

# MAGNA

INSTITUCIÓN DE ESPECIALIZACIÓN PROFESIONAL

CURSO DE FORMACIÓN



# PLANIFICACION Y CONTROL EN PROYECTOS DE CONSTRUCCIÓN CON PRIMAVERA P6, LAST PLANNER Y POWER BI

# Sesión 02

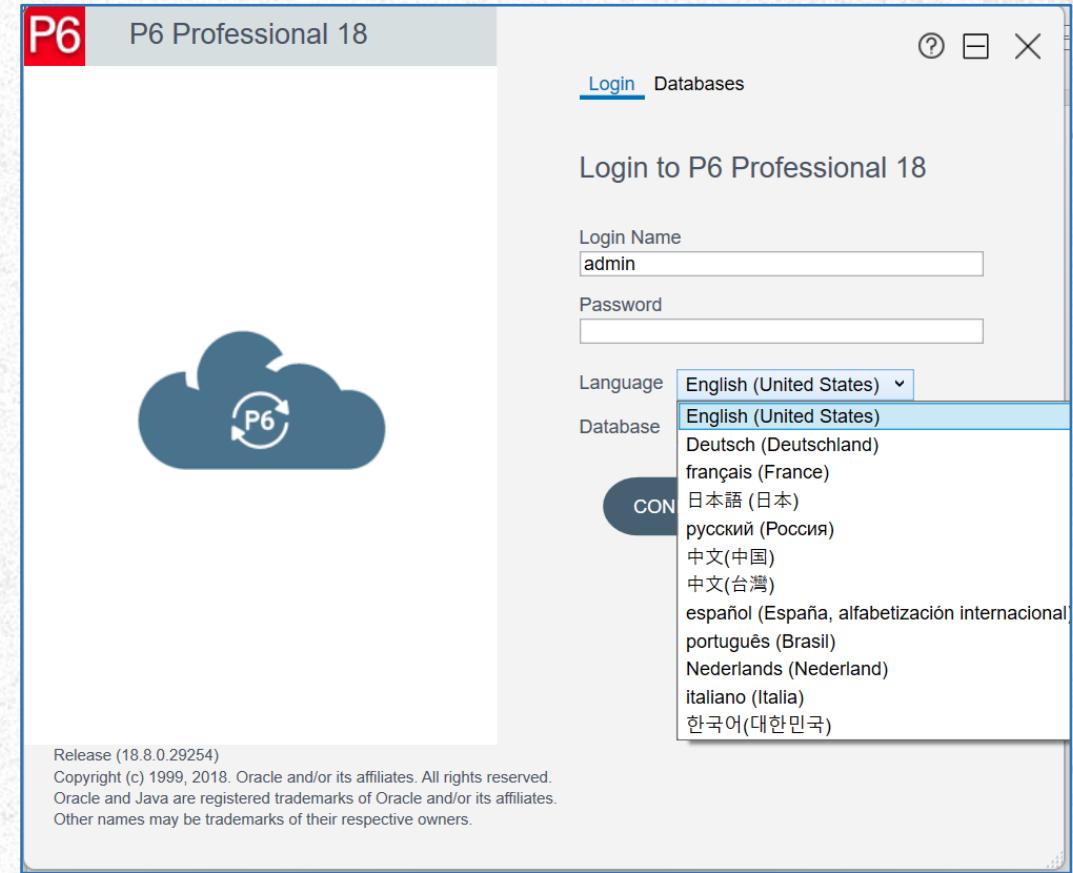
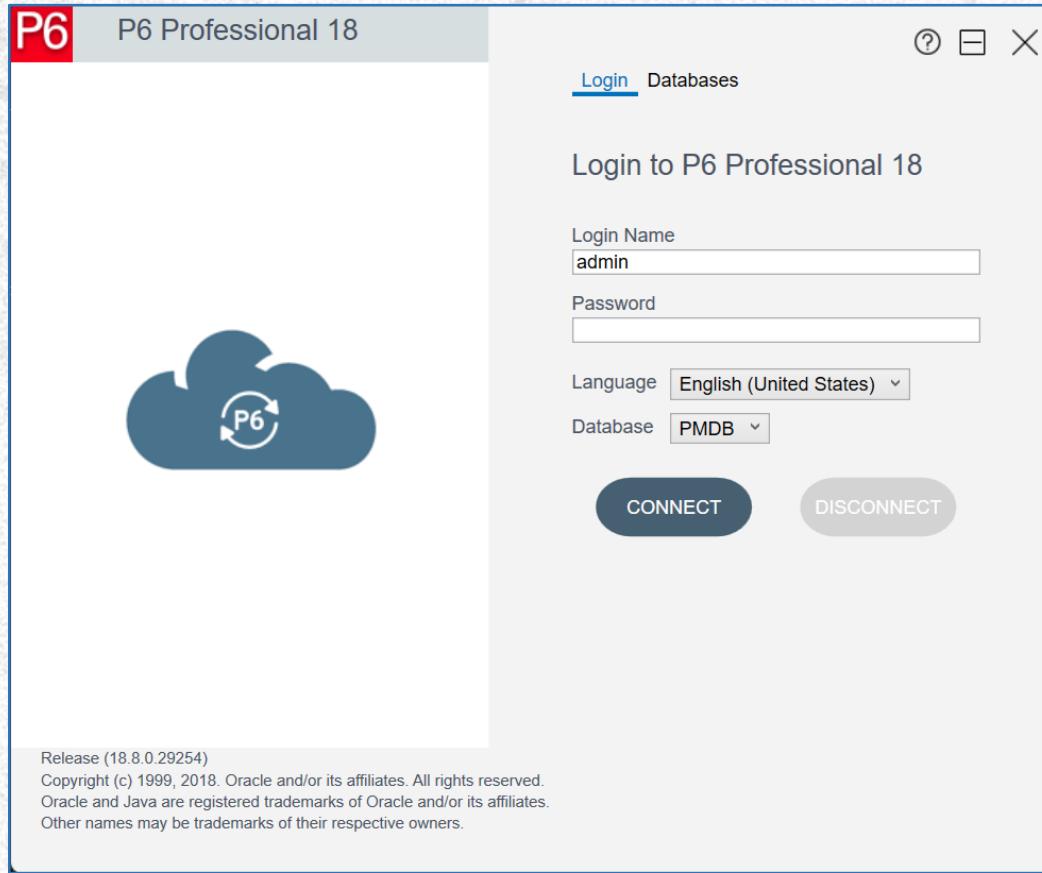
Entorno Primavera P6

# Descripción del Curso



El Programa Oracle Primavera P6 PPM es una herramienta para construir, programar y realizar un seguimiento de los cronogramas complejos de proyectos. Desde el punto de vista de arquitectura de Tecnología de Información, se trata de un cliente de gestión de proyectos que se instala en una PC con Windows y se conecta a una base de datos. Una de las mayores ventajas que se tiene en el uso de P6 PPM es que el software puede manejar cronogramas de proyectos de hasta 100.000 actividades y múltiples proyectos organizados en un portafolio.

# Entorno Primavera P6



# Entorno Primavera P6 - Vista Portafolio

The screenshot displays a project management application with a top menu bar in Spanish: Archivo, Editar, Ver, Proyecto, Empresa, Herramientas, Administrador, Ayuda. The main window is titled "Proyectos". A left sidebar shows a tree view of projects under "Diseño: Projects": Enterprise (selected), All Initiatives, E&C, Engineering & Cons, Energy, Energy Services, Manufacturing, Manufacturing. The "Engineering & Cons" node has several sub-items listed.

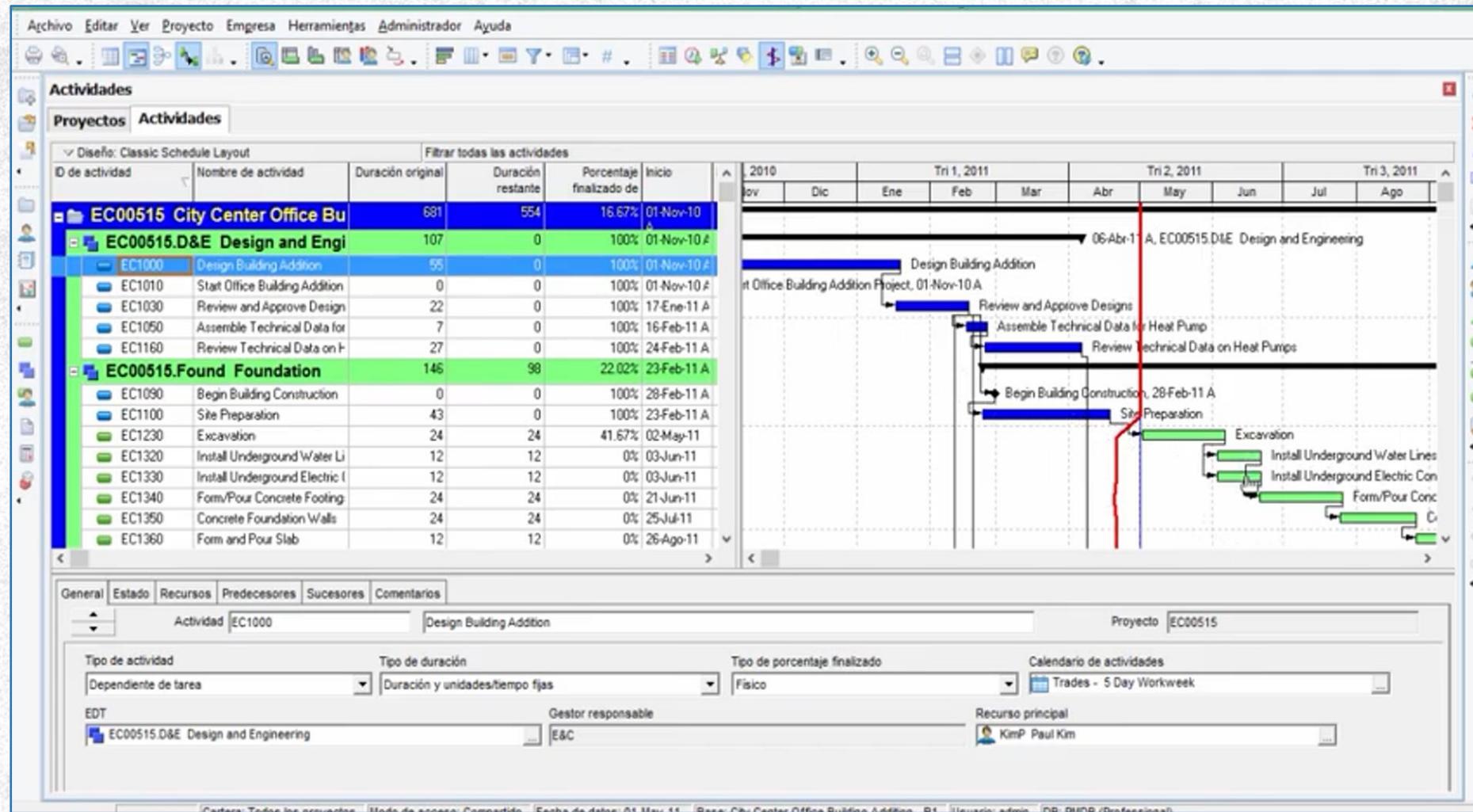
ID de proyecto	Nombre de proyecto	Actividades totales	Prioridad estratégica	Costo total en finalización	Porcentaje finalizado de	Índice de rendimiento	Índice de rendimiento de
<b>Enterprise</b>	<b>All Initiatives</b>	2254		\$44,039,478.26	17.57%	0.97	0.95
<b>E&amp;C</b>	<b>Engineering &amp; Cons</b>	608	500	\$14,223,339.72	10.04%	0.98	0.97
EC00515	City Center Office Building Adc	71	100	\$745,795.91	16.67%	0.93	0.91
EC00530	Nesbitt Building Expansion	71	100	\$550,470.40	0%	0.00	0.00
EC00501	Haitang Corporate Park	71	100	\$632,455.80	31.03%	1.00	1.03
EC00610	Harbour Pointe Assisted Living	131	100	\$4,568,202.00	14.09%	0.98	0.97
<b>EC00620</b>	<b>Juniper Nursing Home</b>	132	100	\$3,630,575.12	12.8%	0.95	0.95
EC00630	Saratoga Senior Community	132	100	\$4,095,450.50	0%	0.00	0.00
<b>Energy</b>	<b>Energy Services</b>	689	500	\$3,711,665.60	37.18%	0.99	0.91
NRG00870	Baytown TX - Offline Mainten-	132	1	\$70,664.20	0%	0.00	0.00
NRG00950	Red River - Refuel Outage	98	500	\$1,224,054.02	30.83%	0.99	0.94
NRG00800	Sunset Gorge - Routine Maintn	132	500	\$97,259.19	100%	1.00	0.95
NRG00940	Sellersville - Refuel Outage	98	500	\$1,093,963.87	0%	0.00	0.00
NRG00820	Johnstown - Routine Maintena	131	500	\$75,960.00	0%	0.00	0.00
NRG00910	Driftwood - Refuel Outage	98	500	\$1,149,764.32	80.45%	0.99	0.95
<b>Manufacturing</b>	<b>Manufacturing</b>	537	500	\$5,321,192.84	36.6%	0.93	0.95
MFG00772	Cordova - Plant Expansion & I	134	500	\$1,258,003.93	35.01%	0.91	0.92
MFG00497	Ravine - Plant Expansion & M	134	500	\$1,895,524.86	0%	0.00	0.00
MFG00925	Melrose - Plant Expansion & M	134	500	\$1,505,056.72	76.49%	0.91	0.95
MFG00659	Deerfield - Automated System	45	100	\$206,907.20	65.46%	0.96	0.98
MFG00189	Waterville - Automated System	45	100	\$236,388.14	0%	0.00	0.00
MFG00327	Anoka - Automated Control	45	100	\$210,212.00	100%	1.00	1.00

The right side of the screen displays a Gantt chart with horizontal bars representing project timelines from July 2010 to February 2013. Each bar's start and end dates are labeled at its ends. The bars are color-coded by project category.

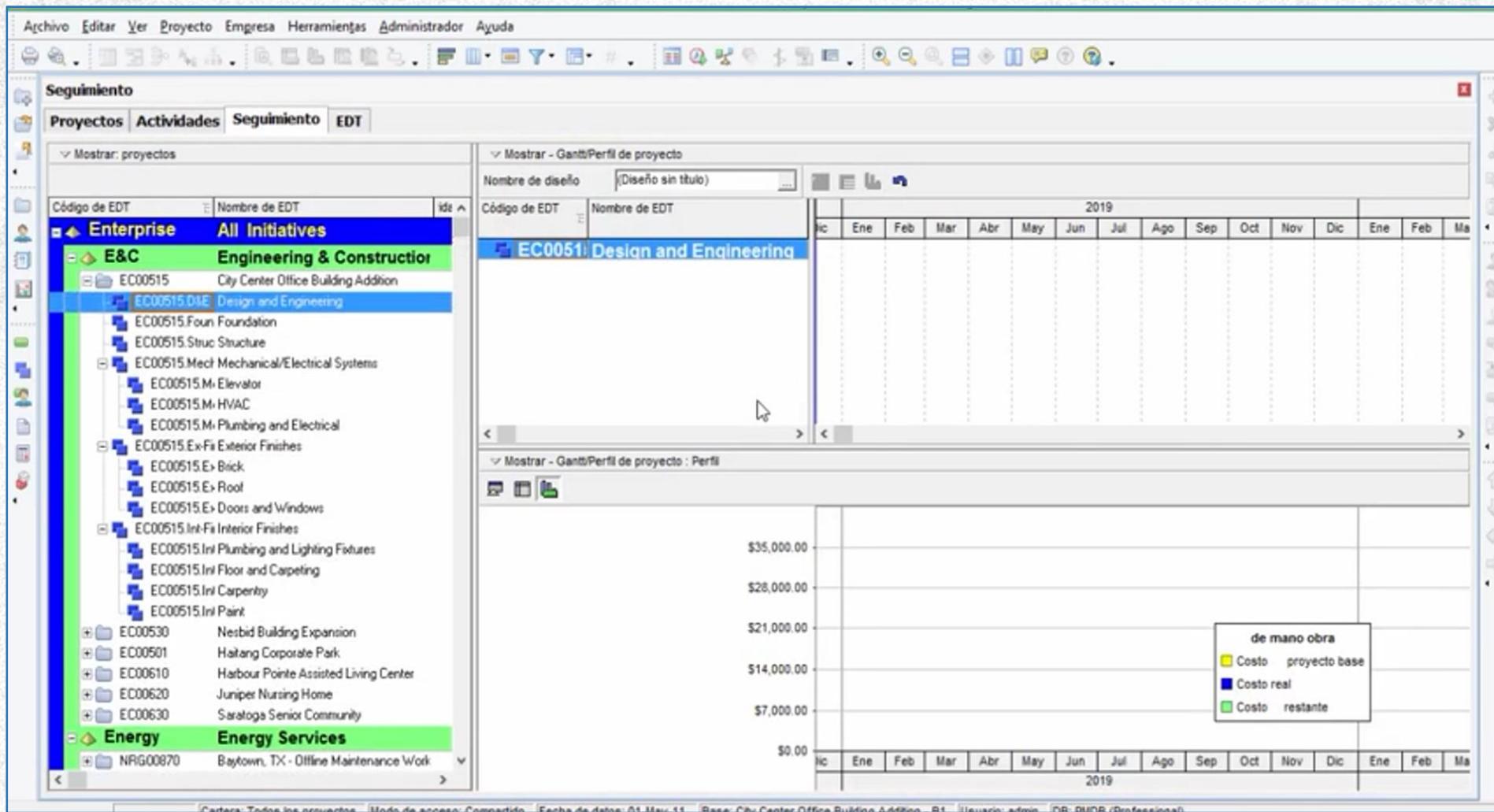
Bottom navigation tabs include: General, Bloc de notas, Log de presupuesto, Plan de gastos, Resumen de presupuesto, Fechas, Financiación, Códigos, Valores por defecto, Recursos, Configuración, Cálculos.

Bottom panels show "Fechas de programa" and "Fechas previstas" sections with input fields for start and end dates.

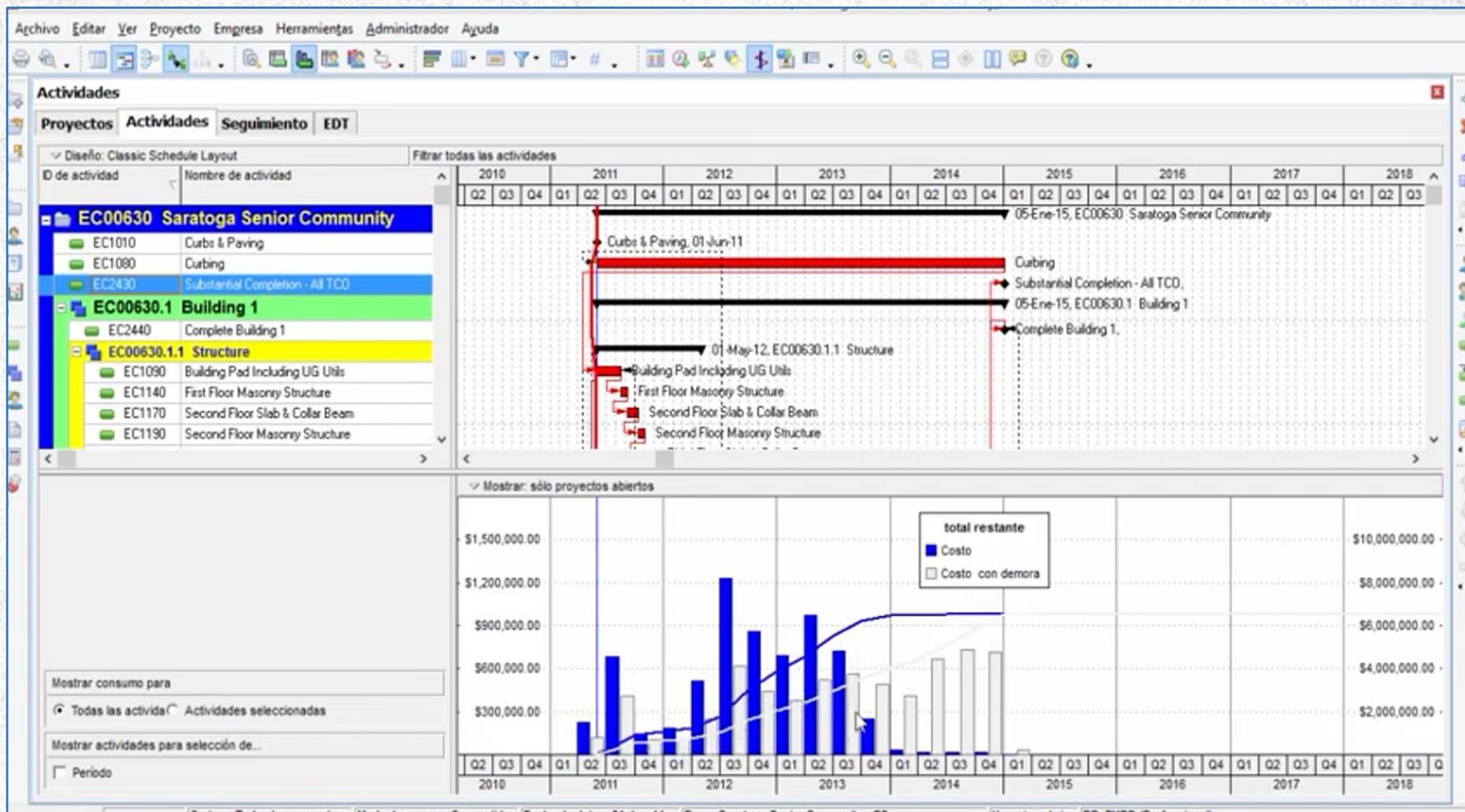
# Entorno Primavera P6 - Ventanas



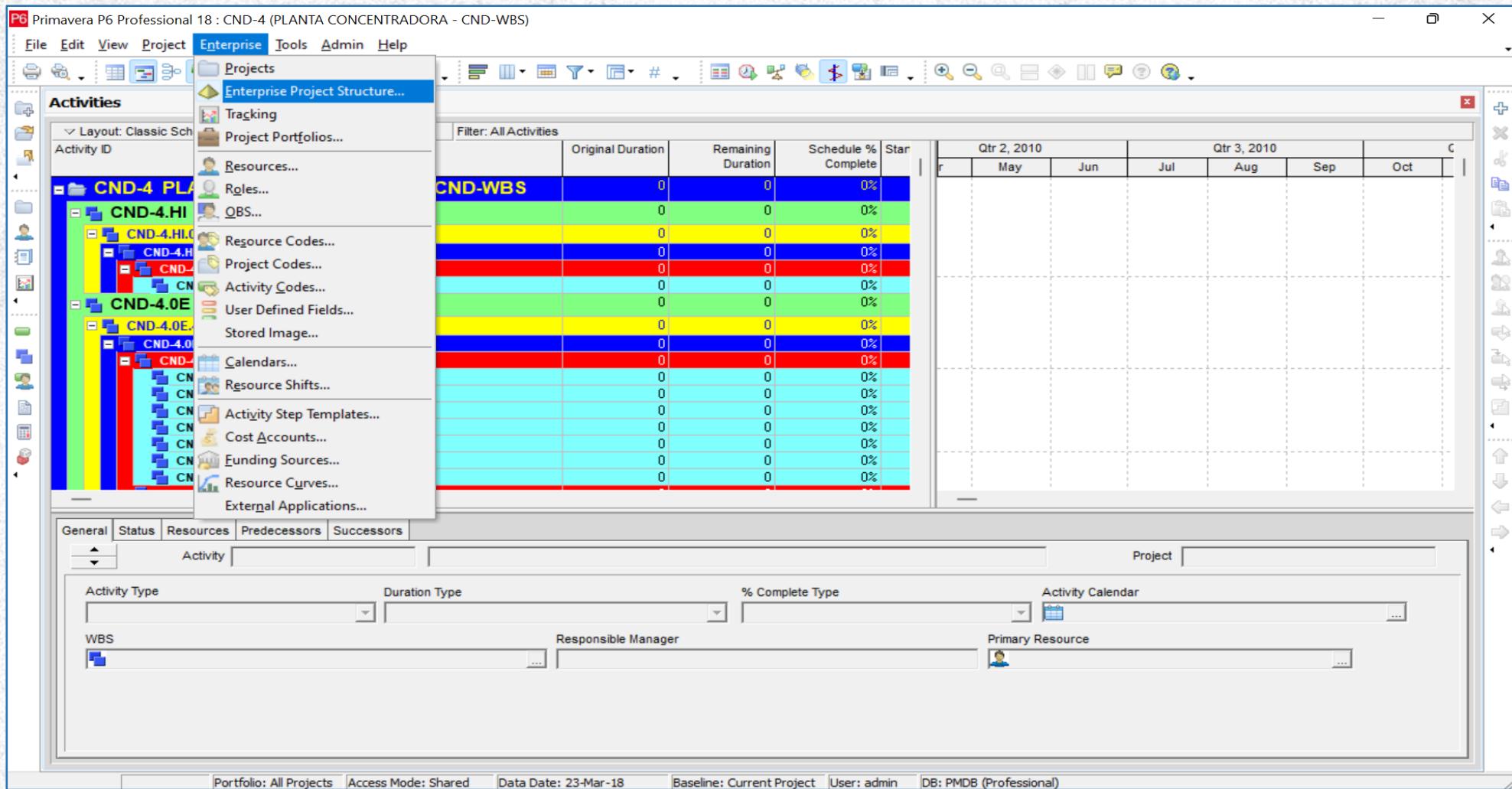
# Entorno Primavera P6 - Vista de Seguimiento



# Entorno Primavera P6 - Vista de Seguimiento



# Definiendo el EPS



# Definiendo el EPS

Primavera P6 Professional 19 : EC00530 (Nesbid Building Expansion)

Activities

Layout: Classic Schedule Layout Filter: All Activities

Activity ID	Activity Name	Original Duration
EC00530	Nesbid Building Exp.	586
EC00530.D&E	Design and Engi	40
EC1000	Design Building Addition	0
EC1010	Start Office Building Addition	0
EC1030	Review and Approve Design	16
EC1050	Assemble Technical Data for	40
EC1160	Review Technical Data on H	40
EC00530.Found Foundation	108	
EC1090	Begin Building Construction	0
EC1100	Site Preparation	32
EC1230	Excavation	18
EC1320	Install Underground Water Li	9
EC1330	Install Underground Electric C	9
EC1340	Form/Pour Concrete Footing	18
EC1350	Concrete Foundation Walls	18
EC1360	Form and Pour Slab	9

General Status Resources Predecessors Successors

Activity: EC1330      Duration Type: Fixed Duration

Activity Type: Task Dependent      Duration Type: Fixed Duration

WBS: EC00530.Found Foundation

P6 Enterprise Project Structure (EPS)

Display: EPS

EPS ID	EPS Name
All Initiatives	All Initiatives
E&C	Engineering & Construction
Energy	Energy Services
Manufacturing	Manufacturing
ProdDev	Product Development
ProdProg1	Product Program 1
ProdProg2	Product Program 2
Corporate	Corporate Programs
In-flight	In-flight Projects
Pipeline	Proposed Opportunities
IT	Information Technology
LOB 1	Line of Business 1
LOB 2	Line of Business 2
ING SA	(New EPS)

Close Add Delete Cut Copy Paste Help

Qtr 4, 2011 Qtr 1, 2012

Oct Nov Dec Jan Feb

EC00530.D&E Design and Engineering

EC00530.Found Foundation

EC1090 Begin Building Construction

EC1100 Site Preparation

EC1230 Excavation

EC1330 Install Underground Electric C

EC1340 Form/Pour Concrete Footing

EC1350 Concrete Foundation Walls

EC1360 Form and Pour Slab

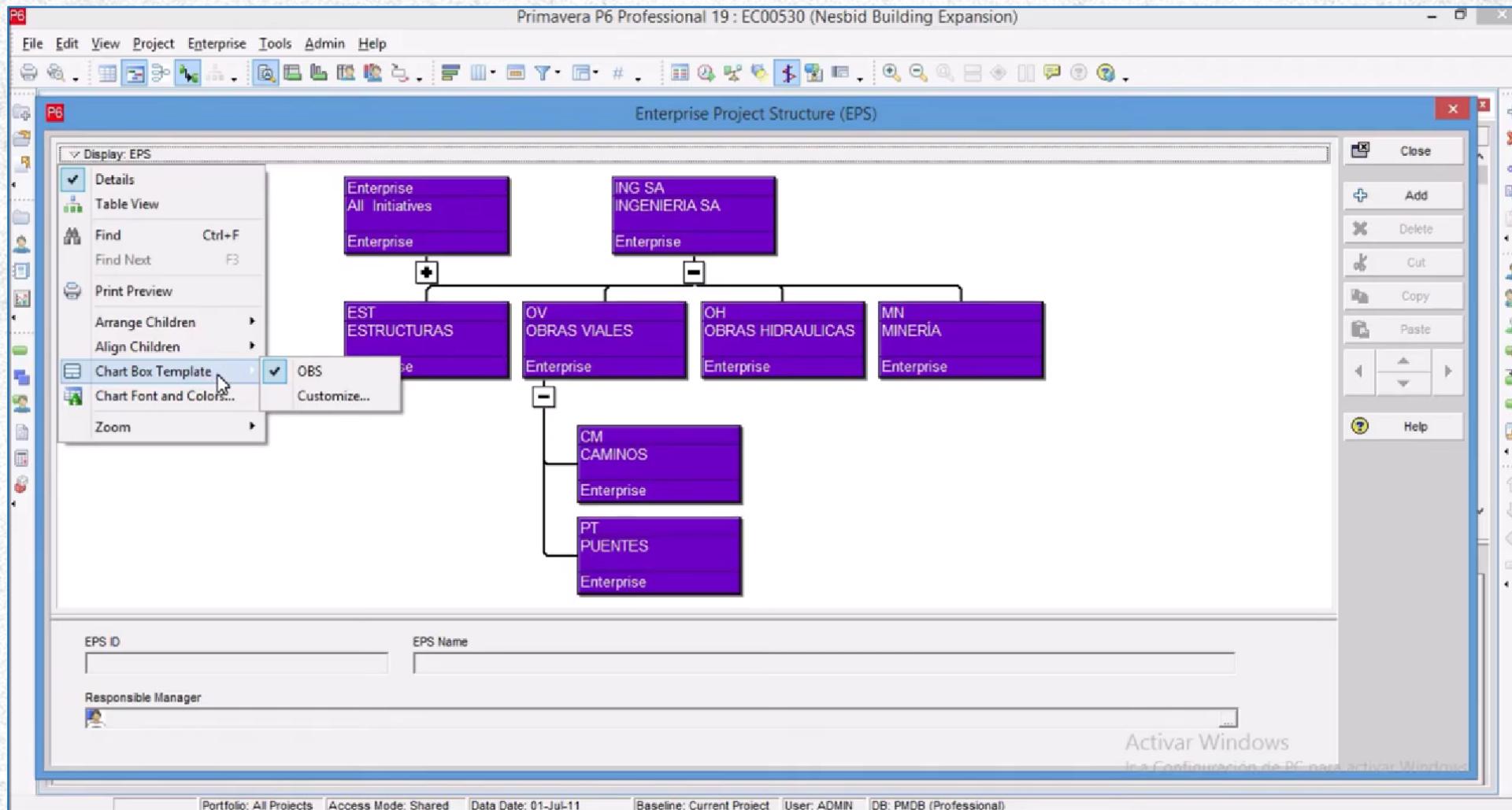
Project: EC00530

Calendar: 5 Day Workweek

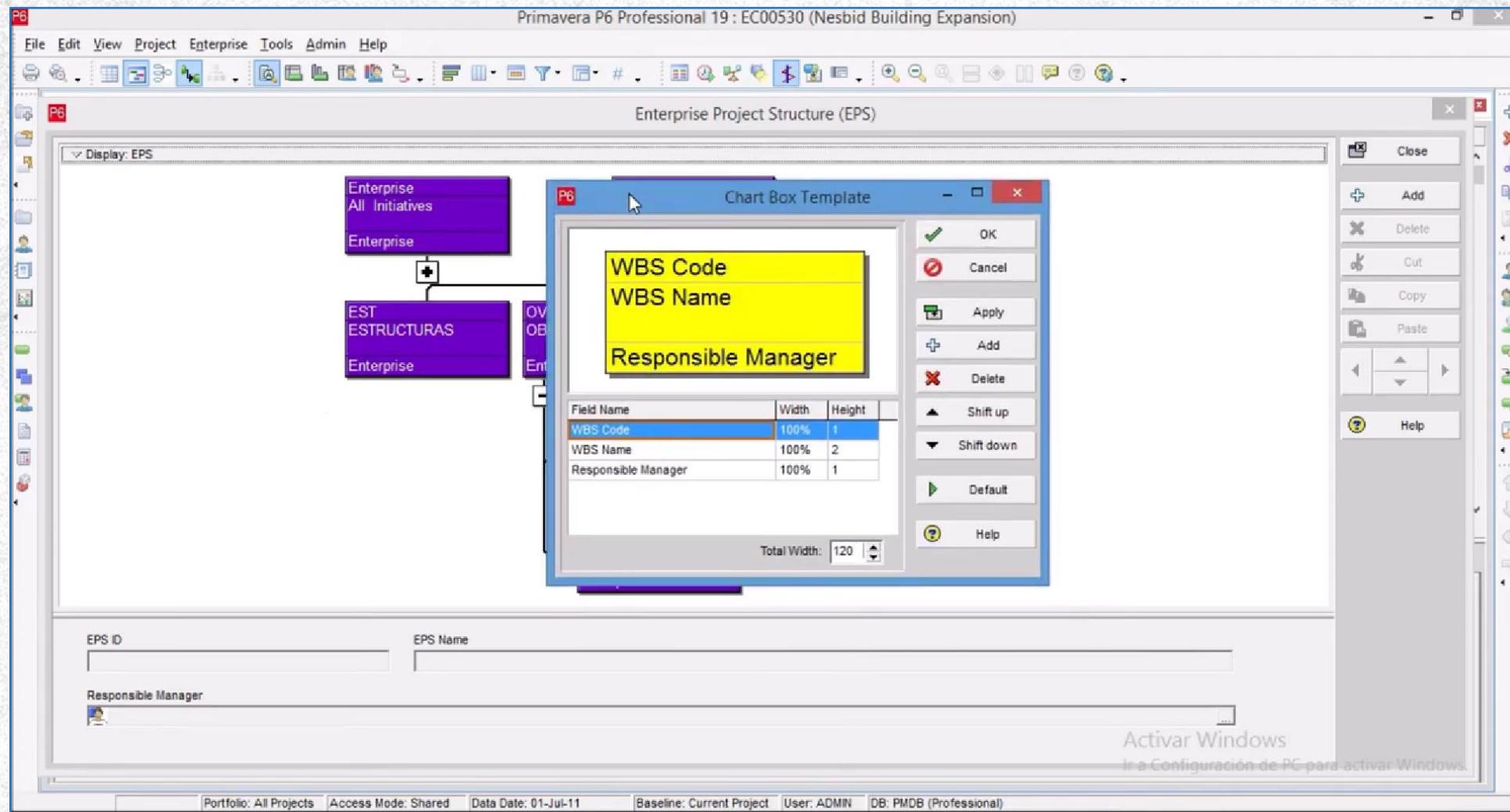
Activar Windows  
Ir a Configuración de PC para activar Windows.

Portfolio: All Projects Access Mode: Shared Data Date: 01-Jul-11 Baseline: Current Project User: ADMIN DB: PMDB (Professional)

# Definiendo el EPS



# Definiendo el EPS



# Definiendo el EPS

P6 Primavera P6 Professional 19 : EC00530 (Nesbid Building Expansion)

File Edit View Project Enterprise Tools Admin Help

Enterprise Project Structure (EPS)

Display: EPS

Enterprise All Initiatives

Enterprise ING SA INGENIERIA SA

Enterprise EST ESTRUCTURAS

Enterprise OV OBRAS VIALES

Enterprise OH OBRAS HIDRAULICAS

Enterprise MN MINERIA

Enterprise CM CAMINOS

Enterprise PT PUENTES

Chart Font and Colors

Font

Back Color

Box Color

OK Cancel Apply Help

EPS ID

EPS Name

Responsible Manager

Activar Windows  
Ir a Configuración de PC para activar Windows.

Portfolio: All Projects Access Mode: Shared Date: 01 Jul 14 Baseline: Current Project User: ADMIN DR: PMPR /Professional

# Definiendo el EPS

P6 Primavera P6 Professional 19 : EC00530 (Nesbid Building Expansion)

File Edit View Project Enterprise Tools Admin Help

Activities

Layout: Classic Schedule Layout

Activity ID Activity Name Original Duration

EC00530 Nesbid Building Exp.

EC00530.D&E Design and Engineering

- EC1000 Design Building Addition
- EC1010 Start Office Building Addition
- EC1030 Review and Approve Design
- EC1050 Assemble Technical Data for Heat Pumps
- EC1160 Review Technical Data on Heat Pumps

EC00530.Found Foundation

- EC1090 Begin Building Construction
- EC1100 Site Preparation
- EC1230 Excavation
- EC1320 Install Underground Water Lines
- EC1330 Install Underground Electric Conduits
- EC1340 Form/Pour Concrete Footing
- EC1350 Concrete Foundation Walls
- EC1360 Form and Pour Slab

General Status Resources Predecessors Successors

Activity EC1330

Activity Type Task Dependent Duration Type Fixed Duration and Units/Time % Complete Type Duration

WBS EC00530.Found Foundation Responsible Manager E&C

Primary Resource Elec Electrician

Activar Windows  
Ir a Configuración de PC para activar Windows.

Portfolio: All Projects Access Mode: Shared Data Date: 01-Jul-11 Baseline: Current Project User: ADMIN DB: PMDB (Professional)

The screenshot illustrates the configuration of the Organizational Breakdown Structure (OBS) within the Primavera P6 Professional software. The OBS dialog box is open, showing the hierarchy under Corporate, including In Flight, Pipeline, IT, LOB 1, and LOB 2, with Miguel Miranda selected. The main window displays a Gantt chart for the EC00530 project, showing tasks like Site Preparation, Excavation, and various foundation work phases. The interface includes standard project management tools such as activity lists, resource assignments, and activity details.

# Definiendo el EPS

P6

Primavera P6 Professional 19 : EC00530 (Nesbid Building Expansion)

File Edit View Project Enterprise Tools Admin Help

Activities

Display: All OBS Elements

Enterprise

```
graph TD; Enterprise --- ESO[ESO]; Enterprise --- Energy[Energy]; Enterprise --- Manufacturing[Manufacturing]; Enterprise --- ProdDev[ProdDev]; Enterprise --- Corporate[Corporate]; Enterprise --- IT[IT]; Enterprise --- MiguelMiranda[Miguel Miranda]; ESO --- EC101[EC10]; ESO --- EC102[EC10]; ESO --- EC103[EC10]; ESO --- EC104[EC10]; ESO --- EC111[EC11]; Corporate --- ProgProg1[ProgProg1]; Corporate --- ProgProg2[ProgProg2]; Corporate --- InFlight[In Flight]; Corporate --- Pipeline[Pipeline]; Corporate --- LOB1[LOB 1]; Corporate --- LOB2[LOB 2]; MiguelMiranda --- CarlosFlores[Carlos Flores]; MiguelMiranda --- AlexGarcia[Alex Garcia]; MiguelMiranda --- OscarGallardo[Oscar Gallardo]; MiguelMiranda --- LuisaRamos[Luisa Ramos]; MiguelMiranda --- LorenzoRamirez[Lorenzo Ramirez]; MiguelMiranda --- CarolinaEspinosa[Carolina Espinosa]
```

Close

Add

Del / Merge

Cut

Copy

Paste

Help

Qtr 1, 2012 Feb

21

Water Lines  
Electric Condu  
ur Concrete F  
Concrete F  
Form

General Responsibility

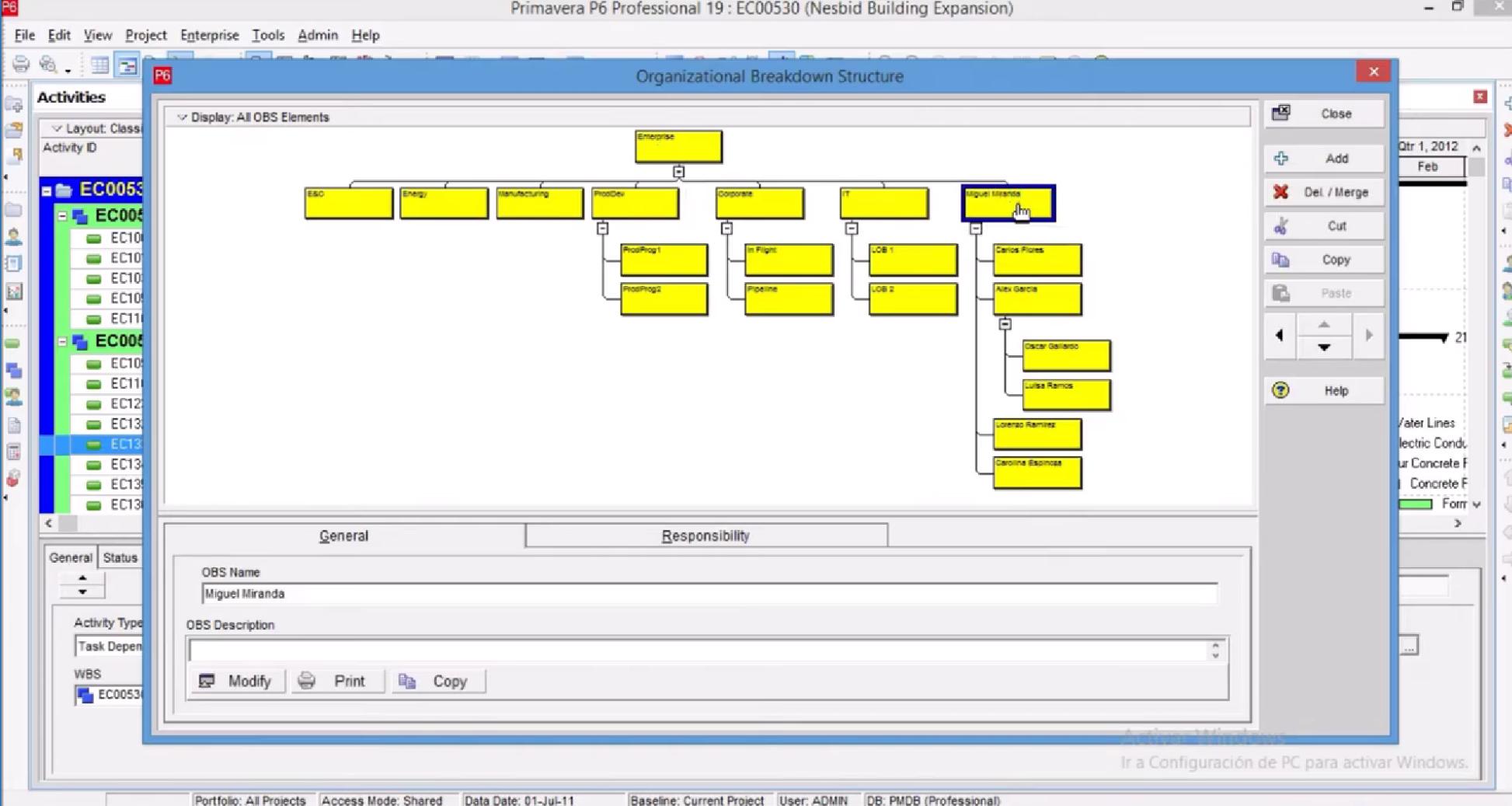
OBS Name: Miguel Miranda

OBS Description:

Modify Print Copy

Ir a Configuración de PC para activar Windows.

Portfolio: All Projects Access Mode: Shared Data Date: 01-Jul-11 Baseline: Current Project User: ADMIN DB: PMDB (Professional)



# Definiendo el EPS

Primavera P6 Professional 19 : EC00530 (Nesbid Building Expansion)

P6

File Edit View Project Enterprise Tools Admin Help

Activities

Display: All OBS Elements

OBS Details

Table View

Find Ctrl+F F3

Print Preview

Arrange Children

Align Children

Chart Box Template

Chart Font and Colors...

Filter By

Zoom

Expand All Ctrl+TECLA DE ADICION

Collapse All Ctrl+TECLA DE SUSTRACCION

OBS Name: Miguel Miranda

OBS Description:

Modify Print Copy

Organizational Breakdown Structure

Enterprise

Manufacturing

ProdDev

Corporate

IT

Miguel Miranda

ProdProg1

ProdProg2

In Flight

Pipeline

LOB 1

LOB 2

Carlos Flores

Alex Garcia

Oscar Galarza

Luisa Ramos

Lorenzo Ramirez

Carolina Espinoza

Add

Del. / Merge

Cut

Copy

Paste

Help

Qtr 1, 2012 Feb 21

Water Lines

Electric Condu

Br Concrete F

Concrete F

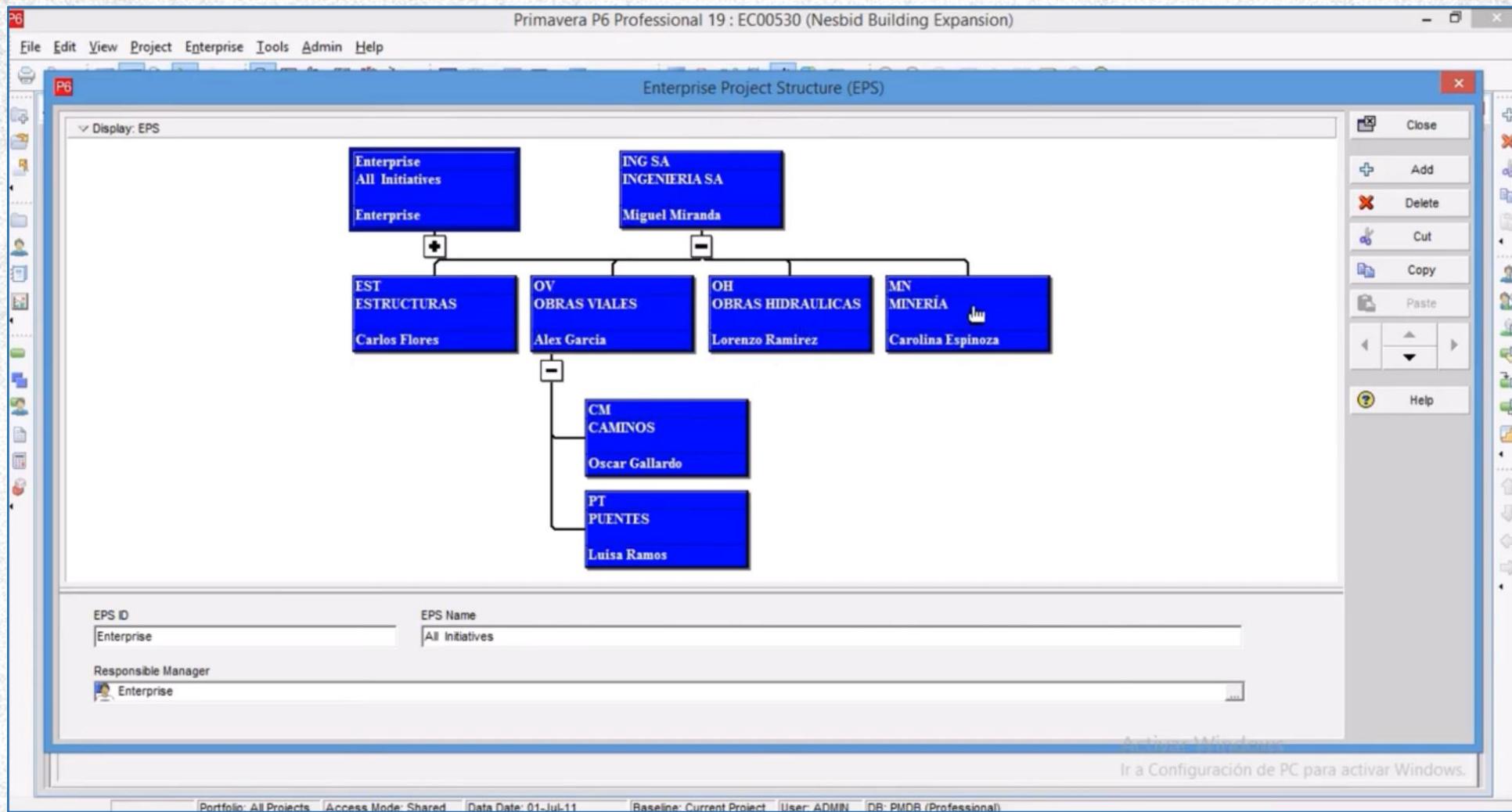
Form

Ir a Configuración de PC para activar Windows.

Portfolio: All Projects Access Mode: Shared Data Date: 01-Jul-11 Baseline: Current Project User: ADMIN DB: PMDB (Professional)

in fb

# Definiendo el EPS



# Definiendo el EPS

Primavera P6 Professional 19 : EC00530 (Nesbid Building Expansion)

File Edit View Project Enterprise Tools Admin Help

Projects Activities Projects

Layout: Projects

Project ID	Project Name	Total Activities	Strategic Priority
Enterprise	All Initiatives	2254	
ING SA	INGENIERIA SA	0	500
EST	ES	500	
OV	OE	500	
CM	CAI	500	
PT	PUI	500	
OH	OE	500	
MN	MI	500	

July 2011 August 2011 September 2011 October 2011 November 2011 December 2011

03 10 17 24 31 07 14 21 28 04 11 18 25 02 09 16 23 30 06 13 20 27 04 11 18 25

Open Project Ctrl+O  
Project Details  
Summarize Project...  
Delete Project Summaries...  
Cut Ctrl+X  
Copy Ctrl+C  
Paste Ctrl+V  
Fill Down Ctrl+E  
Add Ins  
Delete Del

General Notebook Budget Log

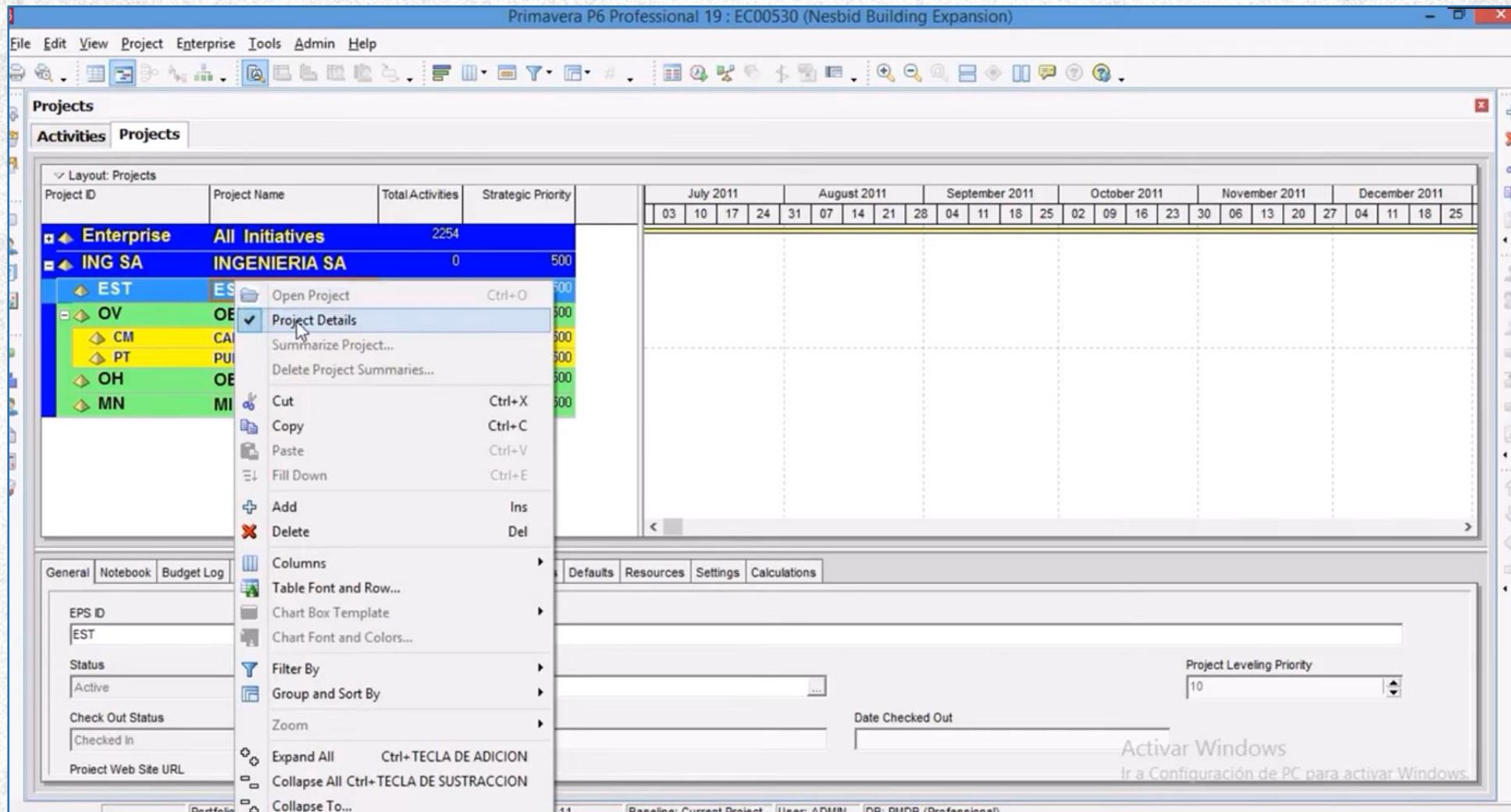
EPS ID EST  
Status Active  
Check Out Status Checked In  
Project Web Site URL

Columns Table Font and Row...  
Chart Box Template  
Chart Font and Colors...  
Filter By  
Group and Sort By  
Zoom  
Expand All Ctrl+TECLA DE ADICION  
Collapse All Ctrl+TECLA DE SUSTRACCION  
Collapse To...

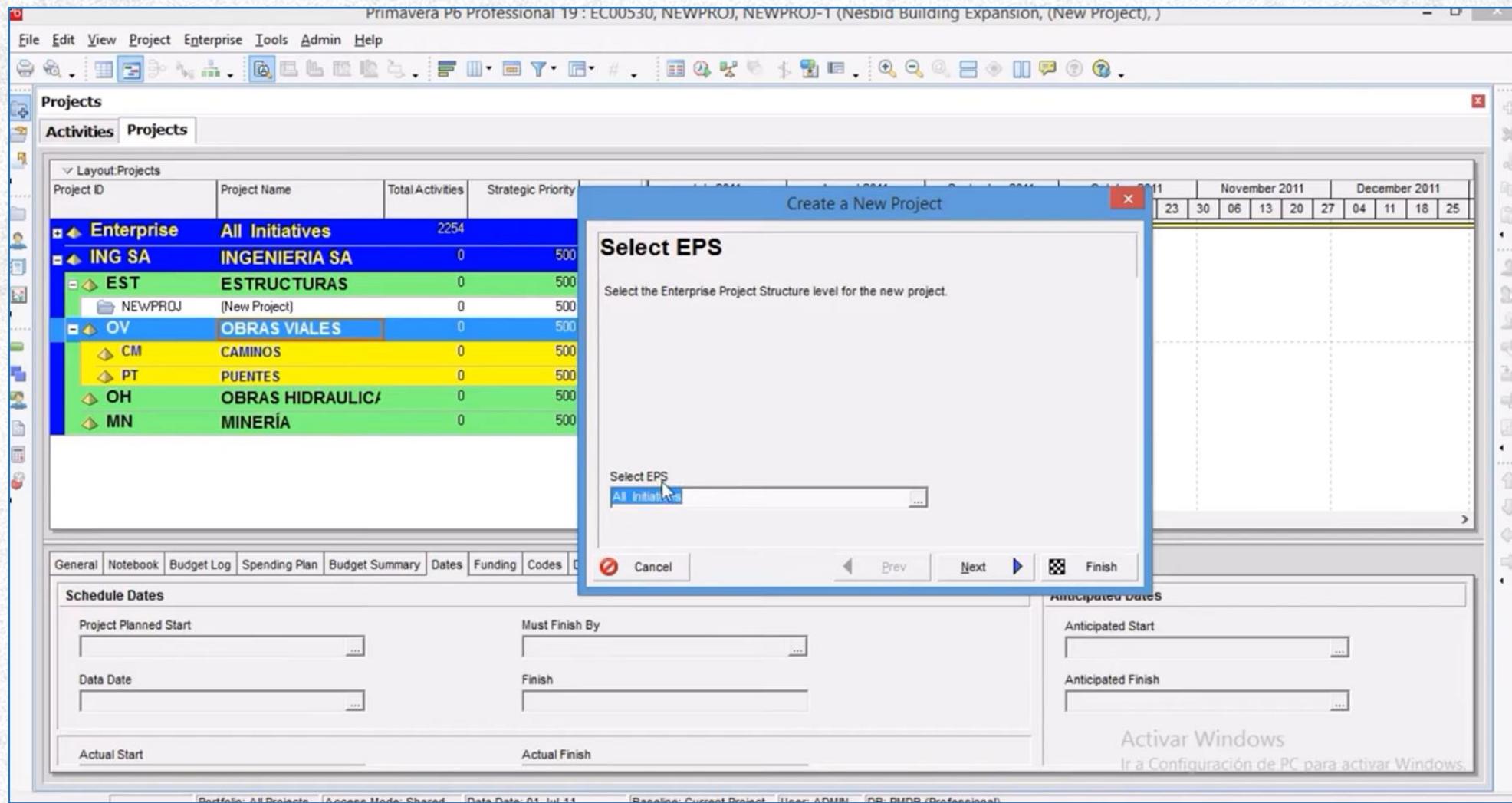
Defaults Resources Settings Calculations

Project Leveling Priority 10  
Date Checked Out  
Activar Windows  
Ir a Configuración de PC para activar Windows

11 Baseline: Current Project User: ADMIN DR: PMDR (Professional)



# Definiendo el EPS



# Definiendo el EPS

Primavera P6 Professional 19 : EC00530, ET1 (Nesbid Building Expansion, Cerco de Albañileria)

File Edit View Project Enterprise Tools Admin Help

Projects Activities Projects

Layout:Projects

Project ID	Project Name	Total Activities	Strategic Priority
Enterprise	All Initiatives	2254	
ING SA	INGENIERIA SA	0	500
EST	ESTRUCTURAS	0	500
ET1	Cerco de Albañileria	0	500
OV	OBRAS VIALES	0	500
CM	CAMINOS	0	500
PT	PUENTES	0	500
OH	OBRAS HIDRAULICAS	0	500
MN	MINERIA	0	500

July 2011 August 2011 September 2011 October 2011 November 2011 December 2011

03 10 17 24 31 07 14 21 28 04 11 18 25 02 09 16 23 30 06 13 20 27 04 11 18 25

General Notebook Budget Log Spending Plan Budget Summary Dates Funding Codes Defaults Resources Settings Calculations

Project ID: ET1 Project Name: Cerco de Albañileria  
Status: Active Responsible Manager: Carlos Flores Project Leveling Priority: 10  
Check Out Status: Checked In Checked Out By: Date Checked Out:   
Project Web Site URL:

Activar Windows [Launch...](#) Ir a Configuración de PC para activar Windows.

Portfolio: All Projects Access Mode: Shared Date: Date: 01 Jul 11 Recycle: Current Project User: ADMIN DB: P6PRO/Professional

# Planificación de un Proyecto

Primavera P6 Professional 19 : EC00530, ET1 (Nesbid Building Expansion, Cerco de Albañilería)

File Edit View Project Enterprise Tools Admin Help

Projects Activities Projects

Layout: Projects

Project ID	Project Name	Total Activities	Strategic Priority
Enterprise	All Initiatives	2254	
ING SA	INGENIERIA SA	0	500
EST	ESTRUCTURAS	0	500
ET1	Cerco de Albañilería	0	500
OV	OBRAS VIALES	0	500
CM	CAMINOS	0	500
PT	PUENTES	0	500
OH	OBRAS HIDRAULICAS	0	500
MN	MINERÍA	0	500

July 2011 August 2011 September 2011 October 2011 November 2011 December 2011

03 10 17 24 31 07 14 21 28 04 11 18 25 02 09 16 23 30 06 13 20 27 04 11 18 25

Assign Notebook Topic

Display: Notebook Topics

Search

Notebook Topic

- Constraints
- Change Management
- Sponsor Feedback
- Recent Accomplishments
- Lessons Learned
- Business Benefits
- Rationale
- Objectives
- Changes
- Corrective Actions

General Notebook Budget Log Spending Plan Budget Summary Dates Funding Codes Defects

Notebook Topic

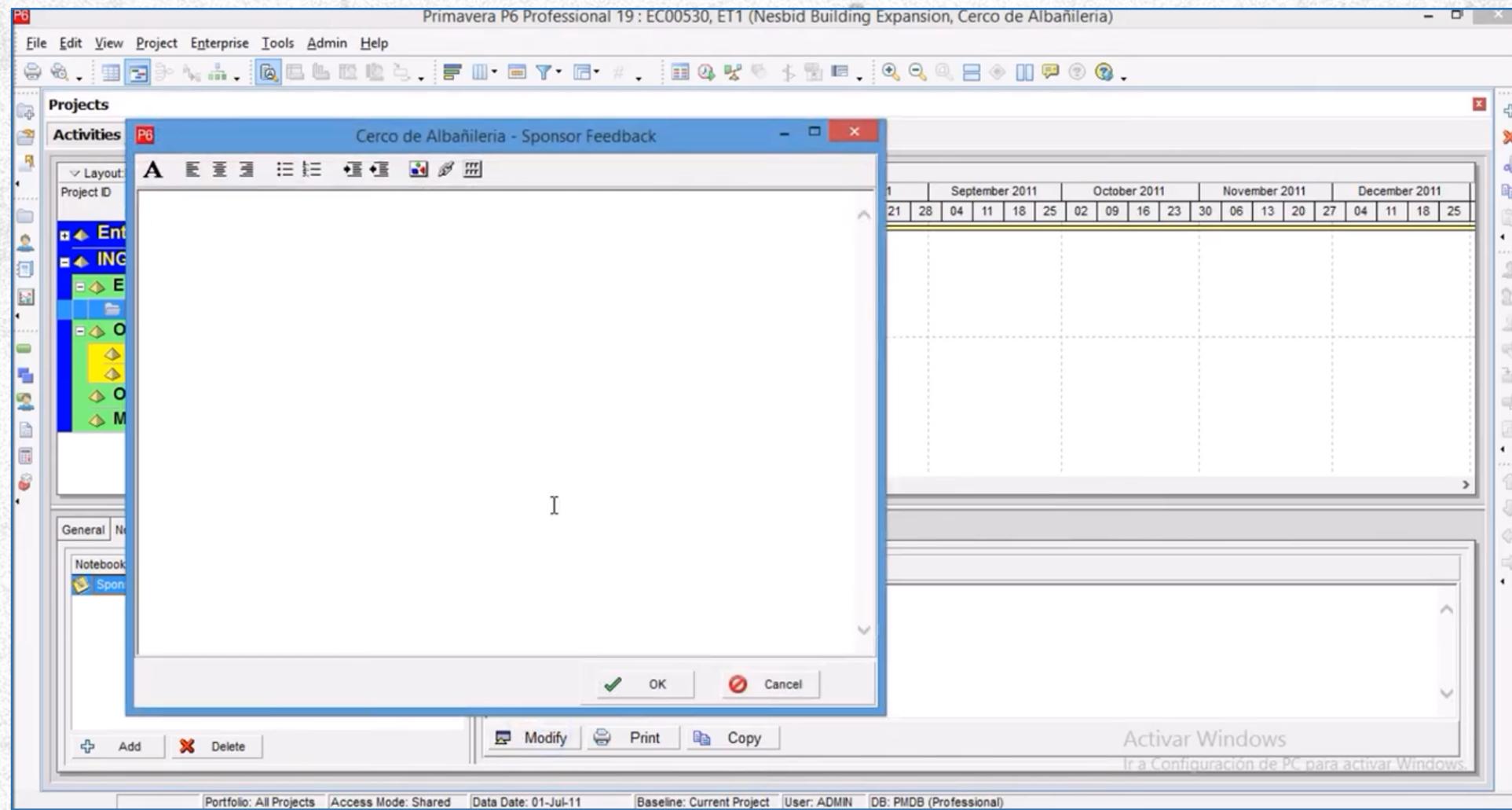
(No Notebook Topic selected)

Add Delete Modify Print Copy

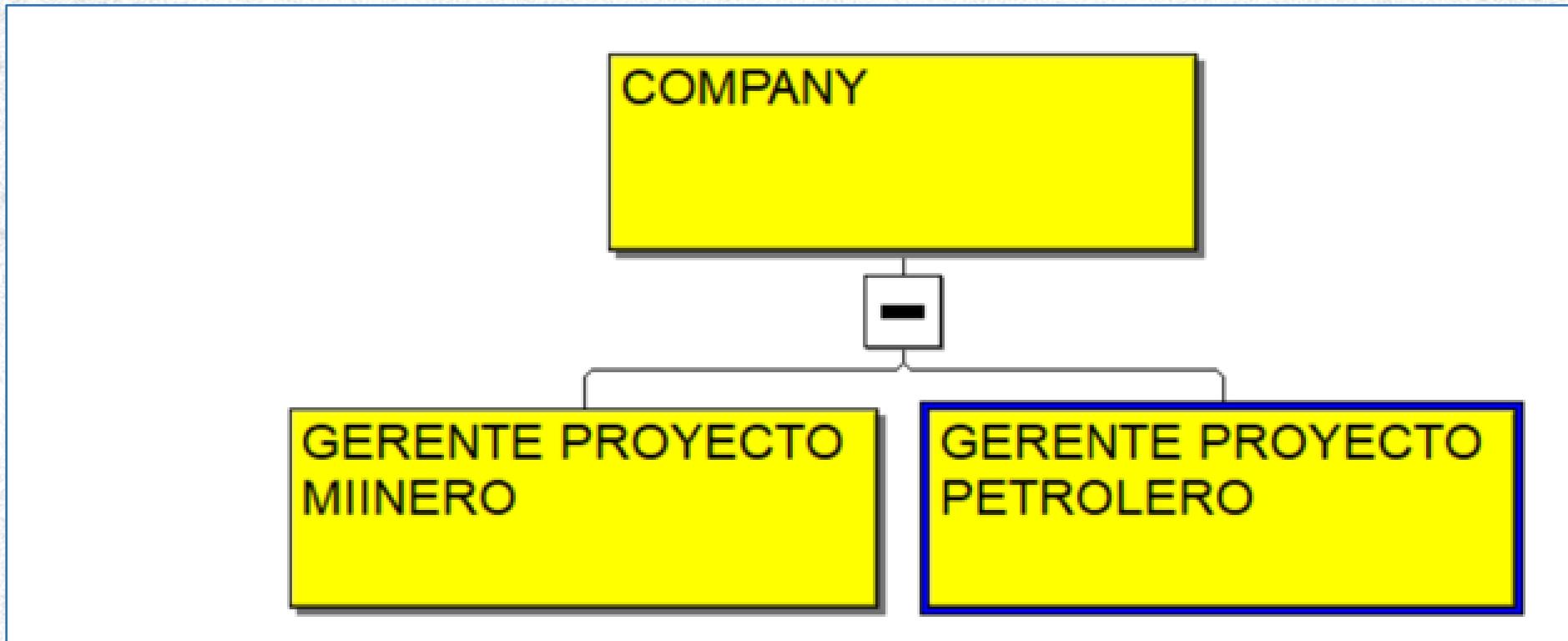
Activar Windows  
Ir a Configuración de PC para activar Windows.

Portfolio: All Projects Access Mode: Shared Data Date: 01-Jul-11 Baseline: Current Project User: ADMIN DR: PMDB (Professional)

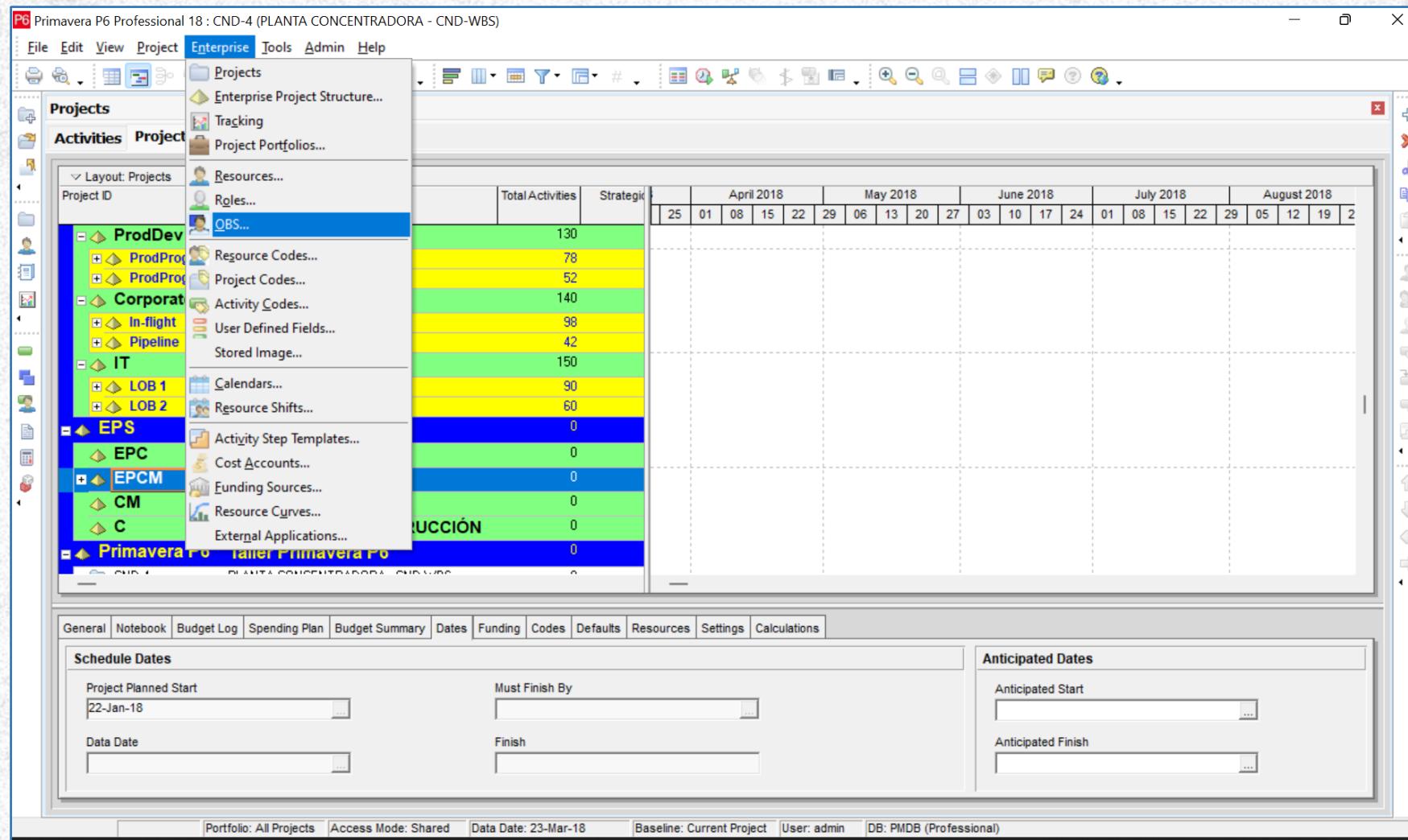
# Planificación de un Proyecto



# Definiendo el OBS



# Definiendo el OBS



# Definiendo el OBS

