

# Presto

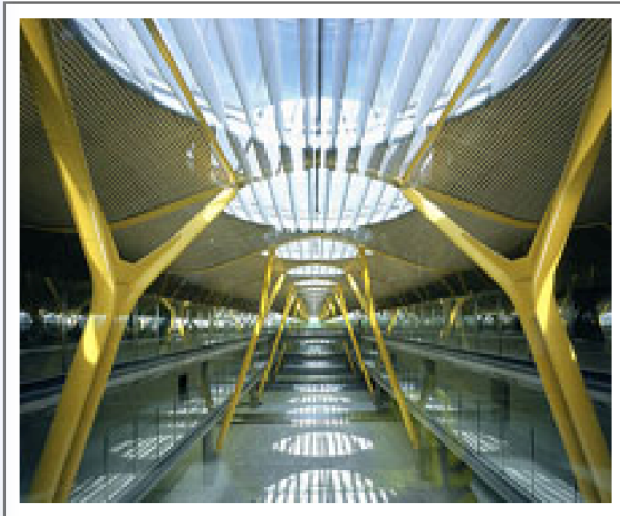
Cost management software  
for construction



# Presto

- Presto is used for monitoring projects of any size, such as the T4 Airport Terminal
- These works have been conducted by international teams, meeting all requirements of time, cost and quality

## Barajas Airport, Madrid

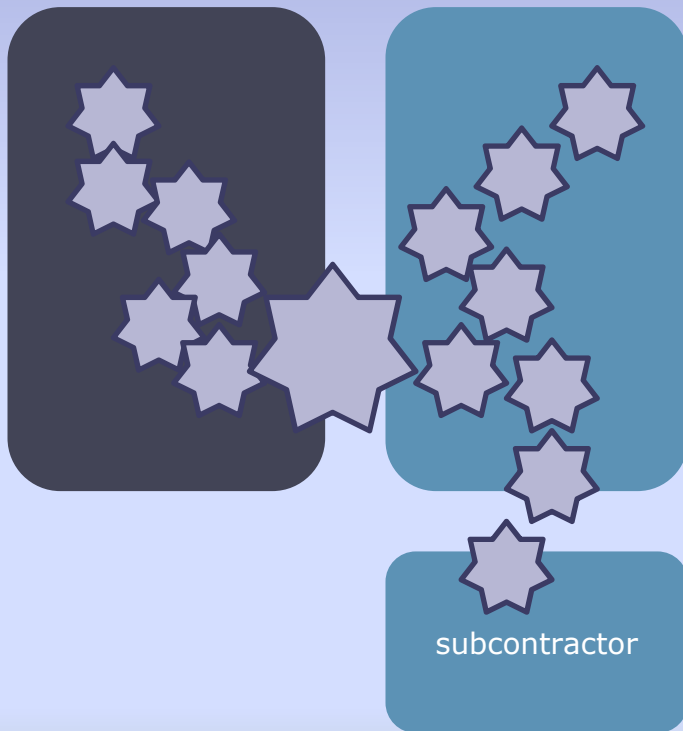


The terminal complex at Madrid Barajas Airport is probably the most ambitious and architecturally striking development of recent airport projects. Faithful+Gould provided a number of services, including design management, bi-lingual cost estimating and planning, and specification writing. We also priced and quantified bills of quantities produced in the Spanish cost system 'Presto'.

# Support of different roles

Client

Project mngr.



**Presto supports the viewpoints of the different agents involved in construction**

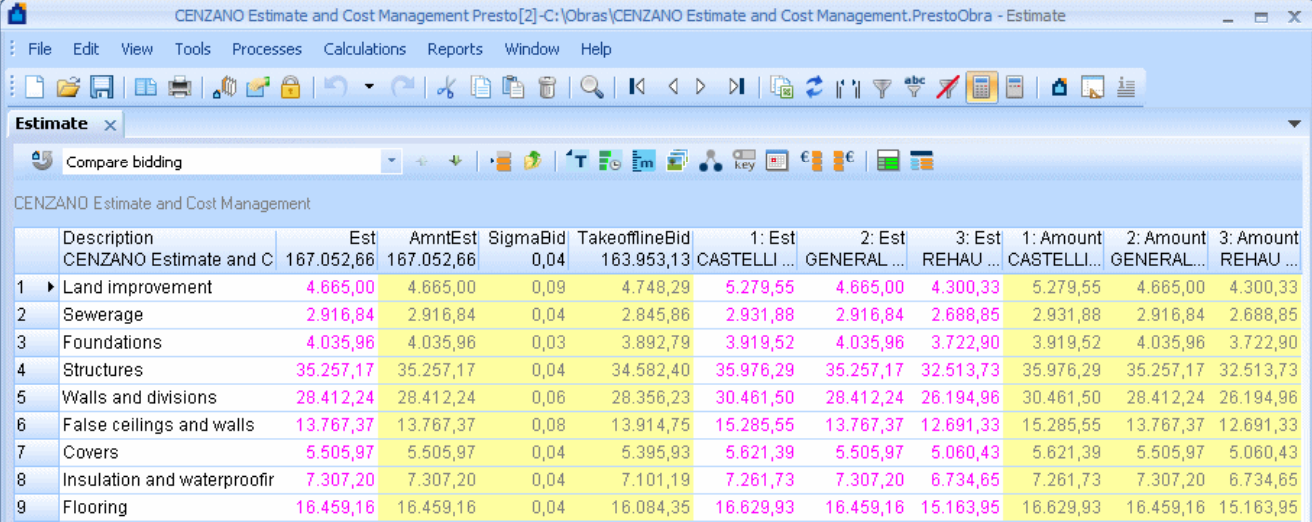
- The project team
- The planners
- The (sub) contractor(s)
- The project management team
- The Client

# Simple architecture, powerful connections

Presto is used *independently* by the different agents

- Each agent uses the Presto relevant components
- Each agent sends to others only the required information
- The information is structured to integrate seamlessly among all actors

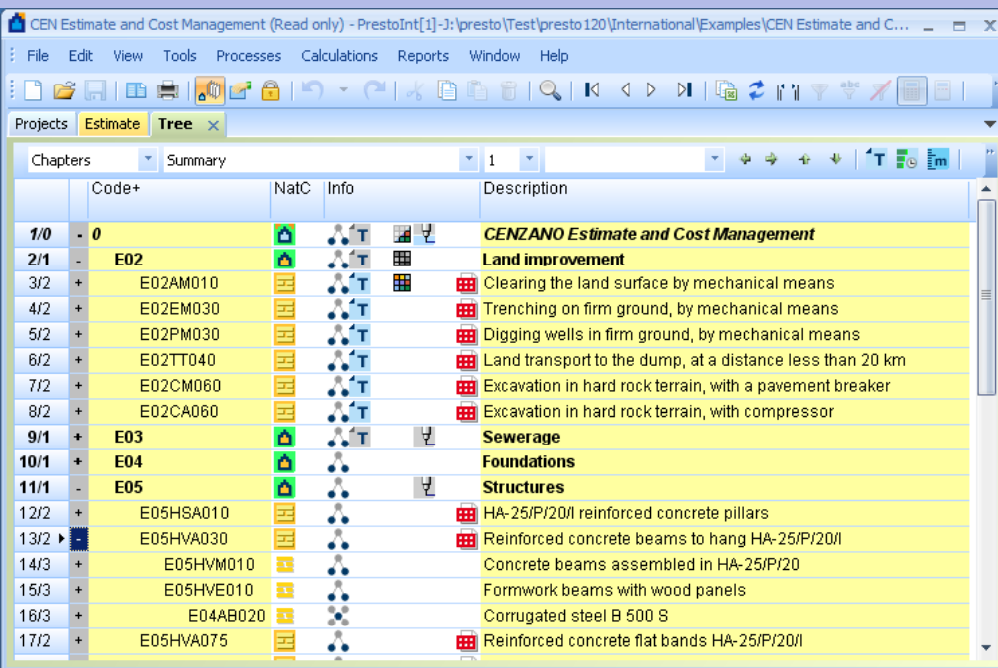
Presto is not perceived as a *control* system, but as a *support* tool



The screenshot displays the Presto software interface for 'CENZANO Estimate and Cost Management'. The window title is 'CENZANO Estimate and Cost Management Presto[2]-C:\Obras\CENZANO Estimate and Cost Management.PrestoObra - Estimate'. The interface includes a menu bar (File, Edit, View, Tools, Processes, Calculations, Reports, Window, Help) and a toolbar with various icons. The main area shows a table titled 'CENZANO Estimate and Cost Management' with the following data:

	Description	Est	AmntEst	SigmaBid	TakeofflineBid	1: Est	2: Est	3: Est	1: Amount	2: Amount	3: Amount
	CENZANO Estimate and C	167.052,66	167.052,66	0,04	163.953,13	CASTELLI ...	GENERAL ...	REHAU ...	CASTELLI...	GENERAL...	REHAU ...
1	Land improvement	4.665,00	4.665,00	0,09	4.748,29	5.279,55	4.665,00	4.300,33	5.279,55	4.665,00	4.300,33
2	Sewerage	2.916,84	2.916,84	0,04	2.845,86	2.931,88	2.916,84	2.688,85	2.931,88	2.916,84	2.688,85
3	Foundations	4.035,96	4.035,96	0,03	3.892,79	3.919,52	4.035,96	3.722,90	3.919,52	4.035,96	3.722,90
4	Structures	35.257,17	35.257,17	0,04	34.582,40	35.976,29	35.257,17	32.513,73	35.976,29	35.257,17	32.513,73
5	Walls and divisions	28.412,24	28.412,24	0,06	28.356,23	30.461,50	28.412,24	26.194,96	30.461,50	28.412,24	26.194,96
6	False ceilings and walls	13.767,37	13.767,37	0,08	13.914,75	15.285,55	13.767,37	12.691,33	15.285,55	13.767,37	12.691,33
7	Covers	5.505,97	5.505,97	0,04	5.395,93	5.621,39	5.505,97	5.060,43	5.621,39	5.505,97	5.060,43
8	Insulation and waterprooffir	7.307,20	7.307,20	0,04	7.101,19	7.261,73	7.307,20	6.734,65	7.261,73	7.307,20	6.734,65
9	Flooring	16.459,16	16.459,16	0,04	16.084,35	16.629,93	16.459,16	15.163,95	16.629,93	16.459,16	15.163,95

# Balance between cost, time and quantity



The screenshot displays the Presto software interface with a project estimate tree. The tree is organized into chapters and sections, with a detailed list of activities and their descriptions.

Code+	NatC	Info	Description
1/0 - 0			<b>CENZANO Estimate and Cost Management</b>
2/1 - E02			<b>Land improvement</b>
3/2 + E02AM010			Clearing the land surface by mechanical means
4/2 + E02EM030			Trenching on firm ground, by mechanical means
5/2 + E02PM030			Digging wells in firm ground, by mechanical means
6/2 + E02TT040			Land transport to the dump, at a distance less than 20 km
7/2 + E02CM060			Excavation in hard rock terrain, with a pavement breaker
8/2 + E02CA060			Excavation in hard rock terrain, with compressor
9/1 + E03			<b>Sewerage</b>
10/1 + E04			<b>Foundations</b>
11/1 - E05			<b>Structures</b>
12/2 + E05HSA010			HA-25/P/20/I reinforced concrete pillars
13/2 + E05HVA030			Reinforced concrete beams to hang HA-25/P/20/I
14/3 + E05HVM010			Concrete beams assembled in HA-25/P/20
15/3 + E05HVE010			Formwork beams with wood panels
16/3 + E04AB020			Corrugated steel B 500 S
17/2 + E05HVA075			Reinforced concrete flat bands HA-25/P/20/I

Many information systems for construction are based on *time* or *money*.

Planning systems are based on time and activities.

- Activities are too many to control costs
- Schedule requires constant updating

Accounting systems are based on money

- They cannot accurately measure progress or make predictions.

Presto is based on monitoring *quantities*.

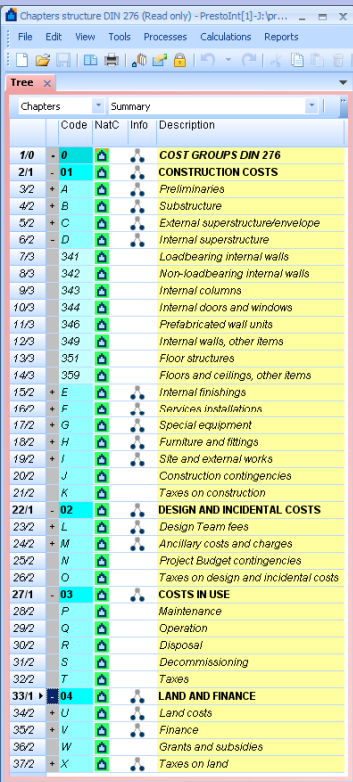
# The project team

## The project needs a uniform estimating system

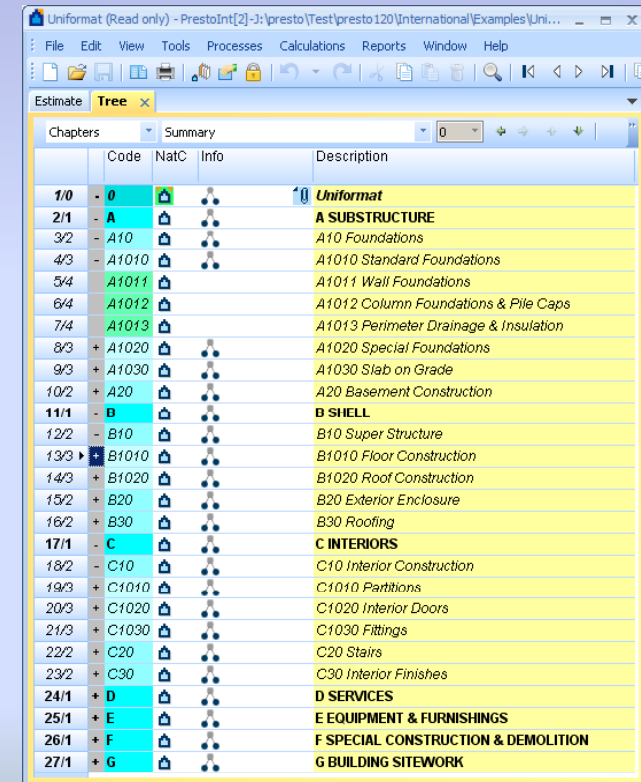
The estimate is based on a Work Breakdown Structure

- WBS may be or not the same as the WBS used in planning
- Information structure is predefined, but content is flexible
- A coding system *may* be imposed to make the exchange easier

Presto is focused on *reusing* information

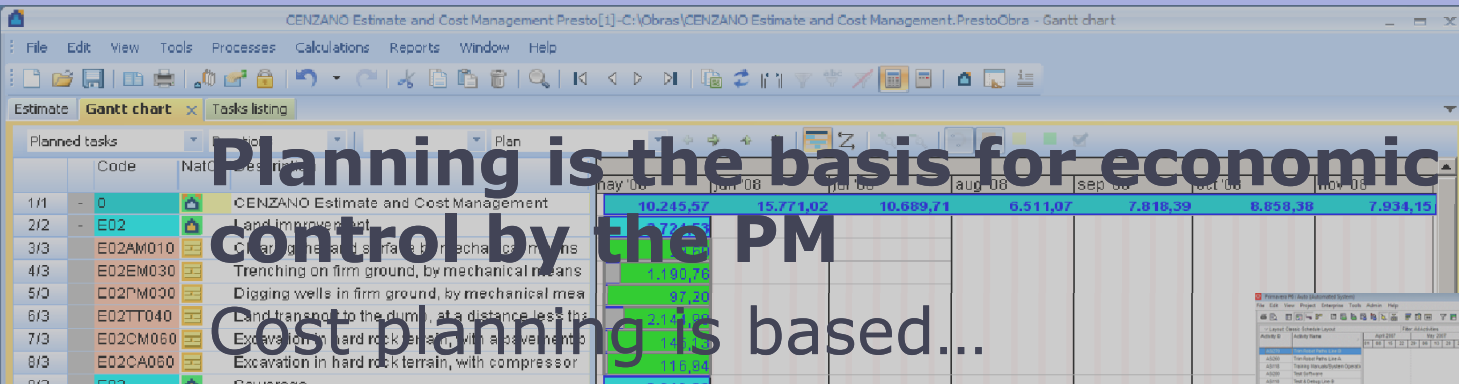


Code	NatC	Info	Description
1/0	- 0		<b>COST GROUPS DIN 276</b>
2/1	- 01		<b>CONSTRUCTION COSTS</b>
3/2	+ A		Preliminaries
4/2	+ B		Substructure
5/2	+ C		External superstructure/envelope
6/2	- D		Internal superstructure
7/3	341		Loadbearing internal walls
8/3	342		Non-loadbearing internal walls
9/3	343		Internal columns
10/3	344		Internal doors and windows
11/3	346		Prefabricated wall units
12/3	349		Internal walls, other items
13/3	351		Floor structures
14/3	359		Floors and ceilings, other items
15/2	+ E		Internal finishings
16/2	+ F		Services installations
17/2	+ G		Special equipment
18/2	+ H		Furniture and fittings
19/2	+ I		Site and external works
20/2	+ J		Construction contingencies
21/2	+ K		Taxes on construction
22/1	- 02		<b>DESIGN AND INCIDENTAL COSTS</b>
23/2	+ L		Design Team fees
24/2	+ M		Ancillary costs and charges
25/2	+ N		Project Budget contingencies
26/2	+ O		Taxes on design and incidental costs
27/1	- 03		<b>COSTS IN USE</b>
28/2	+ P		Maintenance
29/2	+ Q		Operation
30/2	+ R		Disposal
31/2	+ S		Decommissioning
32/2	+ T		Taxes
33/1	- 04		<b>LAND AND FINANCE</b>
34/2	+ U		Land costs
35/2	+ V		Finance
36/2	+ W		Grants and subsidies
37/2	+ X		Taxes on land



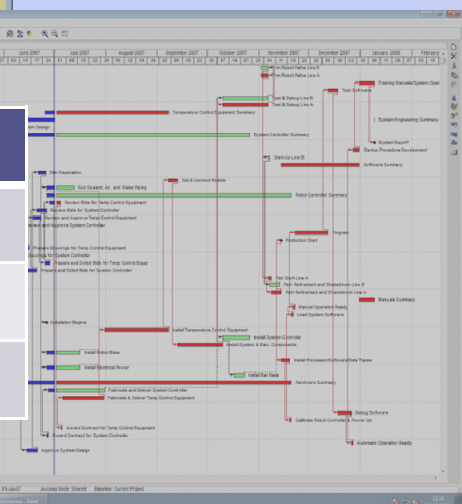
Code	NatC	Info	Description
1/0	- 0		<b>Uniformat</b>
2/1	- A		<b>A SUBSTRUCTURE</b>
3/2	- A10		A10 Foundations
4/3	- A1010		A1010 Standard Foundations
5/4	A1011		A1011 Wall Foundations
6/4	A1012		A1012 Column Foundations & Pile Caps
7/4	A1013		A1013 Perimeter Drainage & Insulation
8/3	+ A1020		A1020 Special Foundations
9/3	+ A1030		A1030 Slab on Grade
10/2	+ A20		A20 Basement Construction
11/1	- B		<b>B SHELL</b>
12/2	- B10		B10 Super Structure
13/3	+ B1010		B1010 Floor Construction
14/3	+ B1020		B1020 Roof Construction
15/2	+ B20		B20 Exterior Enclosure
16/2	+ B30		B30 Roofing
17/1	- C		<b>C INTERIORS</b>
18/2	- C10		C10 Interior Construction
19/3	+ C1010		C1010 Partitions
20/3	+ C1020		C1020 Interior Doors
21/3	+ C1030		C1030 Fittings
22/2	+ C20		C20 Stairs
23/2	+ C30		C30 Interior Finishes
24/1	+ D		<b>D SERVICES</b>
25/1	+ E		<b>E EQUIPMENT &amp; FURNISHINGS</b>
26/1	+ F		<b>F SPECIAL CONSTRUCTION &amp; DEMOLITION</b>
27/1	+ G		<b>G BUILDING SITWORK</b>

# The planning system



Planning is the basis for economic control by the PM  
 Cost planning is based...

ON	NOT ON
Cost or income centers	Activities
Months	Days
Quantities	Money / Time



Bidirectional link to Primavera and Project avoids retyping information and mistakes





# Work in progress (2)

Take-off lines 1/G1030004 m3 Excavation by mechanical means

Take-off lines Text

Estimate

	Activity	Comment	Quantity	QtyEst	Note
	Activity 02.02.03			516.840,00	
1	Activity 01.01.01	PK 58 + 100	40.500,00		
2	Activity 01.01.01	PK 65 + 100	53.500,00		
3	Activity 01.01.01	PK 70 + 100	37.500,00		
4	Activity 01.02.02	PK 82 + 100	48.900,00		
5	Activity 01.02.02	PK 90+ 100	53.700,00		
6	Activity 01.02.02	PK 94 + 100	23.500,00		
7	Activity 01.02.02	PK 98 + 100	28.900,00		
8	Activity 02.01.01	PK 112 + 100	16.400,00		
9	Activity 02.01.01	PK 122 + 100	67.450,00		
10	Activity 02.01.01	PK 118 + 100	34.000,00		
11	Activity 02.01.01	PK 125 + 100	17.900,00		
12	Activity 02.01.01	PK 136+ 100	6.500,00		
13	Activity 02.01.01	PK 144+ 100	23.490,00		
14	Activity 02.01.01	PK 150 + 100	6.850,00		
15	Activity 02.01.01	PK 156 + 100	24.000,00		
16	Activity 02.02.02	PK 158 + 100	53.600,00		
17	Activity 02.02.02	PK 164 + 100	11.000,00		
18	Activity 02.02.02	PK 173 + 100	10.000,00		

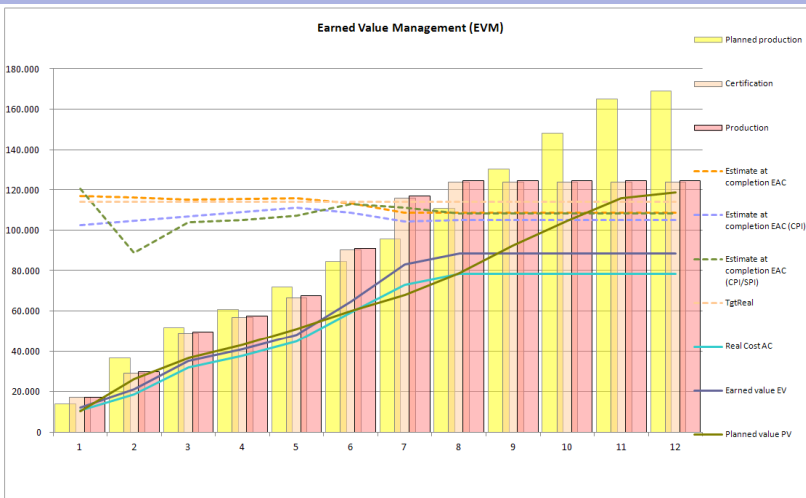
Information sent by the agents integrates into the PM information system

- Initial estimate
- Approved & pending changes

The PM can show results to the Client as soon as data is received

This cannot be achieved with *underground* computing, such as Excel.

# Earned Value Management EVM



**A formal methodology for monitoring deviations**

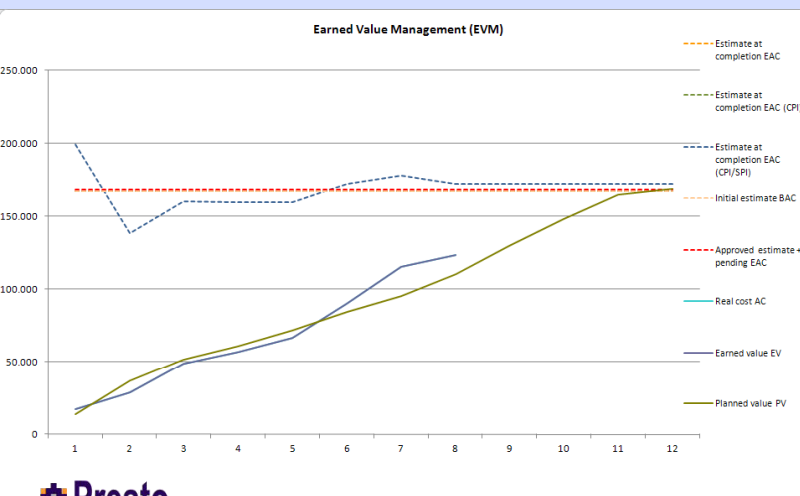
Earned Value represents the actual work valued at estimated cost

- $EV / \text{Actual Cost} = \text{Cost Performance}$
- $EV / \text{Planned Value} = \text{Schedule Performance}$

Standard

- Predefined, common terminology for all the agents
- Based on the same information that comes from BoQ
- Independent of bar chart planning

The result: accurate estimation of current progress, cost and time at *completion*



# Added value for Client

- Common language and standard methodology
- No custom programming or implementation required
- Quick start-up
- Client oriented information

**Presto definite advantage for the Client is obtaining accurate and verified information, in time to make decisions**

# Thank you

Fernando G. Valderrama