

Project Monitoring

Project Management 2007
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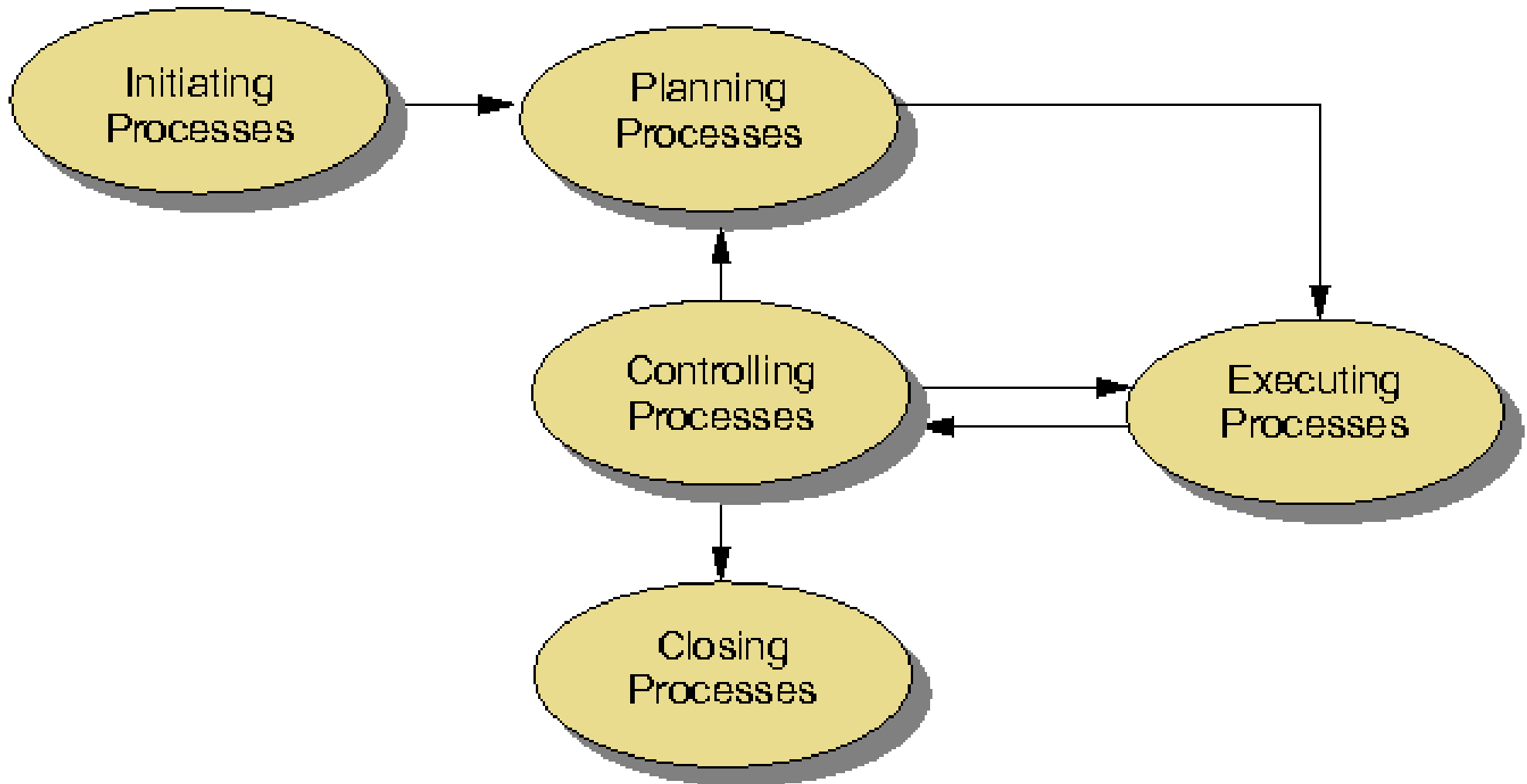
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Project Life Cycle



Continuous Adaptive Planning

- Closed Cycle
 - Planning
 - Monitoring
 - Controlling

Modeling Information Flow

- One of the first things to do in a project
- Examine project plans to extract performance, time, cost goals
- Questions to ask:
 - Who reports
 - To whom is being reported
 - What is being reported

Having done similar projects is no reason to underestimate reporting!

What to Monitor

- Performance, cost, time, quality
- Other important factors
 - Morale of project team
 - Labor hours used
 - Number or extent of output changes
 - Level of customer satisfaction
- Which data to monitor
 - Easy to collect vs. Important to have

What are the right metrics and measurements?

Data Collection

- Information to be collected
 - Accounting data
 - Operating data
 - Engineering test data
 - Customer reactions
 - Specification changes
- Ways to gather data include
 - ♦ Logging computer data
 - ♦ Filling questionnaires
 - ♦ Reviewing formal communication

Technical Performance Measures

- Availability
- Back-up utility safety
- Speed
- Survivability
- Maintainability
- Cycle time
- Efficiency
- Output rate
- Capacity
- Response time
- Security
- Setup time
- Range
- Variance
- Utilization
- Error/defect rate
- Size
- Reliability
- Power
- Compatibility
- Interoperability
- Complexity
- Signal-to-noise ratio
- Idle time

Reporting Issues

- Reporting needs to focus on:
 - Results rather than activities
 - Measurable and standardized factors
- Types of reports:
 - Routine
 - Exception
 - Special analysis
- Different stakeholders may receive different information

Appropriate level of detail and frequency are crucial

Reporting Issues

- Common project reporting problems
 - Too much detail
 - Poor correspondence to parent organization's reporting system
 - Poor correspondence between planning and monitoring systems

Responsibility Matrix

- Rows are tasks
- Columns are participants
- Participants are assigned specific roles for each task
 - **R**esponsible
 - **A**ccountable
 - **C**onsulted – 2-way communication
 - **I**nformed – 1-way communication
- Also called RACI Matrix

Responsibility Matrix

ACTIVITIES	George	Glenda	Tom	Susan	Mary	Craig
Investigate	R	A	I	C	C	
Design SW	I	A	C			R
UAT Plan	R	A	I			C
Phase Signoff	R	A	I	C	C	C

Source: Wikipedia

Responsibility Matrix

- There are other variations of Responsibility Matrices with additional roles
 - Supporting
 - Verifying
 - Signing-off
 - Omitted

Change Management

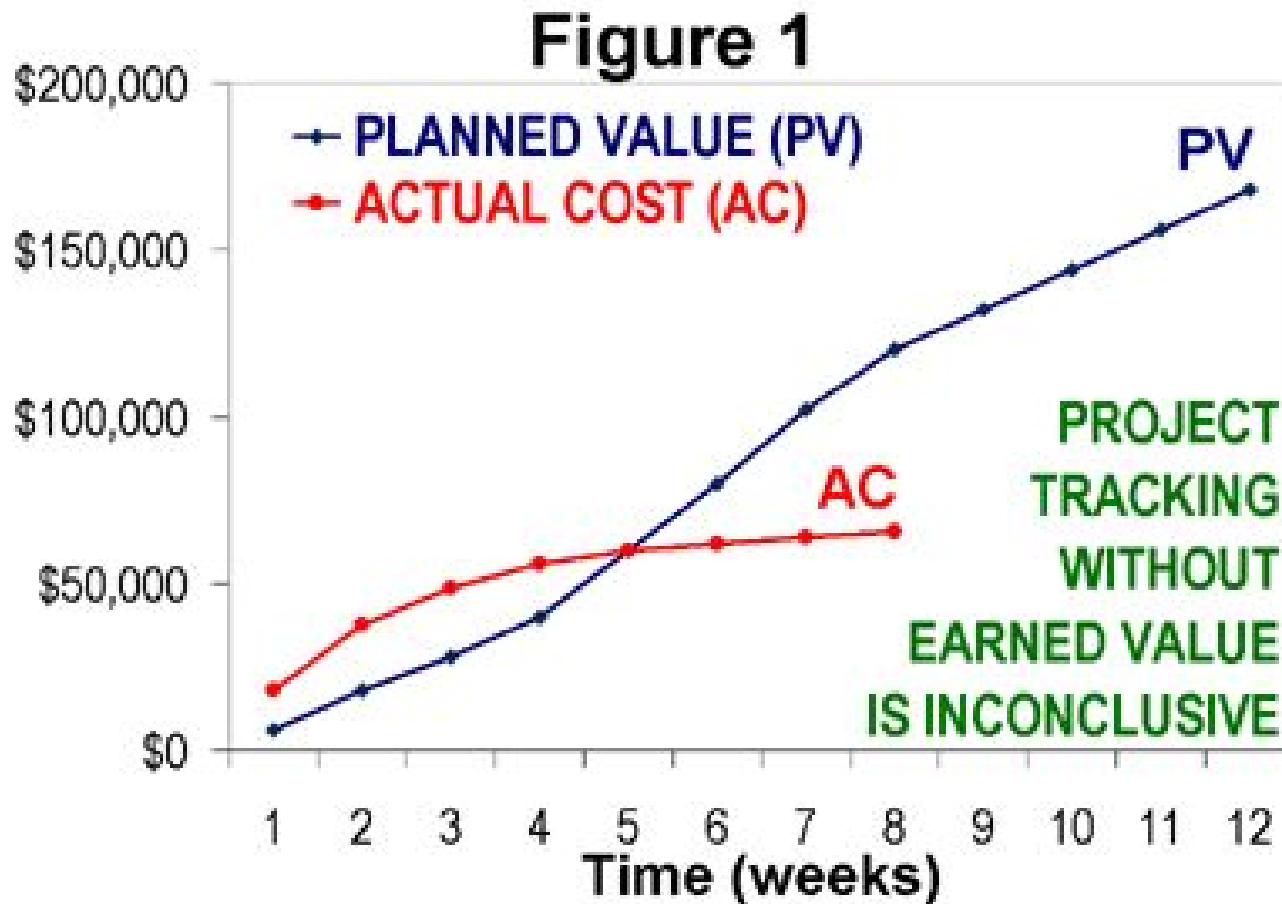
- Need for changes *will* appear
- Be prepared:
 - Change management processes
 - Change requests and logs templates

Earned Value Management

Measurements:

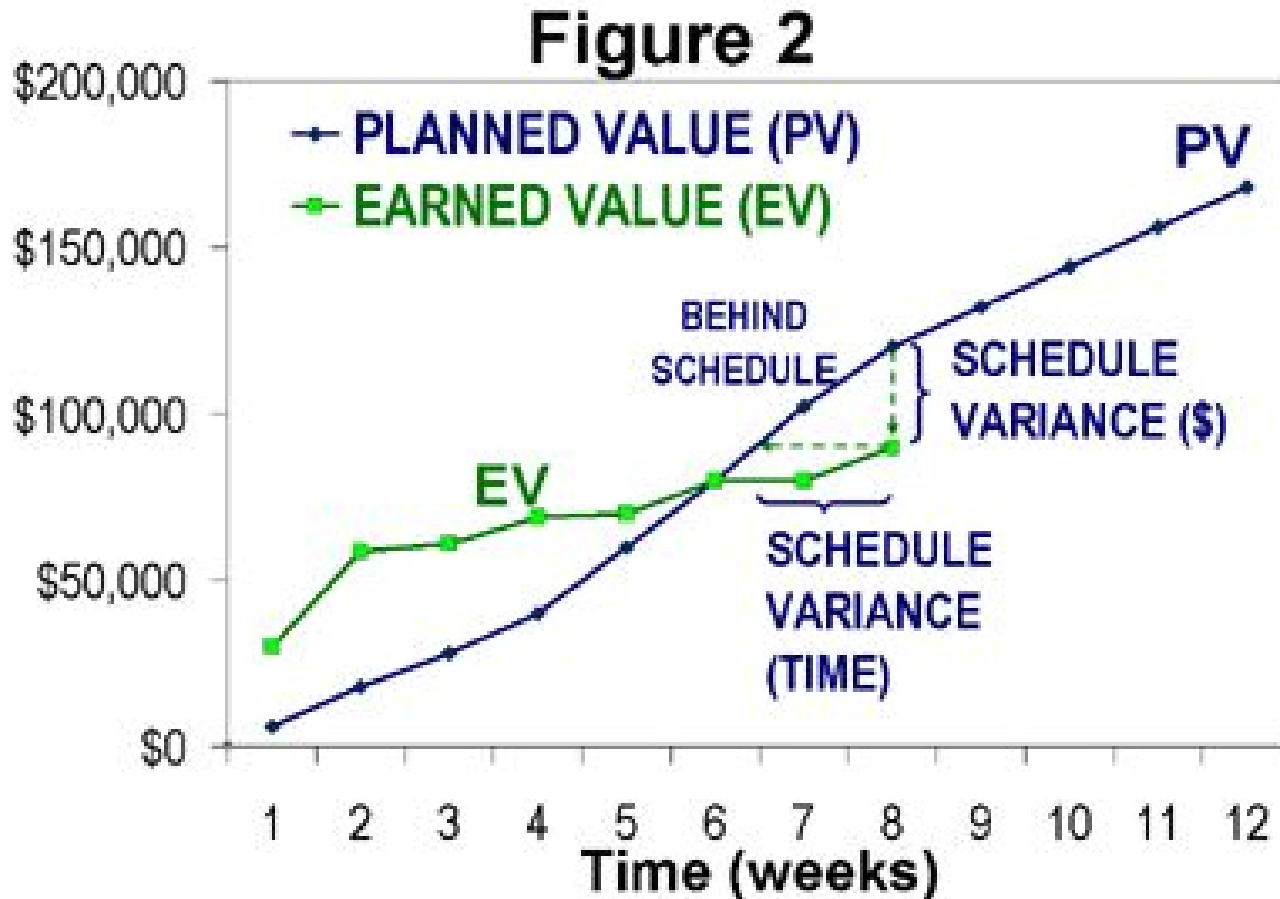
- Planned Value
BCWS - Budgeted Cost of Work Scheduled
- Earned Value
BCWP - Budgeted Cost of Work Performed
- Actual Cost
ACWP - Actual Cost of Work Performed

Earned Value Management



Source: Wikipedia

Earned Value Management



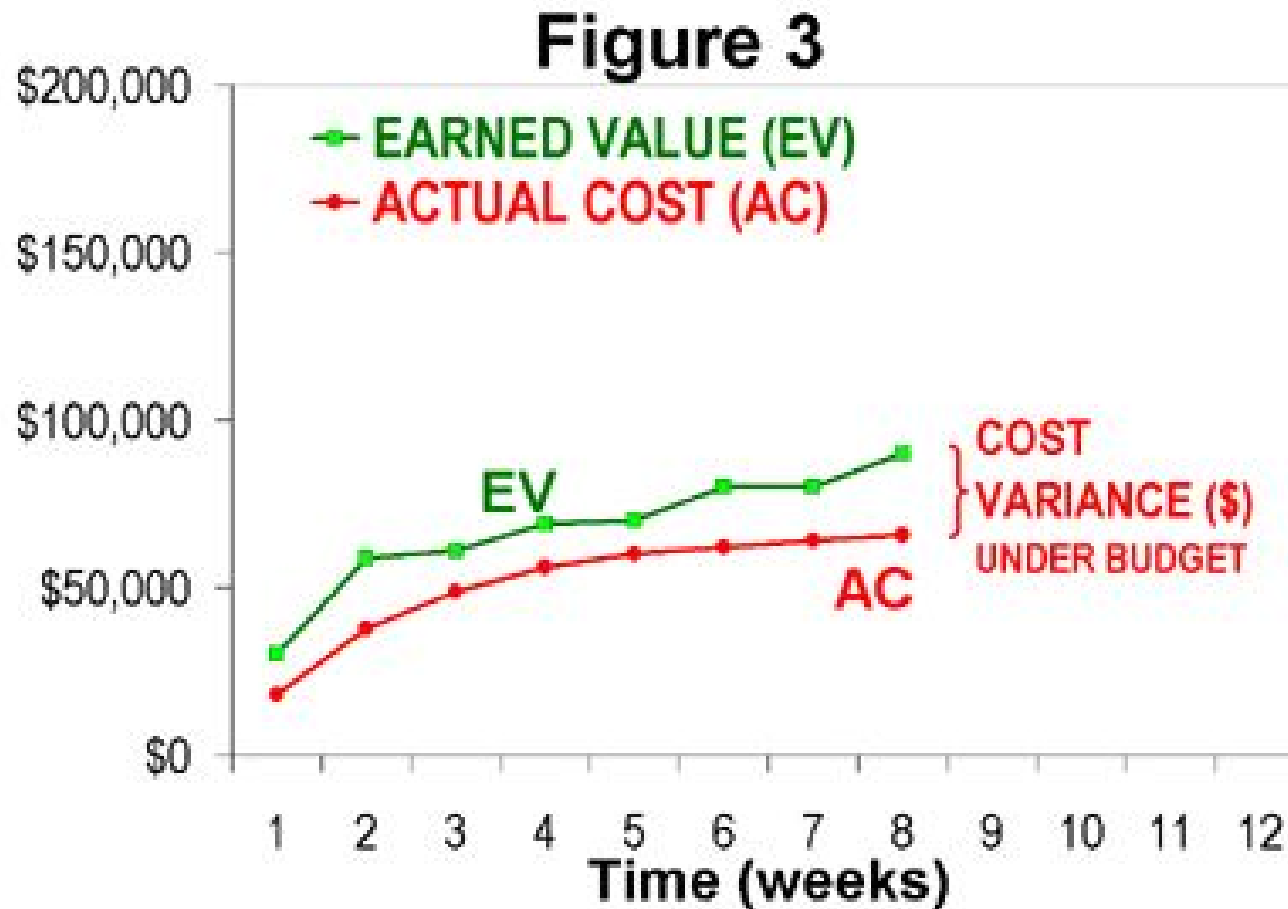
Source: Wikipedia

Earned Value Management

Variances:

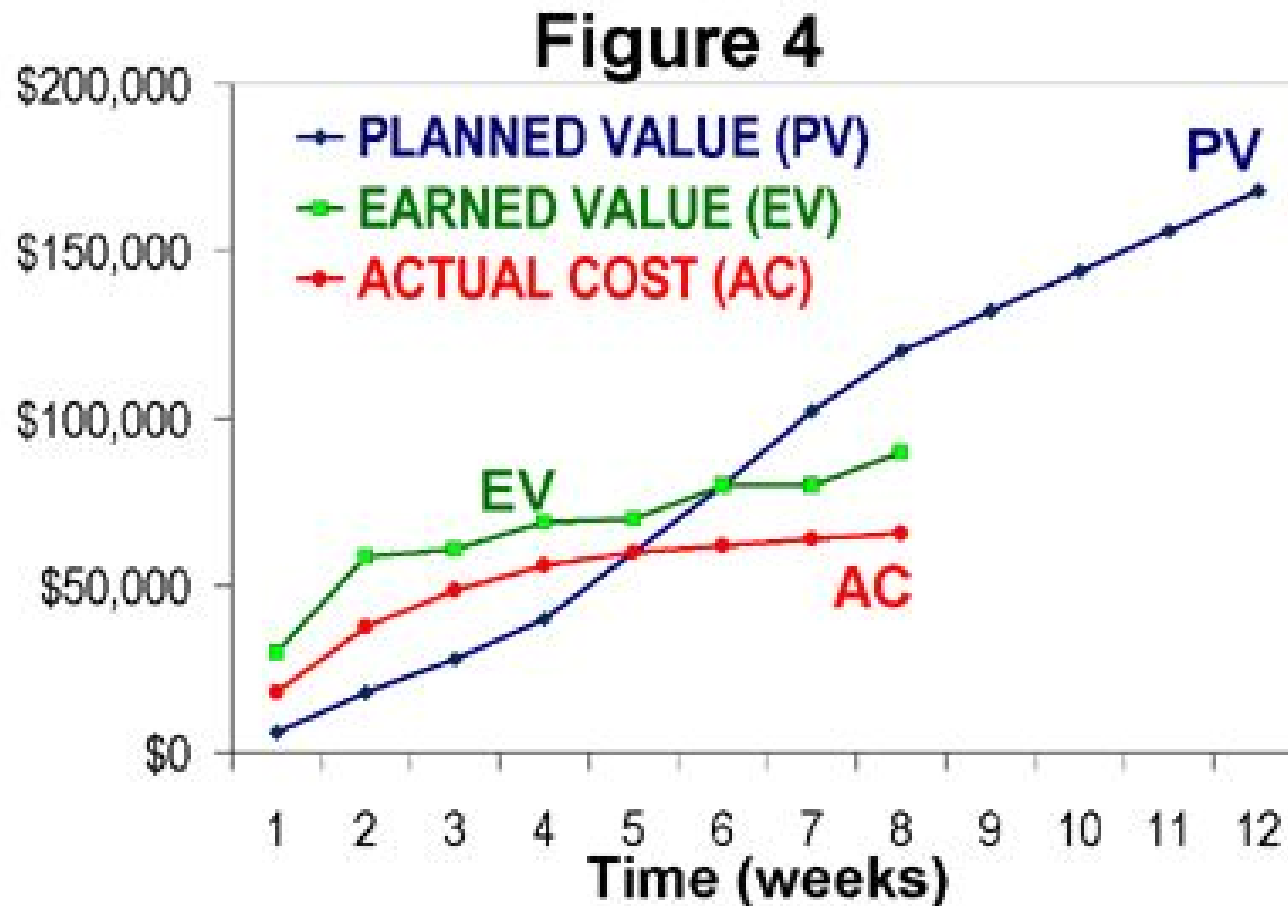
- Schedule Variance
 $SV = BCWP - BCWS$
- Cost Variance
 $CV = BCWP - ACWP$

Earned Value Management



Source: Wikipedia

Earned Value Management



Source: Wikipedia

Earned Value Management

Key Performance Indicators:

- Schedule Performance Indicator
 $SPI = BCWP / BCWS$
- Cost Performance Indicator
 $CPI = BCWP / ACWP$

Tabular Reports

	Planned	Earned	Cost					Performance Index	
WBS Element	Budget	Earned Value	Actual Cost	Cost Variance		Schedule Variance		Cost	Schedule
	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(%)	CPI	SPI
	(PV)	(EV)	(AC)	(EV - AC)	(CV ÷ EV)	(EV - PV)	(SV ÷ PV)	(EV ÷ AC)	(EV ÷ PV)
1.0 Pre-Pilot Plan	63,000	58,000	62,500	-4,500	-7.8	-5,000	-7.9	0.93	0.92
2.0 Checklists	64,000	48,000	45,800	1,200	2.5	-16,000	-25.0	1.03	0.75
3.0 Curriculum	23,000	20,000	23,500	-3,500	-17.5	-3,000	-13.0	0.85	0.87
4.0 Mid-Term Evaluation	68,000	68,000	72,500	-4,500	-6.6	0	0.0	0.94	1.00
5.0 Implementation Support	12,000	10,000	10,000	0	0.0	-2,000	-16.7	1.00	0.83
6.0 Manual of Practice	7,000	6,200	6,000	200	3.2	-800	-11.4	1.03	0.89
7.0 Roll-Out Plan	20,000	13,500	18,100	-4,600	-34.1	-6,500	-32.5	.075	0.68
Totals	257,000	223,700	239,400	-15,700	-7.0	-33,300	-13.0	0.93	0.87

Note: All figures are project-to-date

*Other units of measure that may be used in these calculations may include: labor hours, cubic yards of concrete, etc.

Tabular Performance Report Sample

A Guide to the Project Management Body of Knowledge (PMBOK® Guide) Third Edition
 ©2004 Project Management Institute, Four Campus Boulevard, Newtown Square, PA 19073-3299 USA

Health Dashboards

Project Health Dashboard

Overview

- Project name, "signature" phrase
- Major measurable values

Performance indicators:

SPI: Schedule
CPI: Cost
QPI: Quality

Gantt Chart:
Rolled up to
major branches

Issues

- Schedule, cost, quality
- Risk issues



Customer

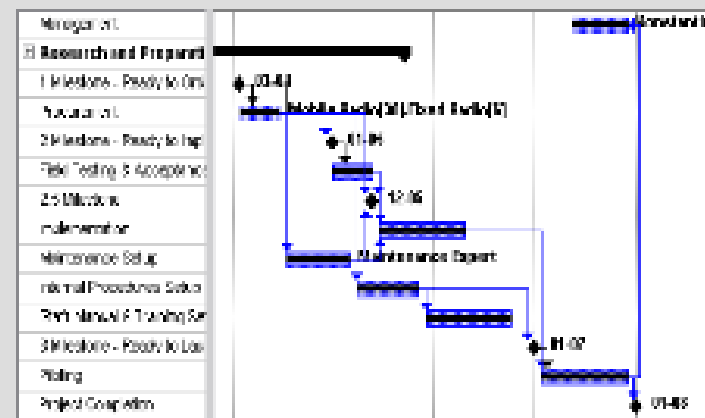
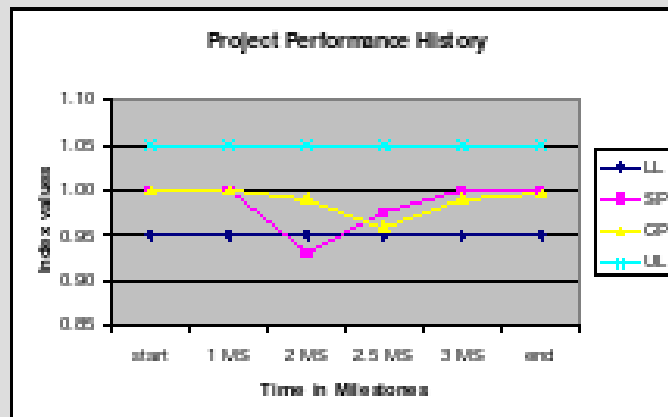
- VOC
- Other issues

"RAG"
Red, Amber, Green

Health Dashboards

Project Health Dashboard

Overview:
Radio Communication System



Performance:

- Schedule Performance Index:
1,00 (BCWP/BCWS)
- Cost Performance Index:
1,00 (BCWP/ACWP)

Issues:

- Project Completed
- Good SPI and CPI

VOC:

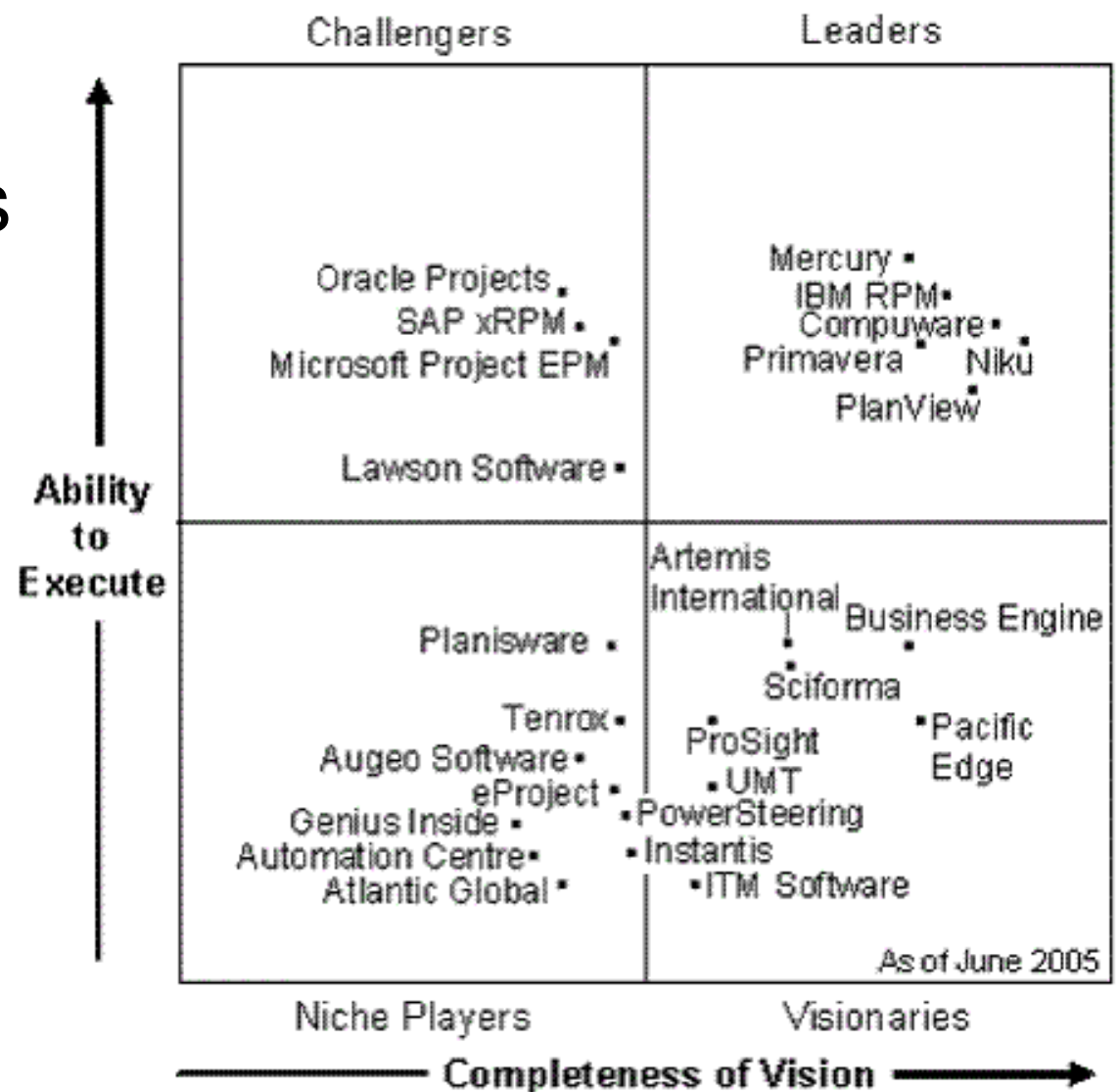
- Workers and Management are satisfied of the communication improvement

Project & Portfolio Management

- Projects can be managed without software
- Software helps project managers to do their job and thus adds value to the business
 - Mathematical models improve estimation and planning
 - Interacting diagrams detect problems and focus manager's attention
 - Reporting and drill-down generate automatic reports
- Different kinds of project management software
- State-of-the-art tools manage portfolios, not just projects

Gartner Magic Quadrant

- 2005 IT Project and Portfolio Management Tools



MS Project

- MS Project Server
- Numerous 3rd party plugins
- MS Project 2007

The image displays two overlapping screenshots. The foreground shows the Microsoft Project 2007 desktop application. The background shows the Microsoft Project Web Access interface accessed via a web browser.

Microsoft Project 2007 - Project1

Task Name	Duration	Start	Finish	Predec
1 A	1 day	Fri 11/17/06	Fri 11/17/06	
2 B	3 days	Mon 11/20/06	Wed 11/22/06	1
3 C	1 day	Thu 11/23/06	Thu 11/23/06	2
4 D	1 day	Fri 11/24/06	Fri 11/24/06	3
5 E	1 day	Mon 11/27/06	Mon 11/27/06	4
6 F	1 day	Mon 11/20/06	Mon 11/20/06	1
7 G	0 days	Mon 11/20/06	Mon 11/20/06	6
8 H	1 day	Tue 11/21/06	Tue 11/21/06	7
9 I	1 day	Wed 11/22/06	Wed 11/22/06	8
10 J	1 day	Thu 11/23/06	Thu 11/23/06	9
11 K	1 day	Fri 11/24/06	Fri 11/24/06	10

Microsoft Project Web Access - xenia - Microsoft Internet Explorer

Adresse: http://xenia/projectserver/Views/PortfolioView.asp?_oid=-1

Start | Vorgänge | **Projekte** | Ressourcen | Statusberichte | Aktualisierungen | Dokumente | Probleme | Admin

Project Projektcenter

Ansicht wähl

tsoptionen | Filtern, Gruppieren, Suchen

ng speichern... | Projekteinheiten bearbeiten | In Microsoft Project öffnen

projektnamen

projektnamen	Hälfte 2, 2001	Hälfte 1, 2002	Hälfte 2, 2002	Hälfte 1, 2003	Hälfte 2, 2003	Hälfte 1, 200
lochbau	J	A	S	O	N	D
0002-Müller-Hausbau	J	F	M	A	M	J
0001-Meyer-Hausbau	J	J	A	S	O	N
0003-Schulze-Hausbau	J	F	M	A	M	J
tiefbau	J	A	S	O	N	D
0201-Abwesenheiten2002	J	F	M	A	M	J
0004-Schmidt-Hausbau	J	J	A	S	O	N
0006-Holert-Hausbau	J	F	M	A	M	J

Vertrauenswürdige Sites

IBM

- Different applications, customizable to work together
- Project management as a part of Enterprise Business Processes
- Powerful, but require know-how
- Based on Eclipse and Rational Rose



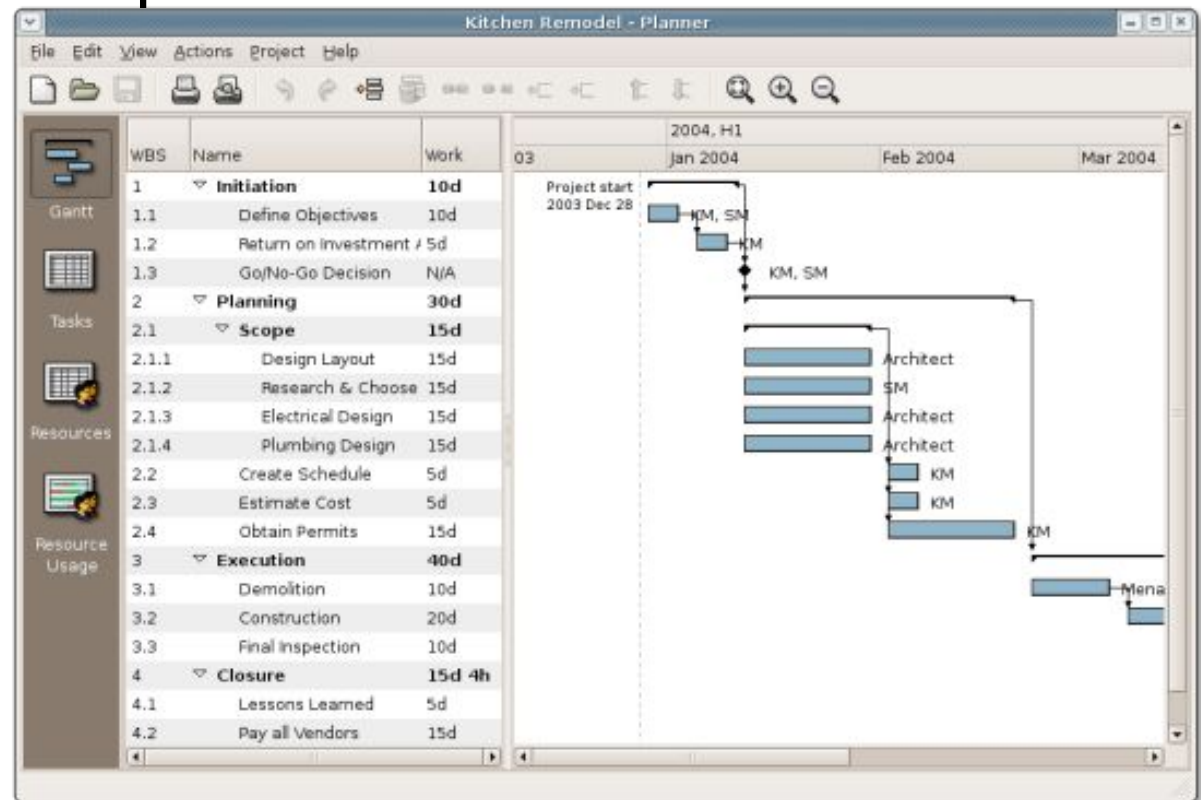
Primavera

- Differentiated products, dedicated to specific industries
- Best software for 2004
- Somewhat better known in Bulgaria



Planner (GPL)

- Some key features
 - Definition of tasks and subtasks, resources and resource groups
 - Display of the critical path
 - Customizable calendars
 - Gantt chart and resource usage overview
 - HTML export of project plans
 - Translated to nearly 20 languages



Hand-made Reporting

Sophie Server draft schedule for Astea*													
<i>number of people working on the task (per week)</i>													
<i>weeks</i>	Nov 3	Nov 4	Nov 5 -	Dec 2	Dec 3	Dec 4	Dec 5	Jan 1	Jan 2	Jan 3	Jan 4	Jan 5	Feb 1
**Technical Specification	7	7	3										
Website Interface (only)			4	3									
web books listing				4	3								
web download					2	2							
web upload					2	2							
web search						2		1					
client connection						1		3	3				
client books listing								3	2	2			
client download									2	3	3		
client upload										2	2	3	
client search											2	3	3
*Does not include work on OKI. Will be adapted after understanding on the OKI task is achieved													
**Techical specification (after having the SophieSpec): Includes design detailization, selection of technologies, diagrams, discussions with Impara, learning, etc.													