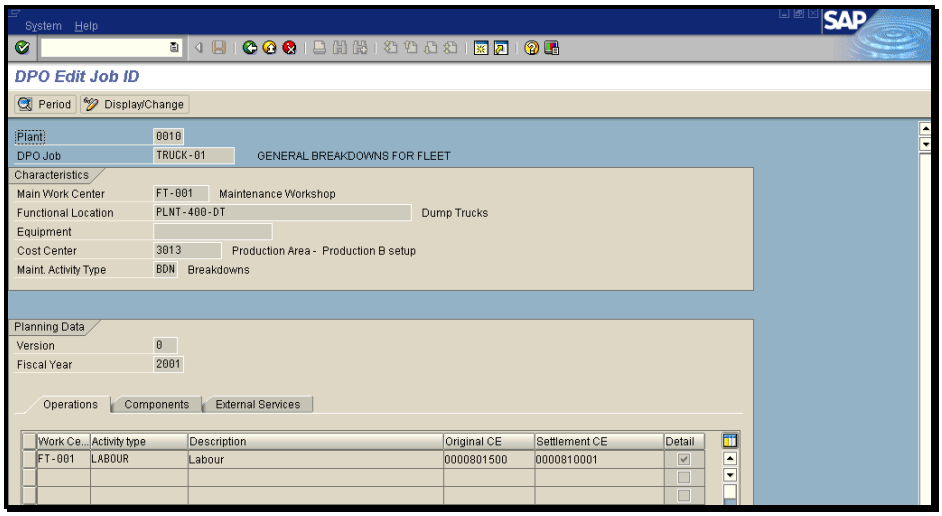
3.1.2.1 inPlan Jobs

An inPlan Job provides a mini-budget reference for a specific combination of:

- Main Work Centre
- Maintenance object (Functional location and/or Equipment)
- Maintenance Activity Type

Each inPlan job can be further broken down per Maintenance Activity Type if required. For each job, budget funds can be planned for labour, materials and services on a quantity basis per period.

An example of this would be to allow for 10 hours of labour and 100 units of materials per month for general miscellaneous breakdowns on a fleet of trucks.



3.1.2.2 Statistical Modelling

inPlan provides a more detailed means for making provision for unplanned maintenance through modelling unplanned or ad-hoc work via “statistical” time based maintenance plans. These plans are similar to normal maintenance plans except that they are not scheduled and consequently create no system generated work orders. They are based on task lists and can contain “dummy” entries. An example of this would be to allow for a repair of a seized wheel bearing once every six months based on maintenance history.

As with system-generated work, the maintenance plan (in this case only statistical) contains information on the work centre, the maintenance object (with it’s settlement cost centre), the maintenance activity type, and the cost elements for expenses. inPlan also extrapolates this data and stores it in the customised budget table.

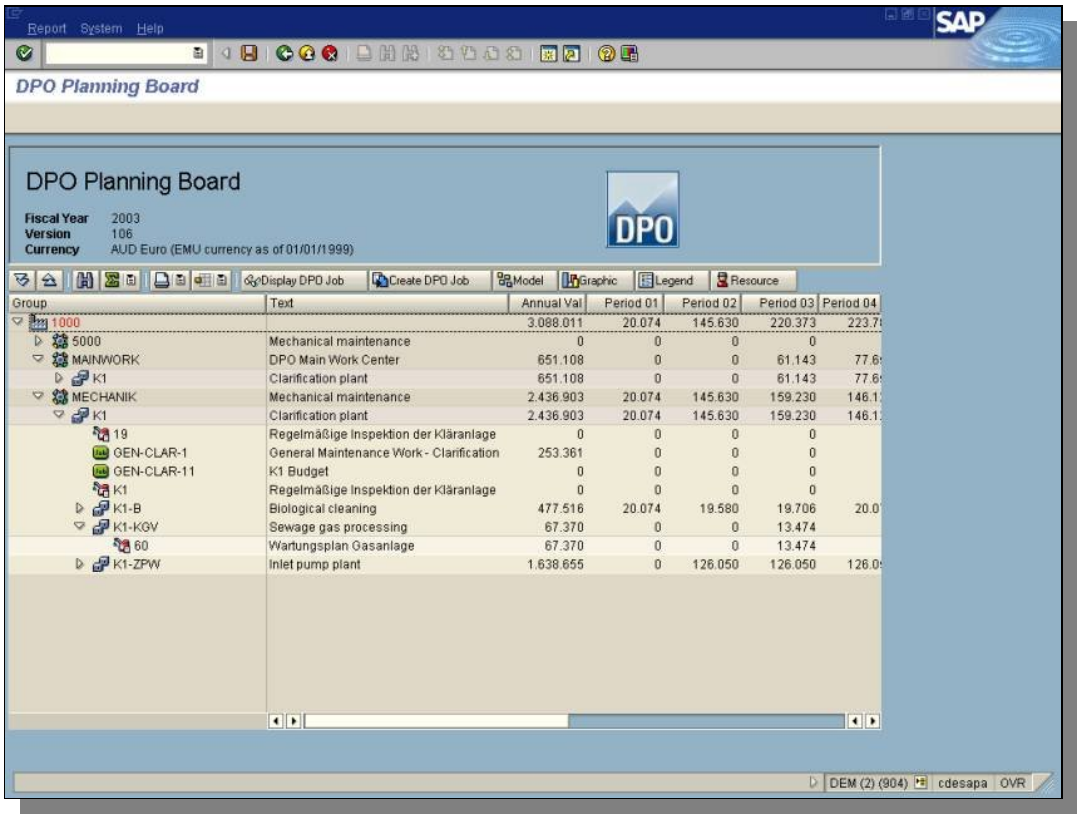
For each portion of budget expenditure, the following information is recorded; these will become "nodes" for analysis within inPlan:

- Plant
- Main Work Centre
- Settlement Cost Centre (production)
- Maintenance Object (Functional Location / Equipment)
- Maintenance Activity Type
- Job (plan/item)
- Value category
- Cost elements

3.2 inPlan Planning Board

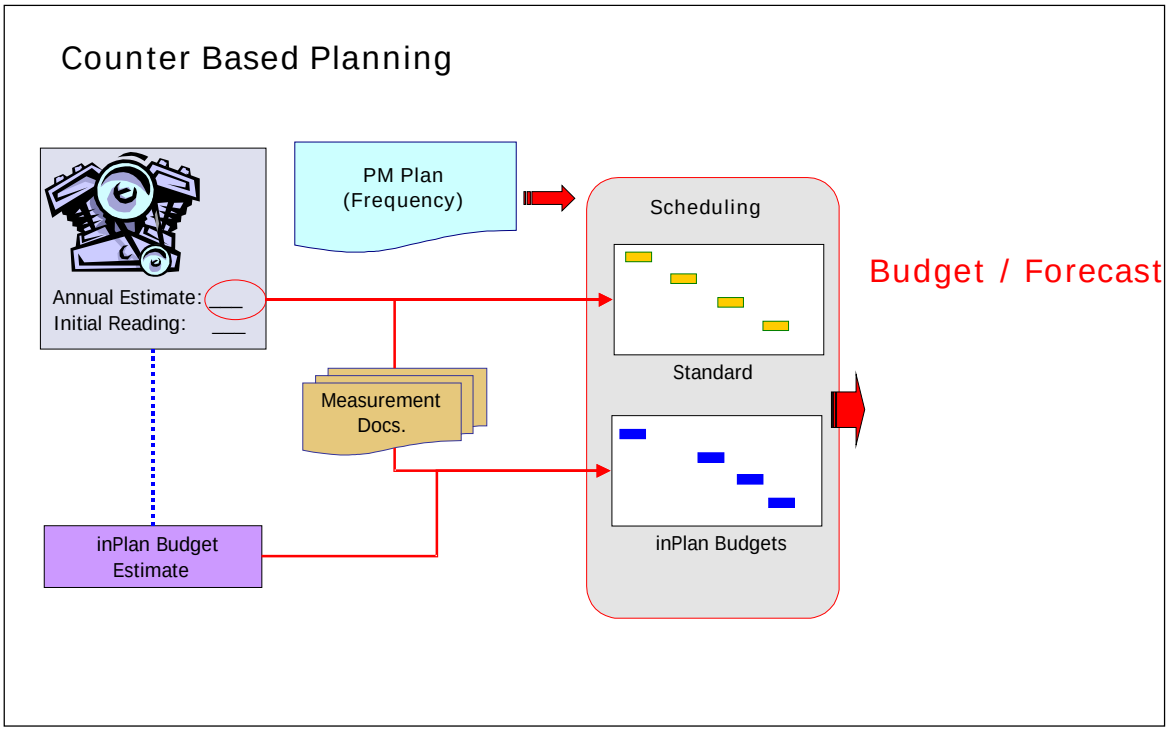
The inPlan planning board is intended to be the primary inPlan user interface. From the planning board the following functions can be performed:

- Access to all plans and inPlan jobs for display or change via a flexible drilldown path.
- Drill-through functions to any planning node.
- Access to inPlan jobs for display or change purposes below a selected node.
- Creation of new PM or statistical plans.
- Creation of new inPlan jobs
- Access to the various scenario-modelling tools.
- Download to external file.
- Graphical representation of any sub-division
- Toggle between monetary and resource views (dollars or hours)



Maintenance Counters

Counter-based maintenance plans in SAP use a combination of an annual estimate and updated measurement documents to predict occurrences of counter-based scheduled maintenance orders. This annual estimate is often inaccurate and does not provide a good platform for cost projections. To this end, inPlan allows for a Budget estimate value for all maintenance counters to be entered. When loading counter-based maintenance plans into inPlan, either the standard SAP annual estimate or the new inPlan budget estimate can be used as a basis for planning. inPlan also provides the facility of copying latest budget estimates into the SAP annual estimate field to improve planning accuracy.



3.3 Forecasting and Modelling

inPlan allows the creation of a series of budget versions:

Budget Type	Version
Annual Budget (12 Months)	000
Monthly Forecast (12 Months)	101 - 112
Scenarios	200 - 999

The annual budget and monthly forecasts are manually generated from inPlan according to business process requirements, typically agreement would be reached between maintenance and accounting personnel based on planned (anticipated) work and the resultant expected costs, and the budget or forecast "locked" away. The annual budget and monthly forecasts are used to track actual costs.

inPlan provides the planner with a means to carry out a range of scenario planning or modelling functions by manipulating the basic maintenance planning elements and / or costing elements.

3.4 Save Budget Versions

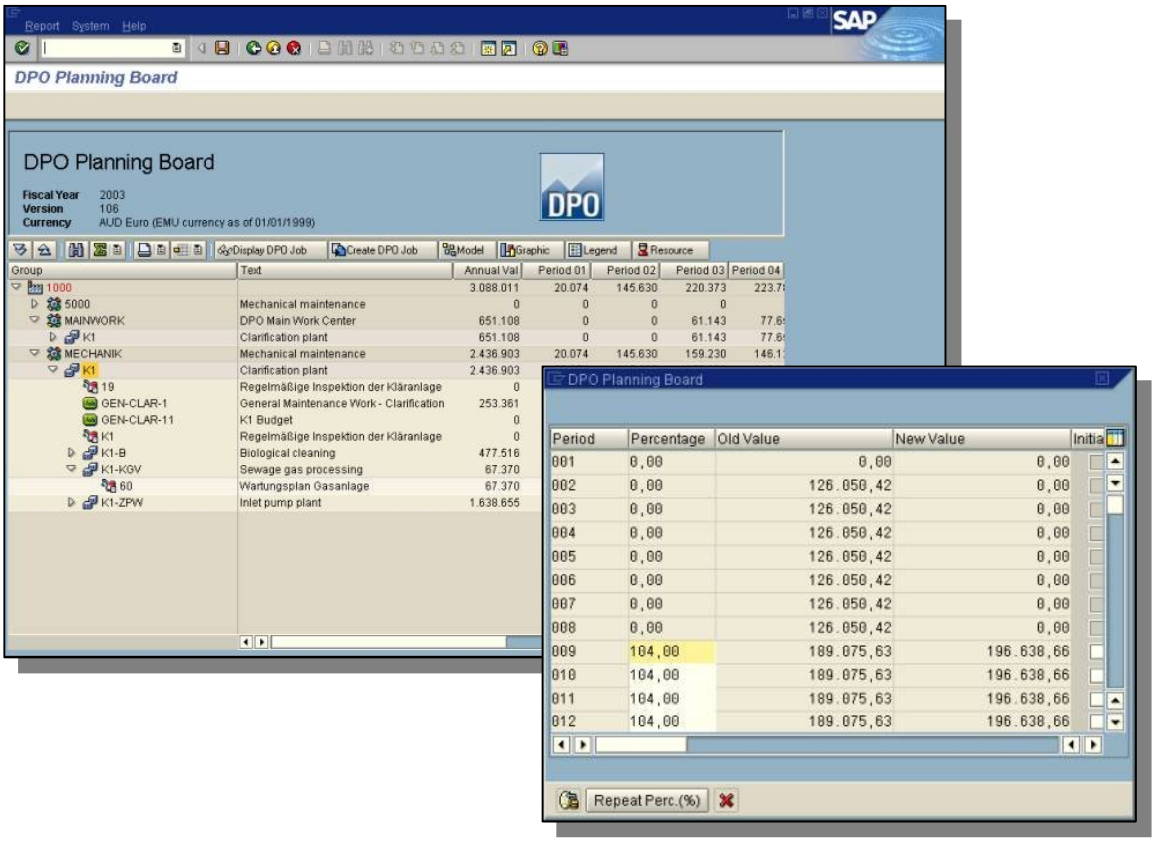
Once planning has been completed, a unique budget version can be created and stored separately. These can also be saved off-line and restored at a later date.

3.5 Download to CO

Once planning in a budget version is complete, the operational (receiving) cost center budgets for maintenance cost elements can automatically uploaded from inPlan into CO.

3.6 Scenario modeling

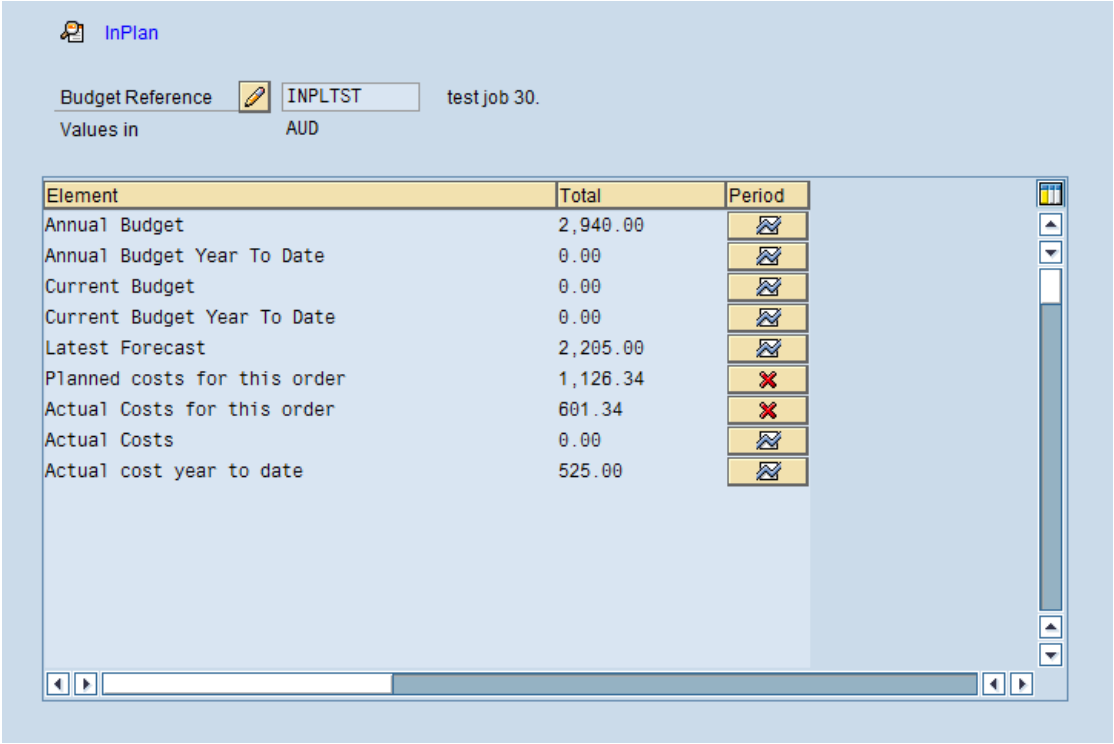
A powerful component of inPlan is the ability to carry out a range of scenario modelling functions on planning data. Factors can be set at a header level for any line items within the flexible budget structure, and percentages can be applied at a line item level against quantities within a period. The planning version can then be saved as a discrete scenario version.



4 Managing Actual Work Orders

4.1 Work Order Planning

All inPlan information relevant to a work order is managed within a new Tab Strip on the order.



This Tab contains the inPlan budget reference and description as well as the following budget related financial figures:

a) Annual Budget
   This figure includes the total budget costs for the selected Budget Reference for the current fiscal year planned in the Annual Budget (Version 000)

b) Annual Budget Year to Date
   This figure includes the total budget cost for the selected Budget Reference for the current fiscal year planned in the Annual Budget for periods up to and including the current fiscal period.

c) Current Budget
This figure includes the total budget costs for the selected Budget Reference for the current fiscal year planned in the latest version of the budget (Version 101-112)

d) Current Budget Year to Date
This figure includes the total budget cost for the selected Budget Reference for the current fiscal year planned in the latest version of the Annual Budget (Version 101-112) up to and including the current fiscal period.

e) Actual Costs
This figure includes all actual costs associated with the indicated Budget Reference for the current fiscal year.

f) Actual Year To Date
This figure includes all actual costs associated with the indicated Budget Reference for the current fiscal year up to the end of the last period.

g) Latest Forecast
This figure includes the actual year to date costs for the selected Budget Reference. The figure also includes the total budgeted cost for the current fiscal year planned in the latest budget version for the current fiscal period up to the end of the current financial year.

h) Planned Costs
This figure indicates the current planned costs for the current order

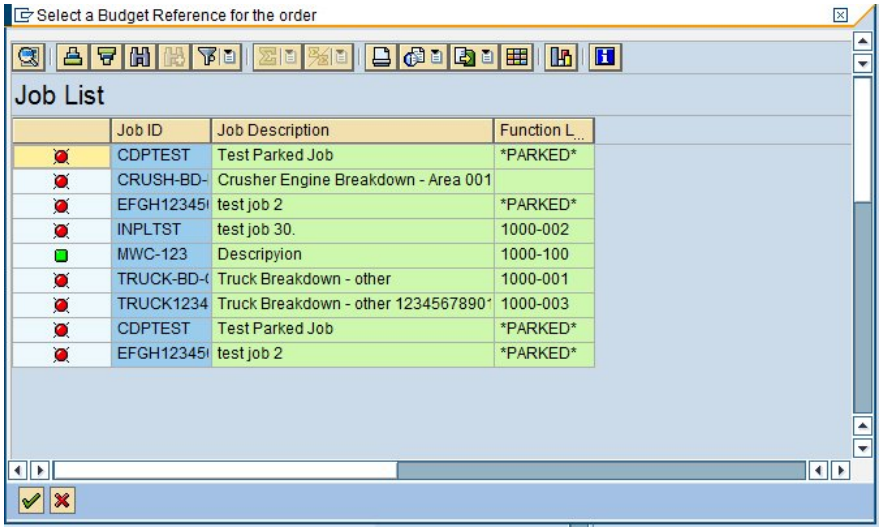
i) Actual Costs for this Order
This figure indicates the current actual costs for the current order

4.2 Budget Reference Linking

Because actual unplanned work orders are not generated via maintenance plans but rather via notifications, a link to the “statistical” plan or the inPlan Job has to be established. This function is carried out automatically via a user exit function on “order save”. As a multi-element nodal structure is used to model budget dependencies, this mapping to an appropriate “statistical” plan or inPlan job will usually result in a single option, however should more than one option for budget provision exist, a pop-up selection box will be displayed.

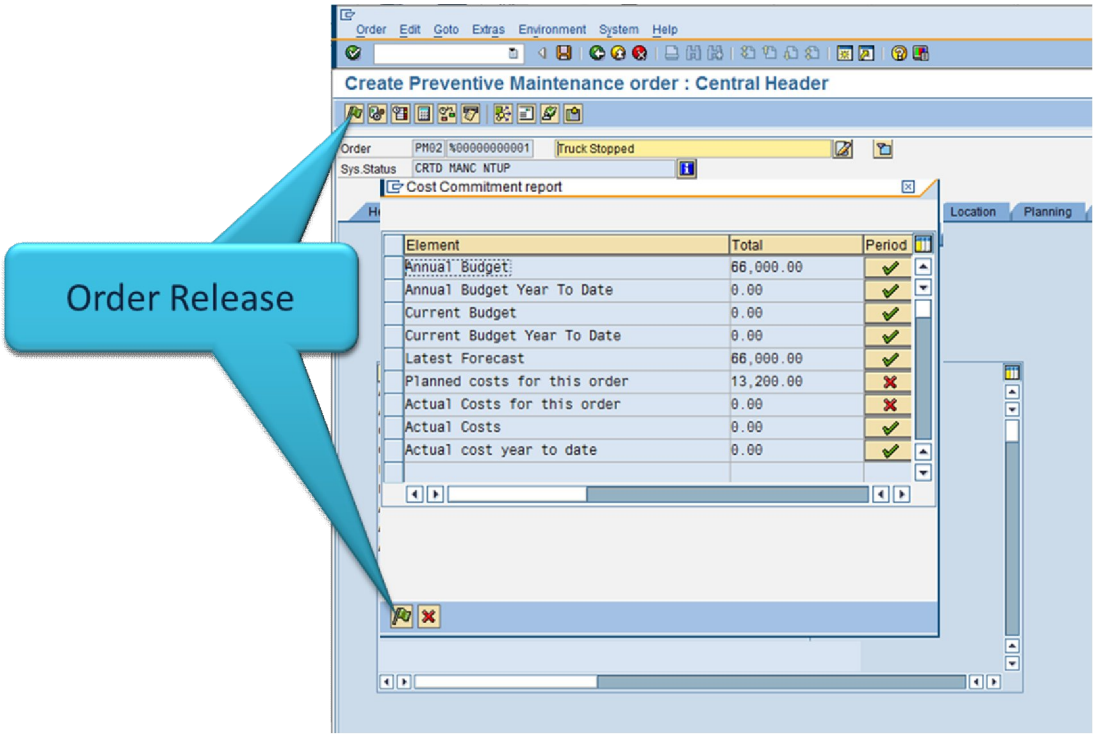
Actual expenditure from maintenance orders is then captured and compared with the budgeted or forecast figures via inPlan based on the above nodes.

The rules for budget reference linking are fully definable within inPlan customising.



4.3 Cost Commitment Information

It is imperative for any budgeting system employed to be able to provide specific critical budget related information to enable effective decision making exactly when it is required. At order release, inPlan returns several key figures related to provisions and expenditure for the specific job / object. The option then is given to accept the information and continue with the order release or to discontinue and make changes to the order.



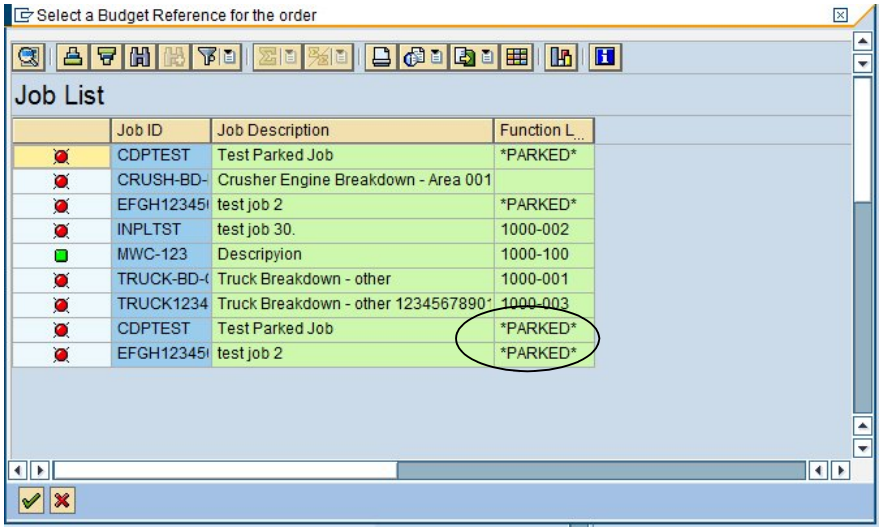
All of the information necessary to make a cost commitment based decision is available on the inPlan tab of the work order

- Annual Budget
- Annual Budget Year to Date
- Current Budget
- Current Budget Year to Date
- Actual Year to Date
- Latest Forecast

These key figures are totalled for the year. Where appropriate, period figures for key figures can be displayed by selecting the appropriate key figure in the pop up and clicking on the period button.

4.4 "Parking" Work Orders

In an endeavour to ensure the timeous creation and execution of maintenance work orders, especially in the case of after hours break downs, it is imperative to not allow inPlan Planning to delay the execution of the work order. For every main work centre a *"Parked"* inPlan Budget Reference will be created. In the event of a breakdown work order not immediately associated with a Budget Reference, the "parked" Budget Reference will be displayed suitably for linking the work order to. This "parked" Budget Reference will be included in the list of displayed Budget References during work order creation. Once linked to a *"Parked"* Budget Reference, a maintenance work order can now be released and executed, the responsibility to correctly reassign the work order to an appropriate Budget Reference rest with the maintenance planner. Orders linked to *"Parked"* Budget References cannot be completed until appropriately reassigned.



4.5 Releasing Work Orders

Maintenance work orders cannot be release until they have been appropriately assigned to a inPlan Budget Reference. First ensure that an appropriate Budget Reference is selected and the order saved before attempting to release the work order.

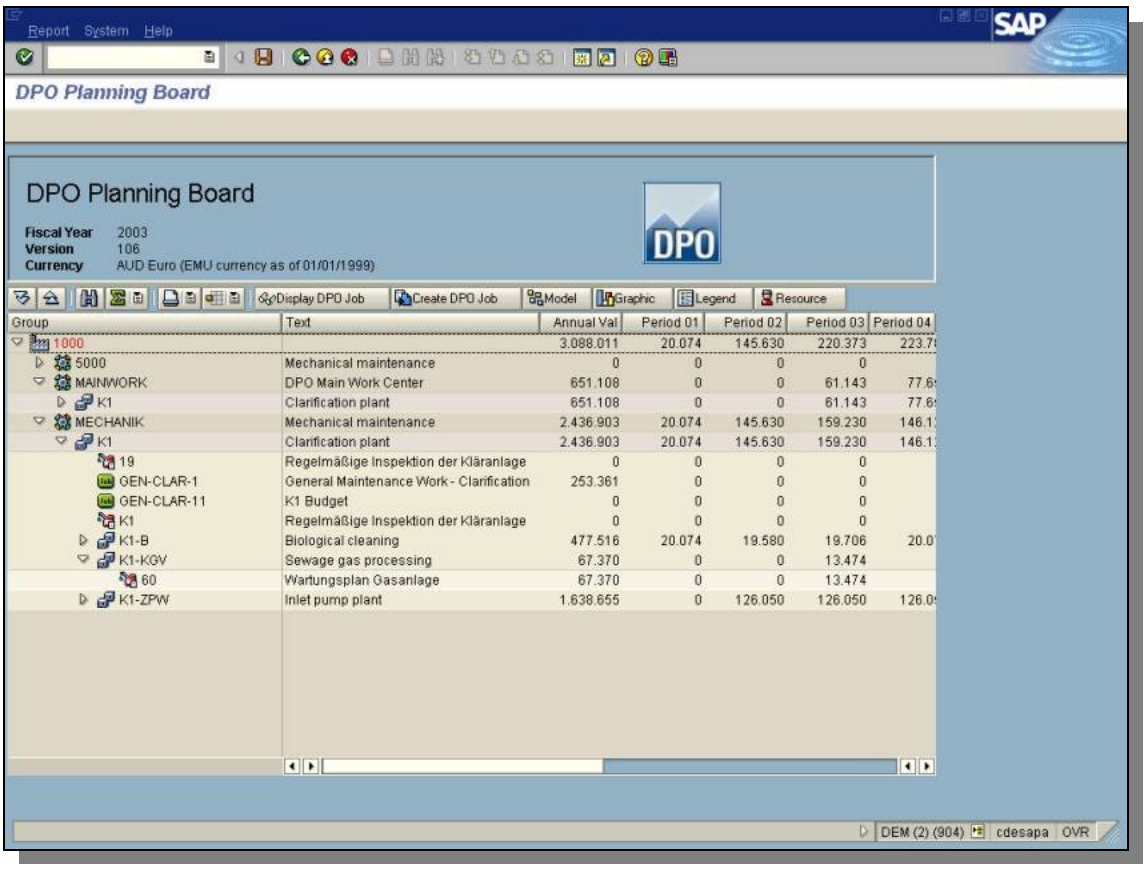
After being linked to a Budget Reference the work order is released as normal. At this point a "Cost Commitment report" pop up is displayed. See section 4.3.

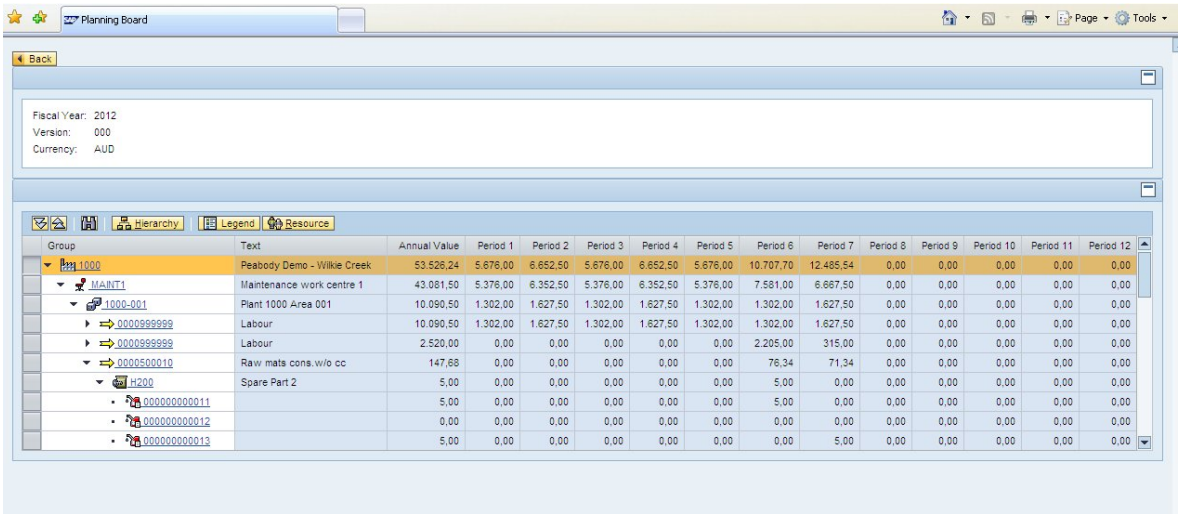
5 Analysis and Reporting

5.1 Planning Board

inPlan contains a flexible analysis facility used to interrogate and report on maintenance budgets and forecasts with respect to actual expenditure. It essentially interrogates the budget-planning table and actual expenditure based on any combination of the nodes as mentioned above. Analysis is carried out by specifying input variables, and then defining a drill-down path through the budget nodes as indicated in the following figure.

Once executed, total or period figures can be displayed and the facility also exists to drill down directly to the plans resulting in the budget costs, and the actual orders resulting in the actual costs.

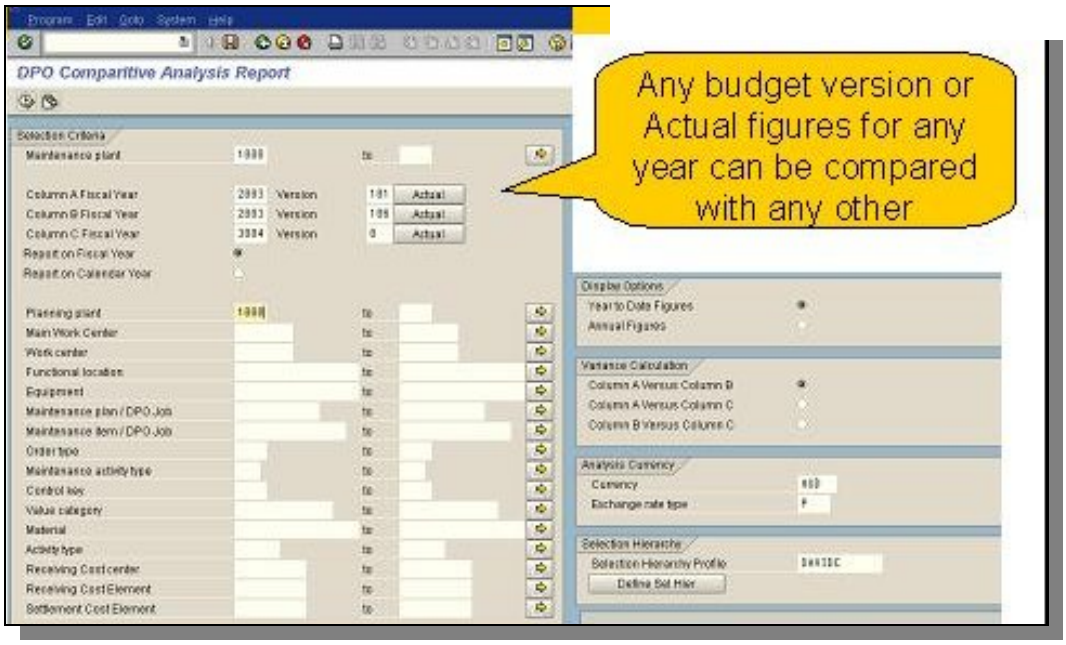


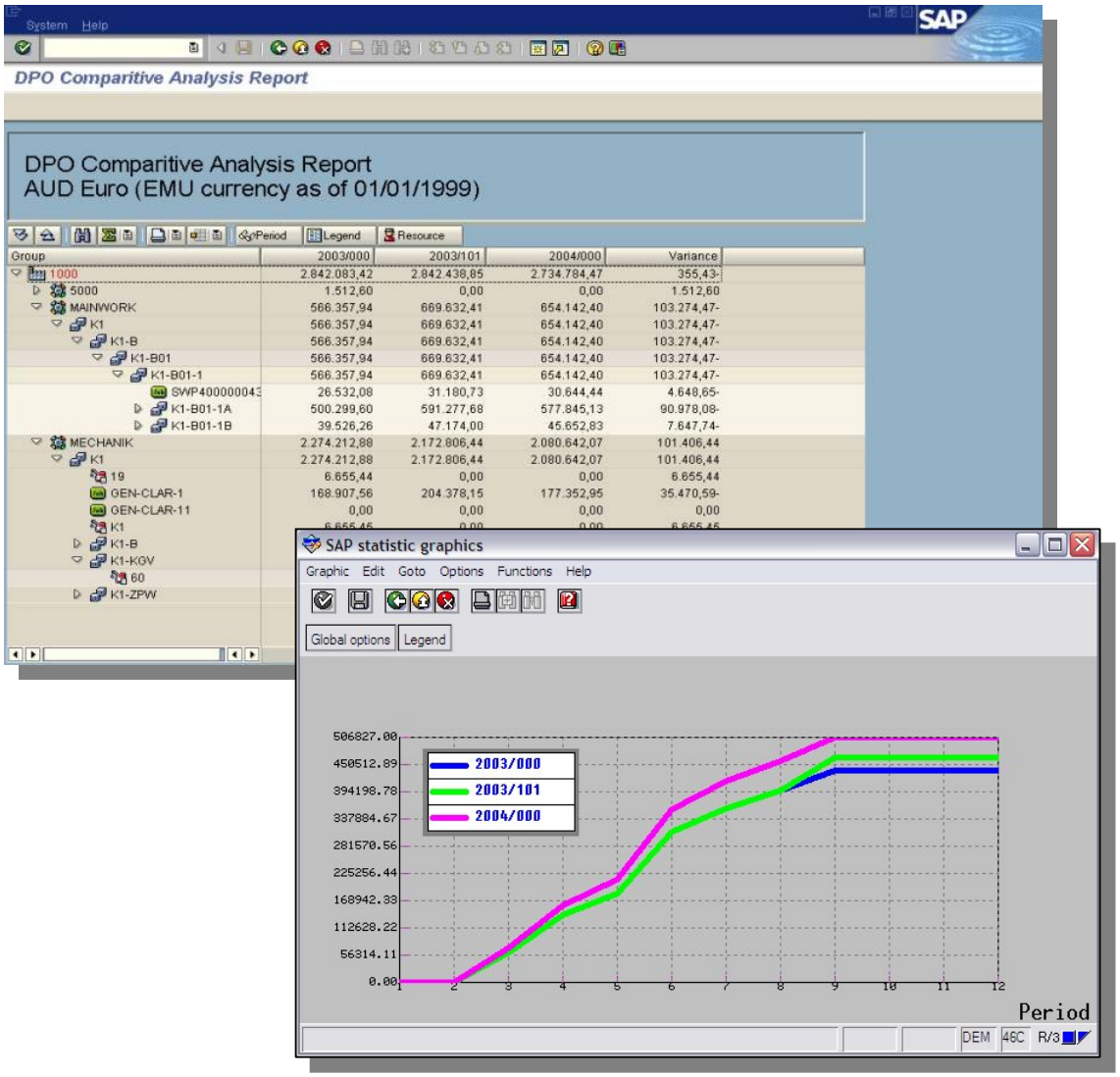


Group	Text	Annual Value	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12
1000	Peabody Demo - Wilkie Creek	53.526,24	5.676,00	6.652,50	5.676,00	6.652,50	5.676,00	10.707,70	12.485,54	0,00	0,00	0,00	0,00	0,00
MAINT1	Maintenance work centre 1	43.081,50	5.376,00	6.352,50	5.376,00	6.352,50	5.376,00	7.581,00	6.667,50	0,00	0,00	0,00	0,00	0,00
1000-001	Plant 1000 Area 001	10.090,50	1.302,00	1.627,50	1.302,00	1.627,50	1.302,00	1.302,00	1.627,50	0,00	0,00	0,00	0,00	0,00
0000999999	Labour	10.090,50	1.302,00	1.627,50	1.302,00	1.627,50	1.302,00	1.302,00	1.627,50	0,00	0,00	0,00	0,00	0,00
0000999999	Labour	2.520,00	0,00	0,00	0,00	0,00	0,00	2.205,00	315,00	0,00	0,00	0,00	0,00	0,00
0000500010	Raw mats cons.w/o cc	147,68	0,00	0,00	0,00	0,00	0,00	76,34	71,34	0,00	0,00	0,00	0,00	0,00
H200	Spare Part 2	5,00	0,00	0,00	0,00	0,00	0,00	5,00	0,00	0,00	0,00	0,00	0,00	0,00
000000000011		5,00	0,00	0,00	0,00	0,00	0,00	5,00	0,00	0,00	0,00	0,00	0,00	0,00
000000000012		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
000000000013		5,00	0,00	0,00	0,00	0,00	0,00	0,00	5,00	0,00	0,00	0,00	0,00	0,00

5.2 Comparative Analysis

The comparative analysis report allows a comparison between any three budget versions or actuals for any three years. As with the planning board, this can be executed in either calendar year mode or fiscal year mode.




System Help
SAP
DPO Comparitive Analysis Report
DPO Comparitive Analysis Report
AUD Euro (EMU currency as of 01/01/1999)
Period
Legend
Resource
Group 2003/000 2003/101 2004/000 Variance
1000 2.842.083,42 2.842.438,85 2.734.784,47 355,43-
5000 1.512,60 0,00 0,00 1.512,60
MAINWORK 566.357,94 669.632,41 654.142,40 103.274,47-
K1 566.357,94 669.632,41 654.142,40 103.274,47-
K1-B 566.357,94 669.632,41 654.142,40 103.274,47-
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K1 2.274.212,88 2.172.806,44 2.080.642,07 101.406,44
19 6.655,44 0,00 0,00 6.655,44
GEN-CLAR-1 168.907,56 204.378,15 177.352,95 35.470,59-
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K1
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K1-ZPW
SAP statistic graphics
Graphic Edit Goto Options Functions Help
Global options
Legend
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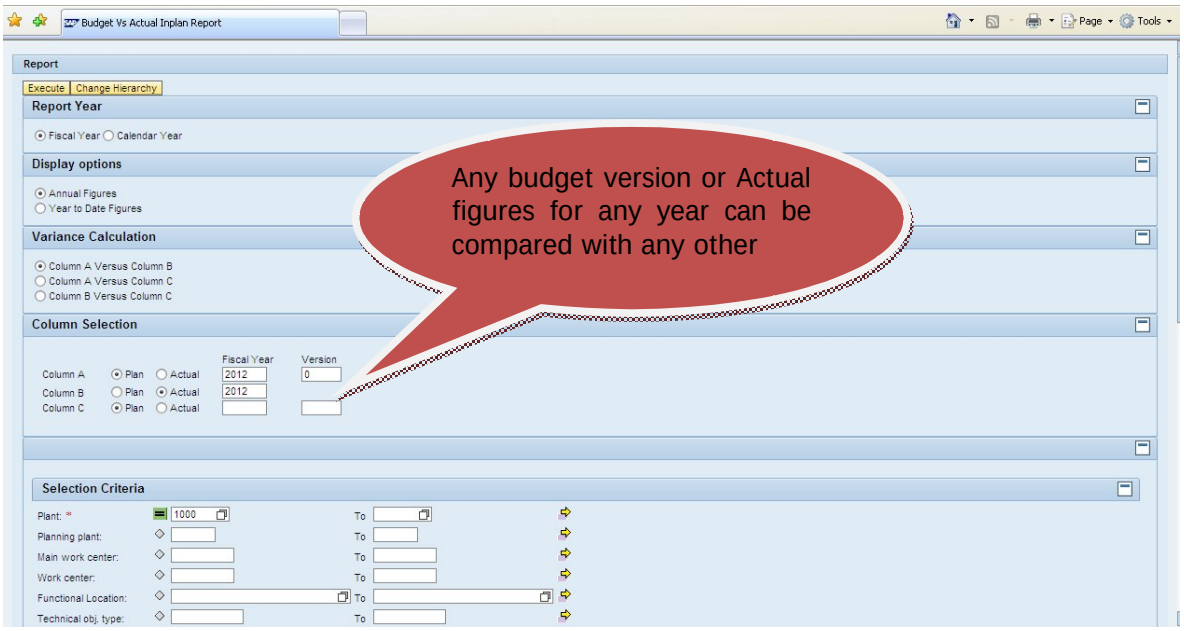
Budget Vs Actual Inplan Report
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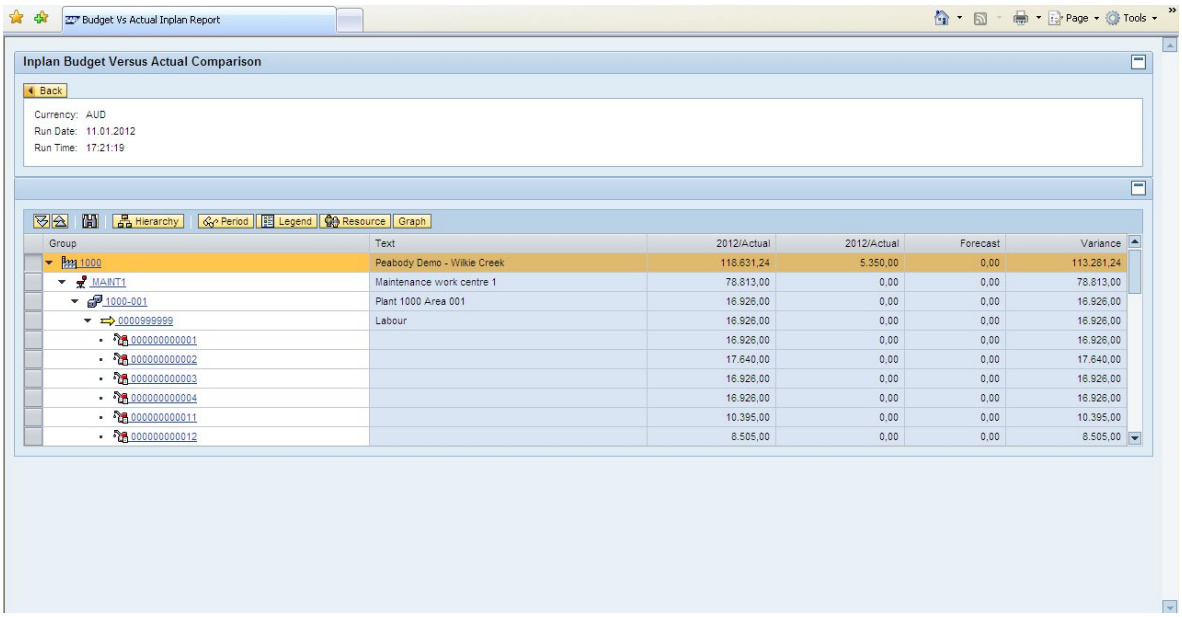
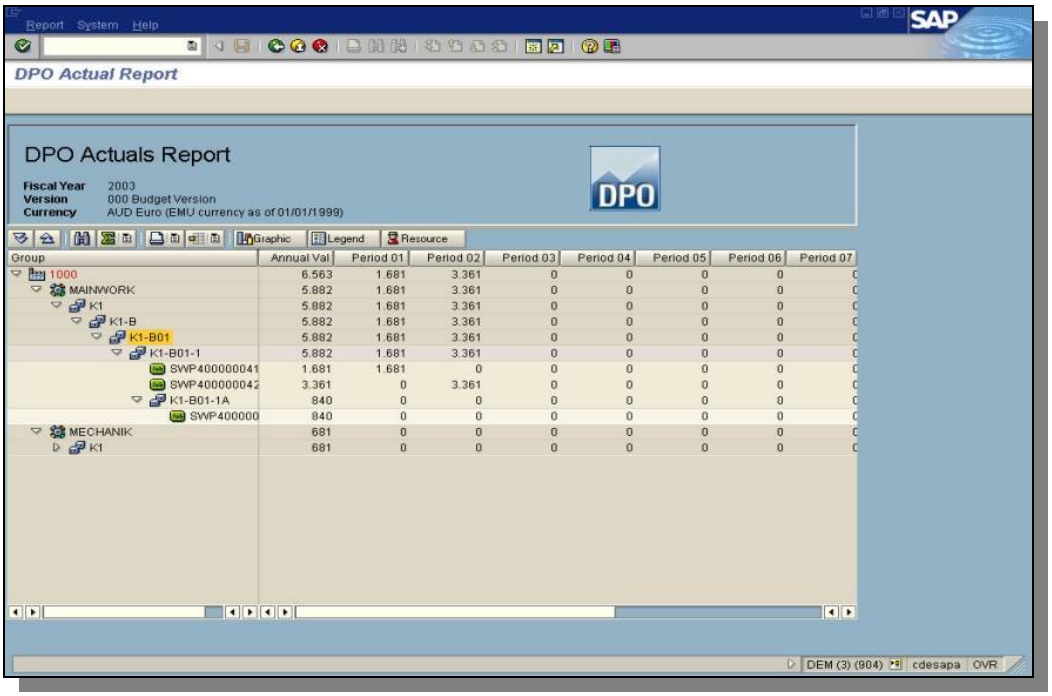
Fiscal Year
Version
Column A
Plan
Actual
2012
0
Column B
Plan
Actual
2012
Column C
Plan
Actual
Selection Criteria
Plant: *
1000
To
Planning plant:
Main work center:
Work center:
Functional Location:
Technical obj. type:
Any budget version or Actual figures for any year can be compared with any other



Group	Text	2012/Actual	2012/Actual	Forecast	Variance
1000	Peabody Demo - Wilkie Creek	118.631,24	5.350,00	0,00	113.281,24
MAINT1	Maintenance work centre 1	78.813,00	0,00	0,00	78.813,00
1000-001	Plant 1000 Area 001	16.926,00	0,00	0,00	16.926,00
0000999999	Labour	16.926,00	0,00	0,00	16.926,00
000000000001		16.926,00	0,00	0,00	16.926,00
000000000002		17.640,00	0,00	0,00	17.640,00
000000000003		16.926,00	0,00	0,00	16.926,00
000000000004		16.926,00	0,00	0,00	16.926,00
000000000011		10.395,00	0,00	0,00	10.395,00
000000000012		8.505,00	0,00	0,00	8.505,00

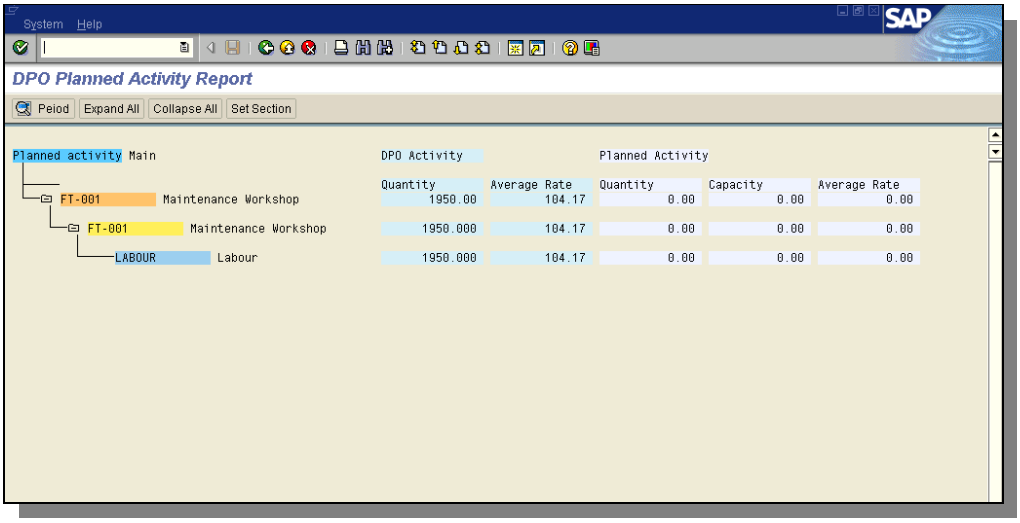
5.3 Actuals Report

The Actuals report provides a detailed overview with drilldown capabilities of actual costs for any selection. These figures are displayed by period as well as for the full year and can be viewed in either calendar year or fiscal year mode. The Actuals report can also be viewed graphically.



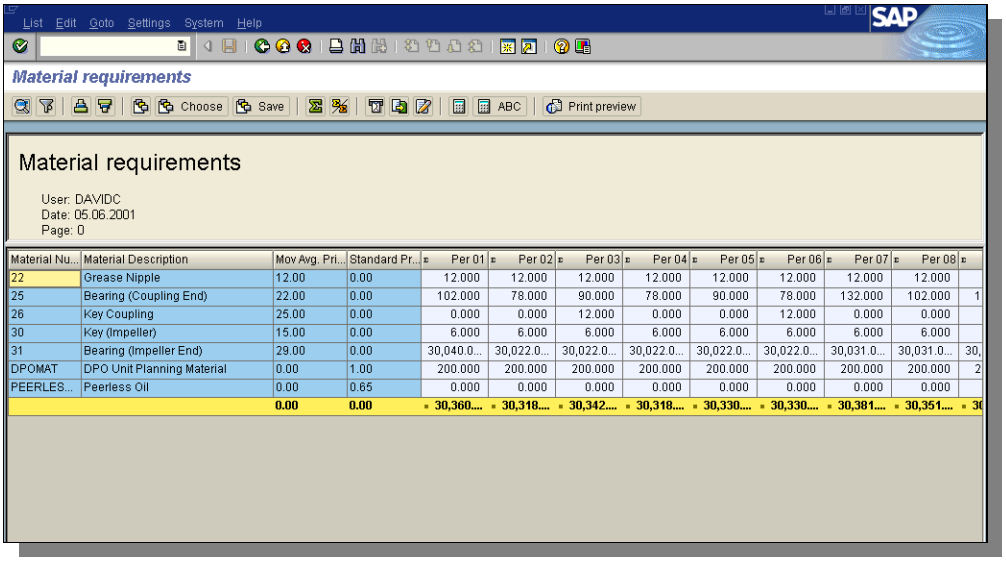
5.4 Planned Activity Report

The planned activity report provides a detailed analysis by work centre and main work centre of the planned utilisation both in CO and inPlan.



5.5 Materials Requirements Report

inPlan has the facility of extracting detailed material requirements by material by period for a planning version.



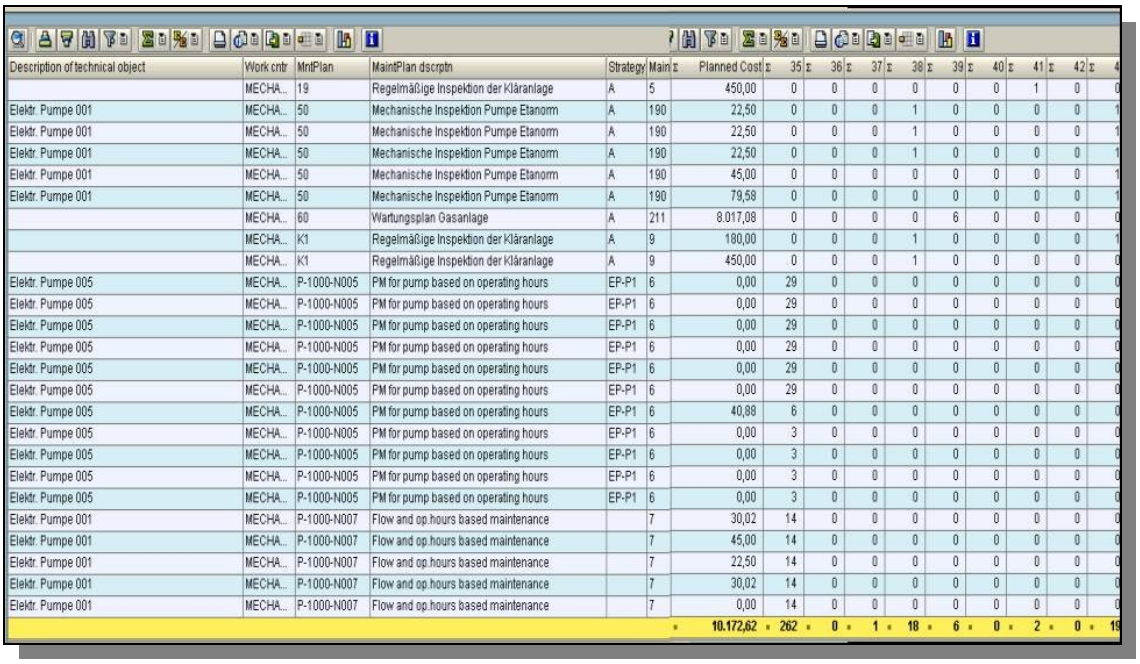
Material requirements

User: DAVIDC
Date: 05.06.2001
Page: 0

Material Nu...	Material Description	Mov Avg. Pri...	Standard Pr...	Per 01	Per 02	Per 03	Per 04	Per 05	Per 06	Per 07	Per 08	
22	Grease Nipple	12.00	0.00	12.000	12.000	12.000	12.000	12.000	12.000	12.000	12.000	
25	Bearing (Coupling End)	22.00	0.00	102.000	78.000	90.000	78.000	90.000	78.000	132.000	102.000	1
26	Key Coupling	25.00	0.00	0.000	0.000	12.000	0.000	0.000	12.000	0.000	0.000	
30	Key (Impeller)	15.00	0.00	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	
31	Bearing (Impeller End)	29.00	0.00	30,040.0...	30,022.0...	30,022.0...	30,022.0...	30,022.0...	30,022.0...	30,031.0...	30,031.0...	30,
DPOMAT	DPO Unit Planning Material	0.00	1.00	200.000	200.000	200.000	200.000	200.000	200.000	200.000	200.000	2
PEERLES...	Peerless Oil	0.00	0.65	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		0.00	0.00	30,360....	30,318....	30,342....	30,318....	30,330....	30,330....	30,381....	30,351....	3(

5.6 Order Projection Report

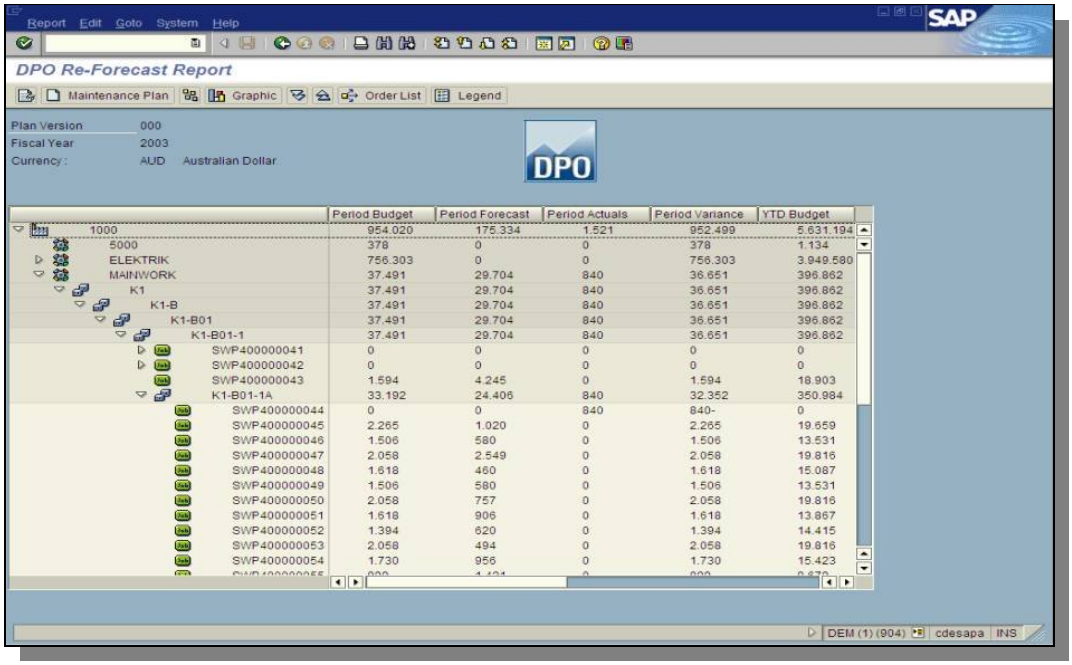
The order projection report displays each call made by standard maintenance plans either by Calendar Week, Week or Month. Each one of the period results can be viewed either by Events per Period or Man Hours per Period. The order projection report also details all of the relevant information contained in Maintenance Plans, Maintenance Items and Task List.



Description of technical object	Work cntr	MntPlan	MaintPlan dscrptn	Strategy	Main	Planned Cost	35	36	37	38	39	40	41	42	4
	MECHA...	19	Regelmäßige Inspektion der Kläranlage	A	5	450,00	0	0	0	0	0	0	1	0	0
Elektr. Pumpe 001	MECHA...	50	Mechanische Inspektion Pumpe Etanorm	A	190	22,50	0	0	0	1	0	0	0	0	1
Elektr. Pumpe 001	MECHA...	50	Mechanische Inspektion Pumpe Etanorm	A	190	22,50	0	0	0	1	0	0	0	0	1
Elektr. Pumpe 001	MECHA...	50	Mechanische Inspektion Pumpe Etanorm	A	190	22,50	0	0	0	1	0	0	0	0	1
Elektr. Pumpe 001	MECHA...	50	Mechanische Inspektion Pumpe Etanorm	A	190	45,00	0	0	0	0	0	0	0	0	1
Elektr. Pumpe 001	MECHA...	50	Mechanische Inspektion Pumpe Etanorm	A	190	79,58	0	0	0	0	0	0	0	0	1
	MECHA...	60	Wartungsplan Gasanlage	A	211	8.017,08	0	0	0	0	6	0	0	0	0
	MECHA...	K1	Regelmäßige Inspektion der Kläranlage	A	9	180,00	0	0	0	1	0	0	0	0	1
	MECHA...	K1	Regelmäßige Inspektion der Kläranlage	A	9	450,00	0	0	0	1	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	0,00	29	0	0	0	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	0,00	29	0	0	0	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	0,00	29	0	0	0	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	0,00	29	0	0	0	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	0,00	29	0	0	0	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	0,00	29	0	0	0	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	40,88	6	0	0	0	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	0,00	3	0	0	0	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	0,00	3	0	0	0	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	0,00	3	0	0	0	0	0	0	0	0
Elektr. Pumpe 005	MECHA...	P-1000-N005	PM for pump based on operating hours	EP-P1	6	0,00	3	0	0	0	0	0	0	0	0
Elektr. Pumpe 001	MECHA...	P-1000-N007	Flow and op.hours based maintenance		7	30,02	14	0	0	0	0	0	0	0	0
Elektr. Pumpe 001	MECHA...	P-1000-N007	Flow and op.hours based maintenance		7	45,00	14	0	0	0	0	0	0	0	0
Elektr. Pumpe 001	MECHA...	P-1000-N007	Flow and op.hours based maintenance		7	22,50	14	0	0	0	0	0	0	0	0
Elektr. Pumpe 001	MECHA...	P-1000-N007	Flow and op.hours based maintenance		7	30,02	14	0	0	0	0	0	0	0	0
Elektr. Pumpe 001	MECHA...	P-1000-N007	Flow and op.hours based maintenance		7	0,00	14	0	0	0	0	0	0	0	0
						10.172,62	262	0	1	18	6	0	2	0	19

5.7 Re-Forecast Report

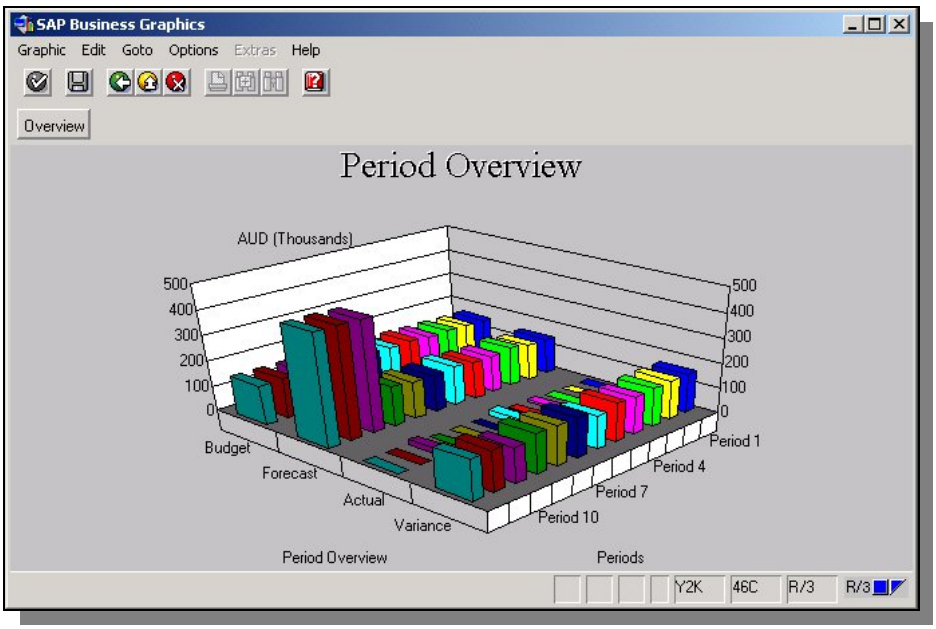
The re-forecast report displays any selected information in three different scenarios. Firstly for a specified period, the report displays the budget for the selected period, the forecast for the selected period, the actual for the selected period as well as the variance (defined). Secondly the report displays the year to date budget figures for the version and year selected, the year to date forecast figures for the forecast version and year selected, the year to date actual figures for the year selected and the variance. Lastly the report displays the financial year budget for the selected version and year, the financial year projection and the variance.



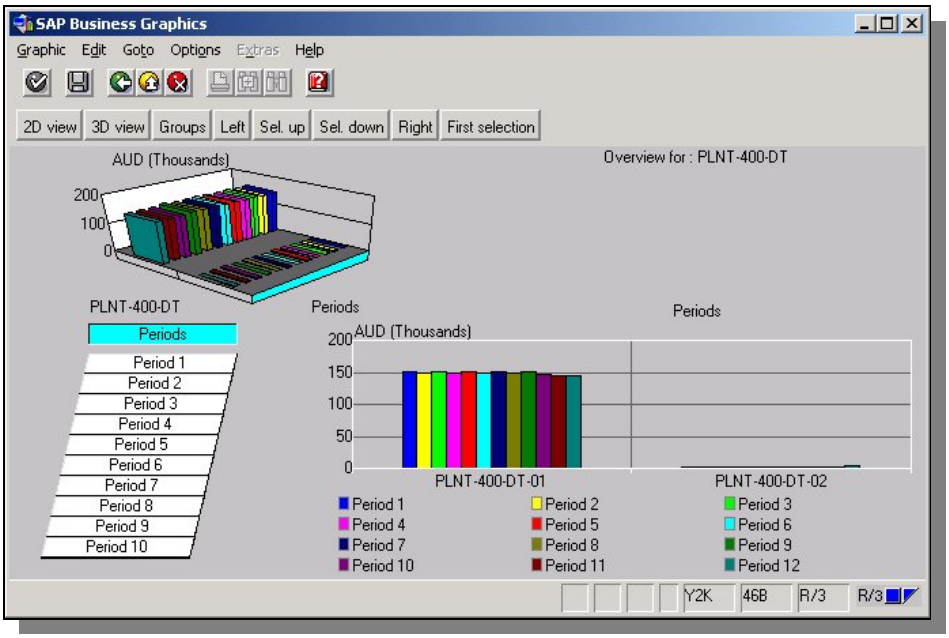
	Period Budget	Period Forecast	Period Actuals	Period Variance	YTD Budget
1000	954.020	175.334	1.521	952.499	5.631.194
5000	378	0	0	378	1.134
ELEKTRIK	756.303	0	0	756.303	3.949.580
MAINWORK	37.491	29.704	840	36.651	396.862
K1	37.491	29.704	840	36.651	396.862
K1-B	37.491	29.704	840	36.651	396.862
K1-B01	37.491	29.704	840	36.651	396.862
K1-B01-1	37.491	29.704	840	36.651	396.862
SWP400000041	0	0	0	0	0
SWP400000042	0	0	0	0	0
SWP400000043	1.594	4.245	0	1.594	18.903
K1-B01-1A	33.192	24.406	840	32.352	350.984
SWP400000044	0	0	840	840-	0
SWP400000045	2.265	1.020	0	2.265	19.659
SWP400000046	1.506	580	0	1.506	13.531
SWP400000047	2.058	2.549	0	2.058	19.816
SWP400000048	1.618	460	0	1.618	15.087
SWP400000049	1.506	580	0	1.506	13.531
SWP400000050	2.058	757	0	2.058	19.816
SWP400000051	1.618	906	0	1.618	13.867
SWP400000052	1.394	620	0	1.394	14.415
SWP400000053	2.058	494	0	2.058	19.816
SWP400000054	1.730	956	0	1.730	15.423

5.8 Graphics

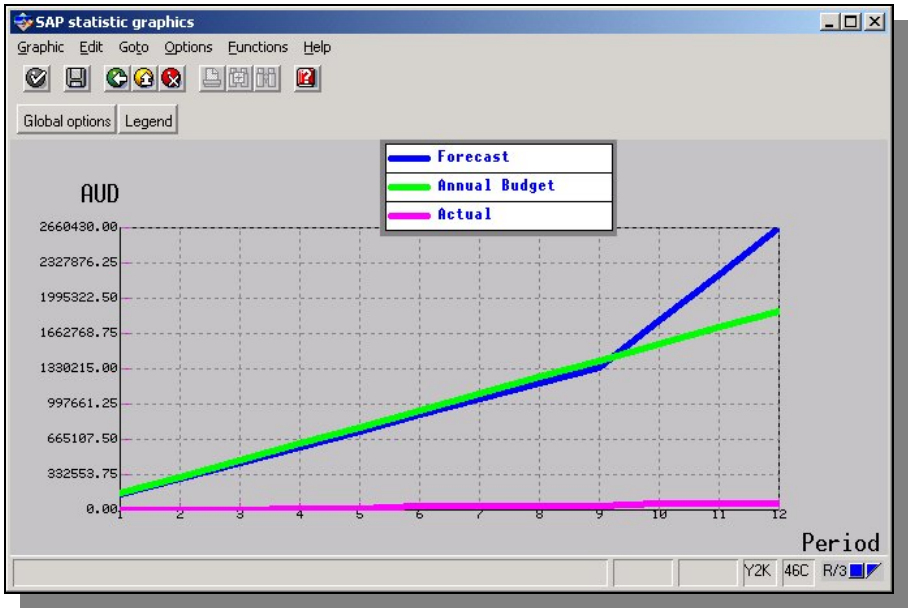
5.8.1 3-D Overview analysis of a selected node



5.8.2 2-D Detailed analysis



5.8.3 Detailed “Growth" analysis for a selected Node



6 Benefits of inPlan

- inPlan provides a True Zero-Based maintenance budgeting capability, re-forecasts can be carried out either annually or periodically.
- Industry benchmarking
- Comparative analytical capabilities against history or actual costs
- Real-time modelling & updating based on PM, MM & CO elements
- Accurate long term Materials and Labour planning
    - Lower inventory levels
    - Stronger price negotiation
    - Reliable base for term contracts
- Improved Accounting / Maintenance Co-operation
- Reliability based budgeting and forecasting
- Cost Commitment Management
- Flexible budget and actual cost consolidation capability
- inPlan has been developed in ABAP/4, it is internal to SAP and has successfully been integrated with BW and SAP Portals.
- inPlan is as standard product and as such is fully compatible through configuration changes & upgrades
- Easy to use and manage, inPlan is fully configurable and budgets can be prepared and managed at increasingly detailed levels as the maturity of the organisation grows.
- Visibility of maintenance budgets and actual costs via a purpose-built info-cube complete with graphical capabilities
- inPlan offers maintenance practitioners and management clear maintenance impact analysis and visibility of plans, costs and the ability to track performance.