The As-Built Schedule

The As-Built Schedule
It's the Project Management Office
Secret Weapon for
Improving Effectiveness

Introduction

- Founder of HMS Software; publishers of TimeControl and TimeControl Industrial, a project-based timesheet system
- Over 30 years experience in project and timesheet systems
- Partner with Primavera since 1997
- Author of the EPMGuidance.com blog

Introduction

- Teaches Advanced Project Management at McGill University
- Writing has appeared in:
  - Fortune Magazine
  - American Management Association's Project Management handbook
  - PMI's PMNetwork
  - Microsoft's TechNet
  - Computing Canada, and PM Times magazines.

Introduction

1984 HMS Software founded. First project: automating the project office at Philips Information Systems and creating a project timesheet

1994 HMS releases TimeControl 1.0

1995 TimeControl published with links to Microsoft Project

1997 HMS becomes a Primavera Technology Alliance Partner

1997 HMS releases TimeControl 3.0 as a client/server product

1999 HMS releases first web timesheet interface for TimeControl

2001 HMS releases TimeControl 4.0, a full web-based version

2005 HMS becomes a Microsoft Gold Certified Partner

2007 HMS releases TimeControl Industrial 4.7

2010 HMS becomes Oracle Gold Partner

2010 HMS releases TimeControl 6.0

2011 HMS releases TimeControl Mobile

2012 HMS releases TimeControlOnline – Hosted TimeControl in the Cloud

What is an As-Built Schedule?

As Built

- What is an As-Built Schedule?
- Don’t we have it already?
- Who cares about the past?
- What can we learn about

What is an As-Built schedule?

- A schedule which shows how a project actually occurred.

- It includes:
  - The tasks that were actually accomplished and when
  - As a result the actual sequence of the work accomplished
  - Who actually worked on the task
  - Whether the task was completed contiguously or was actually started and stopped more than once
  - The amount of effort the task actually required

Don’t I have this already?

- If you are updating your progress, don’t you have all the information for an As-Built schedule immediately?
- Maybe…
  - If you are doing formal plans and tracking day-by-day with timesheet results
  - If you do baseline vs actual tracking
- Maybe not…
  - If you do a scheduled plan but don’t follow it
  - If you do a plan but just update with Percent Complete
  - If you don’t do formal plans

Who cares about the past?

- Not everyone

  …and that is a missed opportunity

"Those who cannot remember the past are condemned to repeat it"

George Santayana (1905)
Reason in Common Sense, p. 284, volume 1 of: *The Life of Reason*

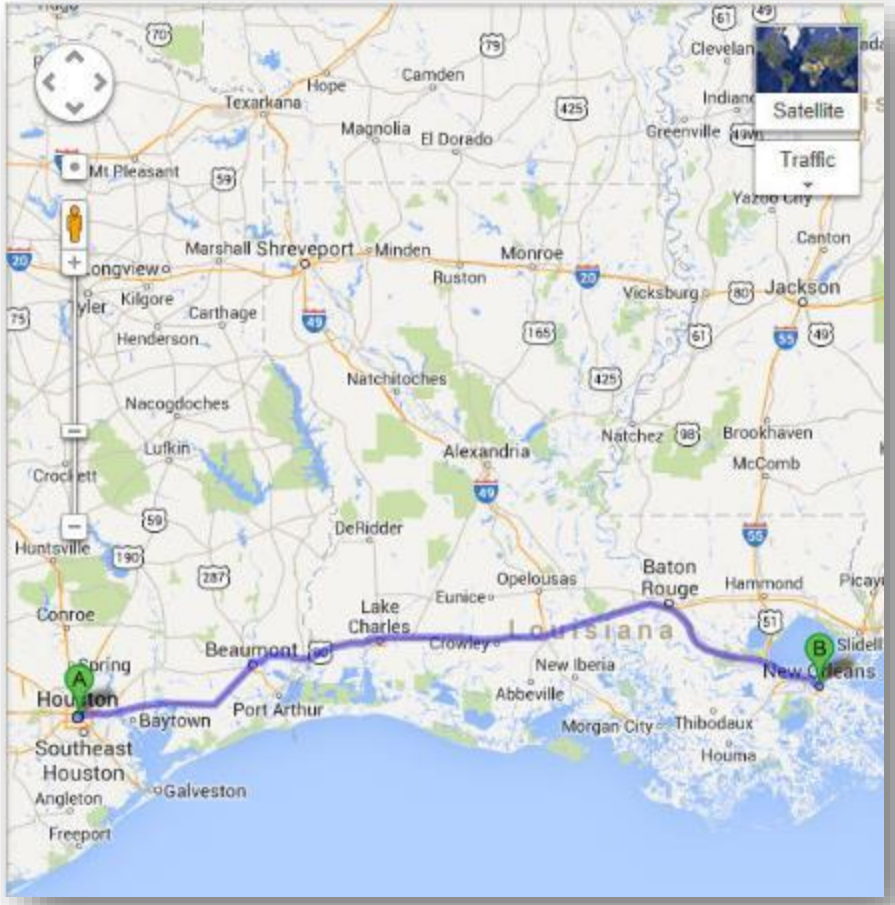
Can’t I get this automatically?

- Sure..
- ***IF*** you do a schedule, baseline it and then update the schedule on a day-to-day basis from a timesheet system.
- The challenge comes for many when there is strong planning but not tracking.
- If you don’t have this kind of structured project tracking so far, do you have to wait until you’ve implemented it to get any As-Built benefits?

Benefits of the As-Built Schedule

If we don't know where we are, how do we get where we're going?

- Directions require <u>both</u> a point of origin and a destination

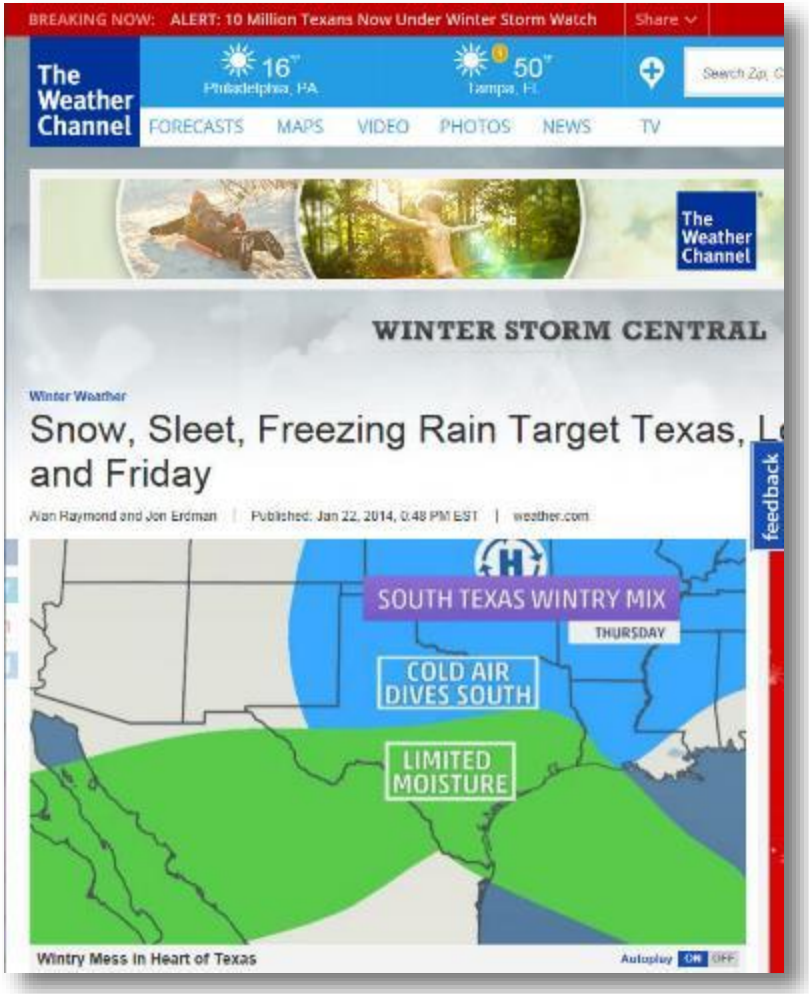


Even if you are on the right path, if you sit down, you could get run over

As you set your plans, be ready to adjust to changing conditions…

(Take it from someone who lives where the Polar Vortex comes from!)

- Economic
- Competitive
- Environmental
- Personnel



Benefits of the As-Built schedule

- For organizations who have a meticulous and formal project tracking environment, they can compare their actuals to their baselines
- For those:
  - whose projects were not tracked as carefully as they were planned;
  - who had projects which were executed without formal plans at all;
  - Who have data in non-planning sources such as a timesheet;
  - …an As-Built schedule can give insight into what actually happens in your organization or on a particular project

Benefits of the As-Built schedule

- Find out how many hours of effort tasks actually took
  - We might find that some tasks took significantly more or less effort than was expected
- Find out who actually did the work. Was it the right resource?
  - We might find that some tasks were completed by a mis-match of resources.
  - Sometimes someone too skilled did the work and that was wasteful.
  - Sometimes someone not skilled enough did the work and that was ineffective.
  - This can be particularly revealing if we are using roles or summary resources in tracking but not looking at individual's progress

Benefits of the As-Built schedule

- Find out how much time a task took
  - Aside from the effort, what was the calendar duration of the work on tasks?
  - Did they take longer than expected because there were gaps or pauses in the work?
  - Did they take longer than expected because the resources were not fully available?
  - Did they take more or less time than expected because they were not estimated efficiently?
  - Did they take less time than expected because more highly skilled resources than expected actually did the work?
- Find out who wasn't working
  - We might discover that there is enormous non-project work that affects resource availability

Benefits of the As-Built schedule

- If there is contention for invoicing following a project or even litigation, creating the As-Built schedule can be a powerful tool to show what actually happened
- If there were extraneous factors such as weather, environment or almost anything else, narratives in the timesheet data can be used to highlight the As-Built schedule

How to create an As-Built Schedule

Ok, we're convinced. We want an As-Built schedule. Where do we start?

- Fortunately, Oracle-Primavera's P6 has import capabilities which allows us to import from almost any source.
- One of the most flexible import formats is Excel
- We'll need to create an Excel spreadsheet file in the precise format P6 requires in order to populate our project

Ok, we're convinced. We want an As-Built schedule. Where do we find it?

- Building blocks for the As-Built schedule can come from Finance, the PMO or even journals but one of the best places to find the raw data is a task-based timesheet system.
- Here's what we'll need:
  - A list of tasks
  - A list of the employees who put time on those tasks
  - The dates the work was done
  - How much work was on each date

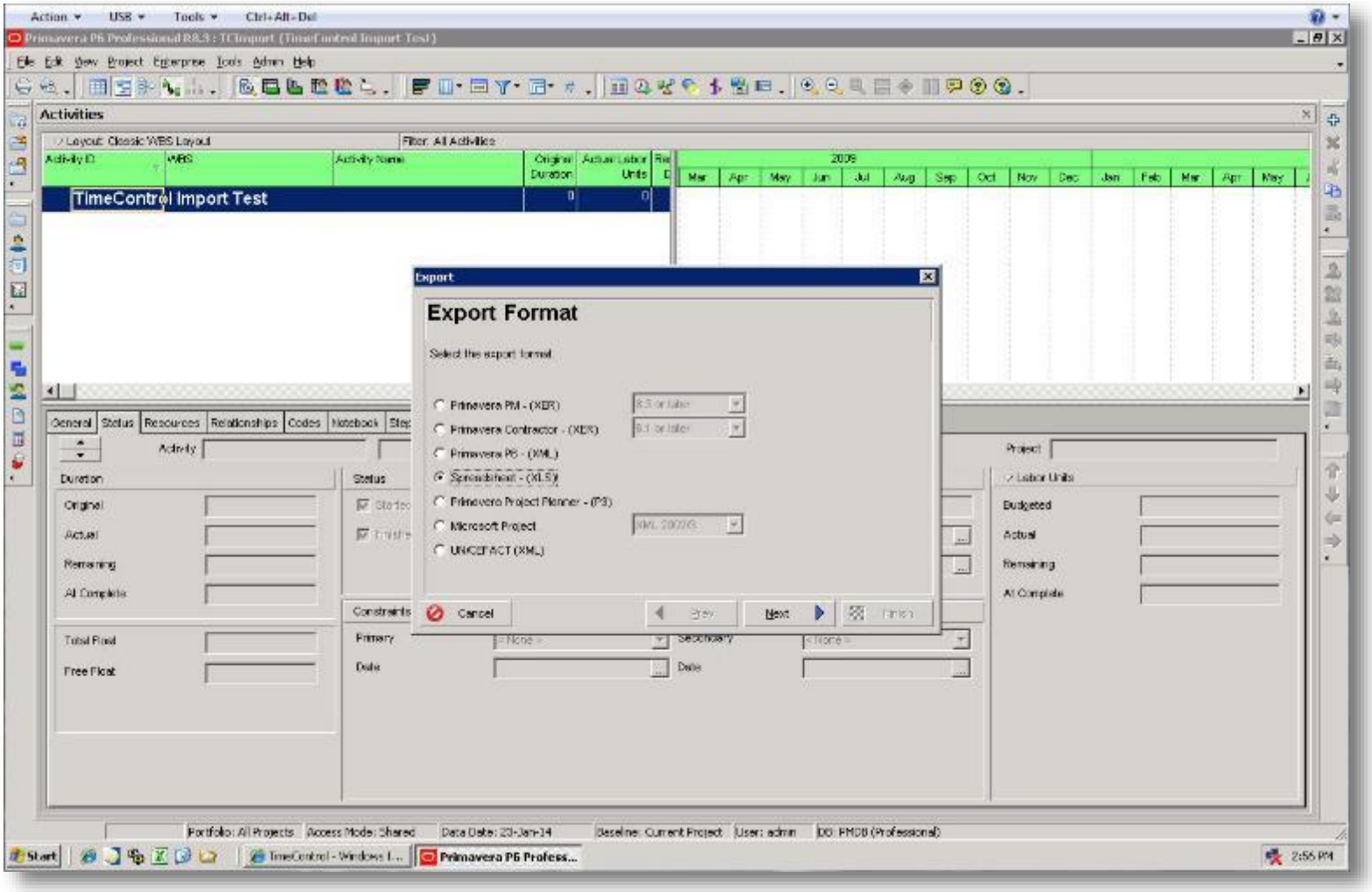
What can be imported from Excel?

Subject Area	Sheet Name
Activities	TASK
Activity Relationships	TASKPRED
Expenses	PROJCOST
Resources	RSRC
Resource Assignments	TASKRSRC

The Excel Workbook format comes from P6

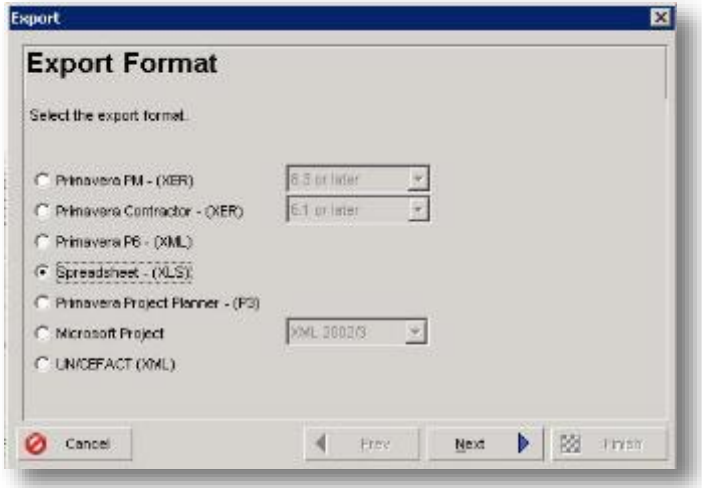
- The easiest way to make sure we get the exact format we need for our import is to start with an export from P6
- All the column names, worksheet names and formats will be perfectly aligned

The P6 Export Menu File/Export



The P6 Export Menu process

1



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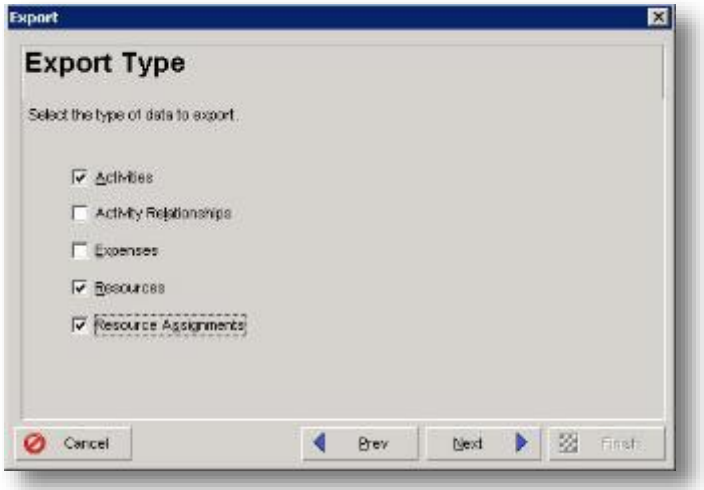

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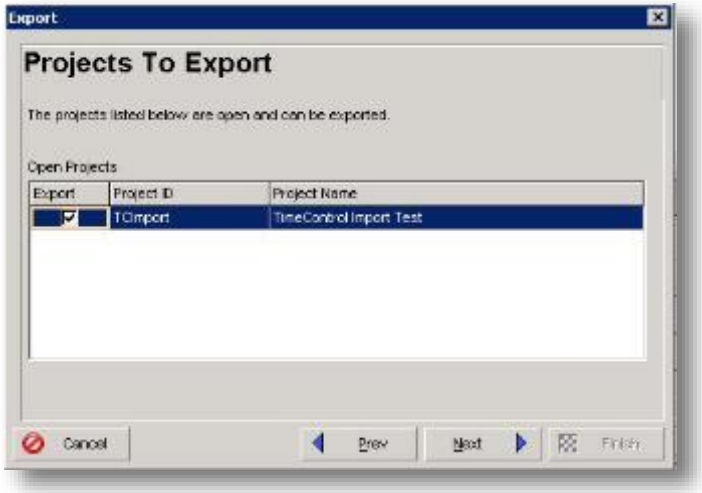

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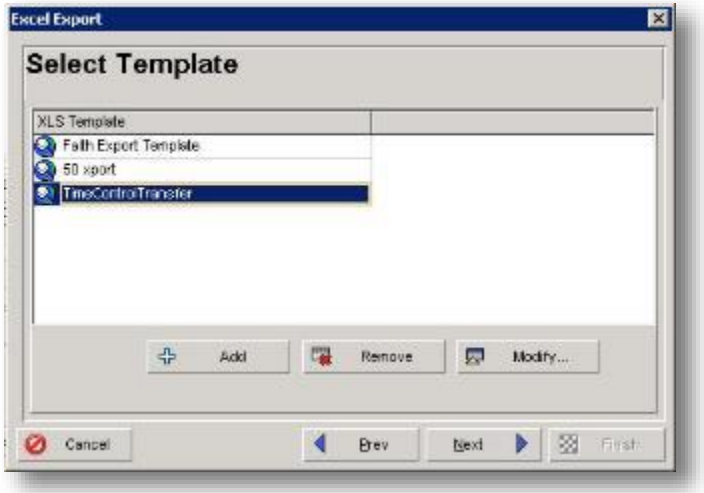
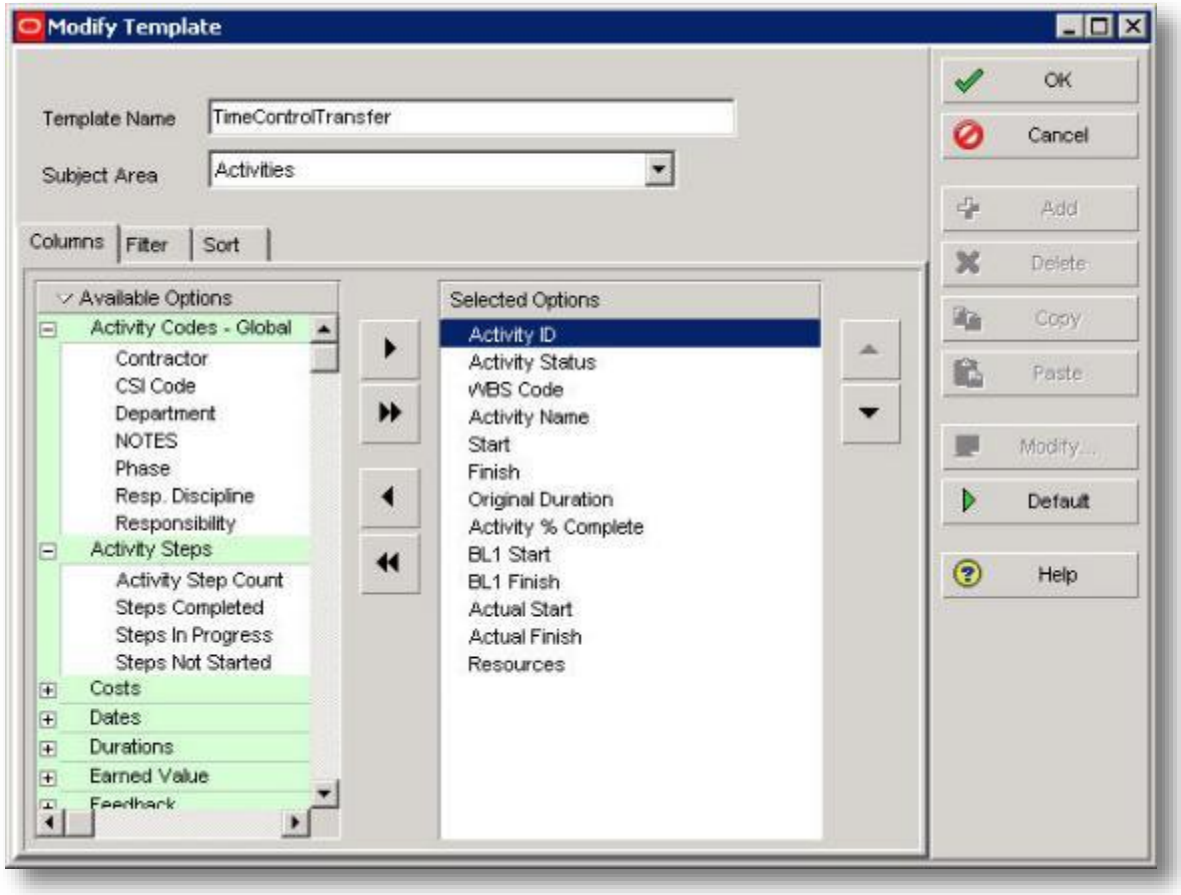
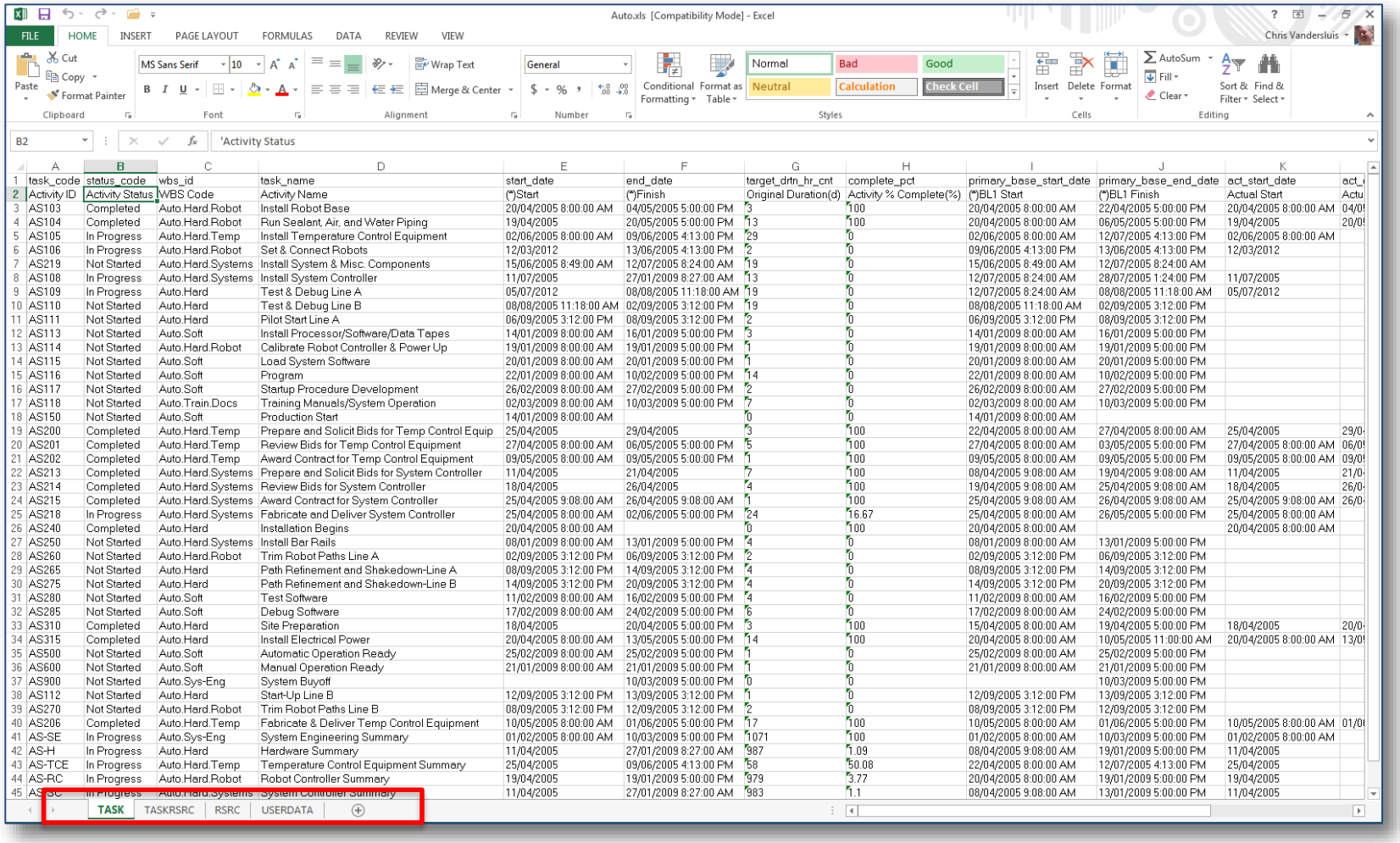


The P6 Export Menu – modify template

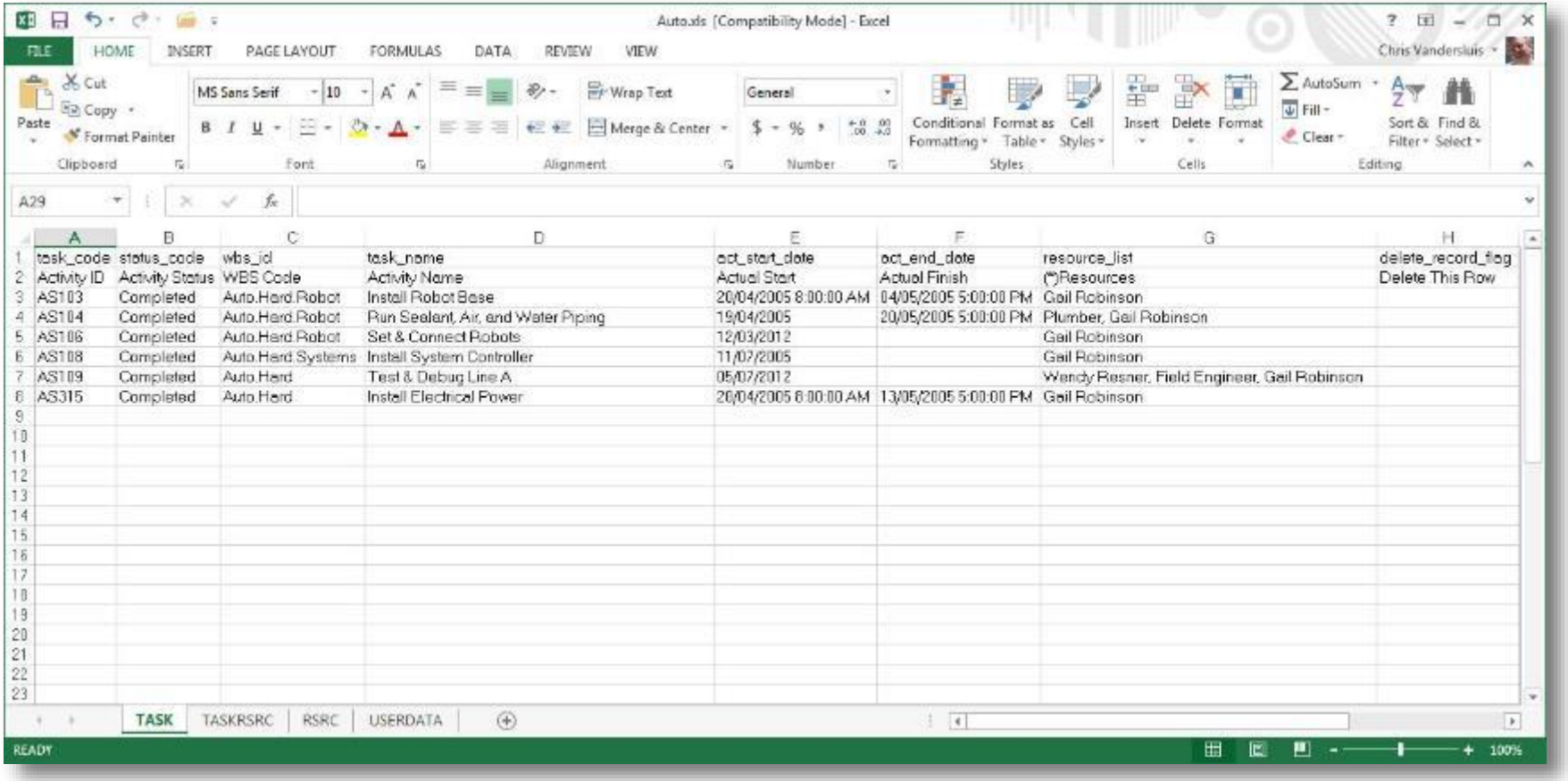


The Excel Workbook format comes from P6



	A	B	C	D	E	F	G	H	I	J	K
1	task_code	status_code	wbs_id	task_name	start_date	end_date	target_drtn_hr_cnt	complete_pct	primary_base_start_date	primary_base_end_date	act_start_date
2	Activity ID	Activity Status	WBS Code	Activity Name	(*)Start	(*)Finish	Original Duration(d)	Activity % Complete(%)	(*)BL1 Start	(*)BL1 Finish	Actual Start
3	AS103	Completed	Auto.Hard.Robot	Install Robot Base	20/04/2005 8:00:00 AM	04/05/2005 5:00:00 PM	3	100	20/04/2005 8:00:00 AM	22/04/2005 5:00:00 PM	20/04/2005 8:00:00 AM
4	AS104	Completed	Auto.Hard.Robot	Run Sealant, Air, and Water Piping	19/04/2005	20/05/2005 5:00:00 PM	13	100	20/04/2005 8:00:00 AM	06/05/2005 5:00:00 PM	19/04/2005
5	AS105	In Progress	Auto.Hard.Temp	Install Temperature Control Equipment	02/06/2005 8:00:00 AM	09/06/2005 4:13:00 PM	29	0	02/06/2005 8:00:00 AM	12/07/2005 4:13:00 PM	02/06/2005 8:00:00 AM
6	AS106	In Progress	Auto.Hard.Robot	Set & Connect Robots	12/03/2012	13/06/2005 4:13:00 PM	2	0	09/06/2005 4:13:00 PM	13/06/2005 4:13:00 PM	12/03/2012
7	AS219	Not Started	Auto.Hard.Systems	Install System & Misc. Components	15/06/2005 8:49:00 AM	12/07/2005 8:24:00 AM	19	0	15/06/2005 8:49:00 AM	12/07/2005 8:24:00 AM	
8	AS108	In Progress	Auto.Hard.Systems	Install System Controller	11/07/2005	27/01/2009 8:27:00 AM	13	0	12/07/2005 8:24:00 AM	28/07/2005 1:24:00 PM	11/07/2005
9	AS109	In Progress	Auto.Hard	Test & Debug Line A	05/07/2012	08/08/2005 11:18:00 AM	19	0	12/07/2005 8:24:00 AM	08/08/2005 11:18:00 AM	05/07/2012
10	AS110	Not Started	Auto.Hard	Test & Debug Line B	08/08/2005 11:18:00 AM	02/09/2005 3:12:00 PM	19	0	08/08/2005 11:18:00 AM	02/09/2005 3:12:00 PM	
11	AS111	Not Started	Auto.Hard	Pilot Start Line A	06/09/2005 3:12:00 PM	08/09/2005 3:12:00 PM	2	0	06/09/2005 3:12:00 PM	08/09/2005 3:12:00 PM	
12	AS113	Not Started	Auto.Soft	Install Processor/Software/Data Tapes	14/01/2009 8:00:00 AM	16/01/2009 5:00:00 PM	3	0	14/01/2009 8:00:00 AM	16/01/2009 5:00:00 PM	
13	AS114	Not Started	Auto.Hard.Robot	Calibrate Robot Controller & Power Up	19/01/2009 8:00:00 AM	19/01/2009 5:00:00 PM	1	0	19/01/2009 8:00:00 AM	19/01/2009 5:00:00 PM	
14	AS115	Not Started	Auto.Soft	Load System Software	20/01/2009 8:00:00 AM	20/01/2009 5:00:00 PM	1	0	20/01/2009 8:00:00 AM	20/01/2009 5:00:00 PM	
15	AS116	Not Started	Auto.Soft	Program	22/01/2009 8:00:00 AM	10/02/2009 5:00:00 PM	14	0	22/01/2009 8:00:00 AM	10/02/2009 5:00:00 PM	
16	AS117	Not Started	Auto.Soft	Startup Procedure Development	26/02/2009 8:00:00 AM	27/02/2009 5:00:00 PM	2	0	26/02/2009 8:00:00 AM	27/02/2009 5:00:00 PM	
17	AS118	Not Started	Auto.Train.Docs	Training Manuals/System Operation	02/03/2009 8:00:00 AM	10/03/2009 5:00:00 PM	7	0	02/03/2009 8:00:00 AM	10/03/2009 5:00:00 PM	
18	AS150	Not Started	Auto.Soft	Production Start	14/01/2009 8:00:00 AM		0	0	14/01/2009 8:00:00 AM		
19	AS200	Completed	Auto.Hard.Temp	Prepare and Solicit Bids for Temp Control Equip	25/04/2005	29/04/2005	3	100	22/04/2005 8:00:00 AM	27/04/2005 8:00:00 AM	25/04/2005
20	AS201	Completed	Auto.Hard.Temp	Review Bids for Temp Control Equipment	27/04/2005 8:00:00 AM	06/05/2005 5:00:00 PM	5	100	27/04/2005 8:00:00 AM	03/05/2005 5:00:00 PM	27/04/2005 8:00:00 AM
21	AS202	Completed	Auto.Hard.Temp	Award Contract for Temp Control Equipment	09/05/2005 8:00:00 AM	09/05/2005 5:00:00 PM	1	100	09/05/2005 8:00:00 AM	09/05/2005 5:00:00 PM	09/05/2005 8:00:00 AM
22	AS213	Completed	Auto.Hard.Systems	Prepare and Solicit Bids for System Controller	11/04/2005	21/04/2005	7	100	08/04/2005 9:08:00 AM	19/04/2005 9:08:00 AM	11/04/2005
23	AS214	Completed	Auto.Hard.Systems	Review Bids for System Controller	18/04/2005	26/04/2005	4	100	19/04/2005 9:08:00 AM	25/04/2005 9:08:00 AM	18/04/2005
24	AS215	Completed	Auto.Hard.Systems	Award Contract for System Controller	25/04/2005 9:08:00 AM	26/04/2005 9:08:00 AM	1	100	25/04/2005 9:08:00 AM	26/04/2005 9:08:00 AM	25/04/2005 9:08:00 AM
25	AS218	In Progress	Auto.Hard.Systems	Fabricate and Deliver System Controller	25/04/2005 8:00:00 AM	02/06/2005 5:00:00 PM	24	16.67	25/04/2005 8:00:00 AM	26/05/2005 5:00:00 PM	25/04/2005 8:00:00 AM
26	AS240	Completed	Auto.Hard	Installation Begins	20/04/2005 8:00:00 AM		0	100	20/04/2005 8:00:00 AM		20/04/2005 8:00:00 AM
27	AS250	Not Started	Auto.Hard.Systems	Install Bar Rails	08/01/2009 8:00:00 AM	13/01/2009 5:00:00 PM	4	0	08/01/2009 8:00:00 AM	13/01/2009 5:00:00 PM	
28	AS260	Not Started	Auto.Hard.Robot	Trim Robot Paths Line A	02/09/2005 3:12:00 PM	06/09/2005 3:12:00 PM	2	0	02/09/2005 3:12:00 PM	06/09/2005 3:12:00 PM	
29	AS265	Not Started	Auto.Hard	Path Refinement and Shakedown-Line A	08/09/2005 3:12:00 PM	14/09/2005 3:12:00 PM	4	0	08/09/2005 3:12:00 PM	14/09/2005 3:12:00 PM	
30	AS275	Not Started	Auto.Hard	Path Refinement and Shakedown-Line B	14/09/2005 3:12:00 PM	20/09/2005 3:12:00 PM	4	0	14/09/2005 3:12:00 PM	20/09/2005 3:12:00 PM	
31	AS280	Not Started	Auto.Soft	Test Software	11/02/2009 8:00:00 AM	16/02/2009 5:00:00 PM	4	0	11/02/2009 8:00:00 AM	16/02/2009 5:00:00 PM	
32	AS285	Not Started	Auto.Soft	Debug Software	17/02/2009 8:00:00 AM	24/02/2009 5:00:00 PM	6	0	17/02/2009 8:00:00 AM	24/02/2009 5:00:00 PM	
33	AS310	Completed	Auto.Hard	Site Preparation	18/04/2005	20/04/2005 5:00:00 PM	3	100	15/04/2005 8:00:00 AM	19/04/2005 5:00:00 PM	18/04/2005
34	AS315	Completed	Auto.Hard	Install Electrical Power	20/04/2005 8:00:00 AM	13/05/2005 5:00:00 PM	14	100	20/04/2005 8:00:00 AM	10/05/2005 11:00:00 AM	20/04/2005 8:00:00 AM
35	AS500	Not Started	Auto.Soft	Automatic Operation Ready	25/02/2009 8:00:00 AM	25/02/2009 5:00:00 PM	1	0	25/02/2009 8:00:00 AM	25/02/2009 5:00:00 PM	
36	AS600	Not Started	Auto.Soft	Manual Operation Ready	21/01/2009 8:00:00 AM	21/01/2009 5:00:00 PM	1	0	21/01/2009 8:00:00 AM	21/01/2009 5:00:00 PM	
37	AS900	Not Started	Auto.Sys-Eng	System Buyoff		10/03/2009 5:00:00 PM	0	0		10/03/2009 5:00:00 PM	
38	AS112	Not Started	Auto.Hard	Start-Up Line B	12/09/2005 3:12:00 PM	13/09/2005 3:12:00 PM	1	0	12/09/2005 3:12:00 PM	13/09/2005 3:12:00 PM	
39	AS270	Not Started	Auto.Hard.Robot	Trim Robot Paths Line B	08/09/2005 3:12:00 PM	12/09/2005 3:12:00 PM	2	0	08/09/2005 3:12:00 PM	12/09/2005 3:12:00 PM	
40	AS206	Completed	Auto.Hard.Temp	Fabricate & Deliver Temp Control Equipment	10/05/2005 8:00:00 AM	01/06/2005 5:00:00 PM	17	100	10/05/2005 8:00:00 AM	01/06/2005 5:00:00 PM	10/05/2005 8:00:00 AM
41	AS-SE	In Progress	Auto.Sys-Eng	System Engineering Summary	01/02/2005 8:00:00 AM	10/03/2009 5:00:00 PM	1071	100	01/02/2005 8:00:00 AM	10/03/2009 5:00:00 PM	01/02/2005 8:00:00 AM
42	AS-H	In Progress	Auto.Hard	Hardware Summary	11/04/2005	27/01/2009 8:27:00 AM	987	1.09	08/04/2005 9:08:00 AM	19/01/2009 5:00:00 PM	11/04/2005
43	AS-TCE	In Progress	Auto.Hard.Temp	Temperature Control Equipment Summary	25/04/2005	09/06/2005 4:13:00 PM	58	50.08	22/04/2005 8:00:00 AM	12/07/2005 4:13:00 PM	25/04/2005
44	AS-RC	In Progress	Auto.Hard.Robot	Robot Controller Summary	19/04/2005	19/01/2009 5:00:00 PM	979	3.77	20/04/2005 8:00:00 AM	19/01/2009 5:00:00 PM	19/04/2005
45	AS-SC	In Progress	Auto.Hard.Systems	System Controller Summary	11/04/2005	27/01/2009 8:27:00 AM	983	1.1	08/04/2005 9:08:00 AM	13/01/2009 5:00:00 PM	11/04/2005

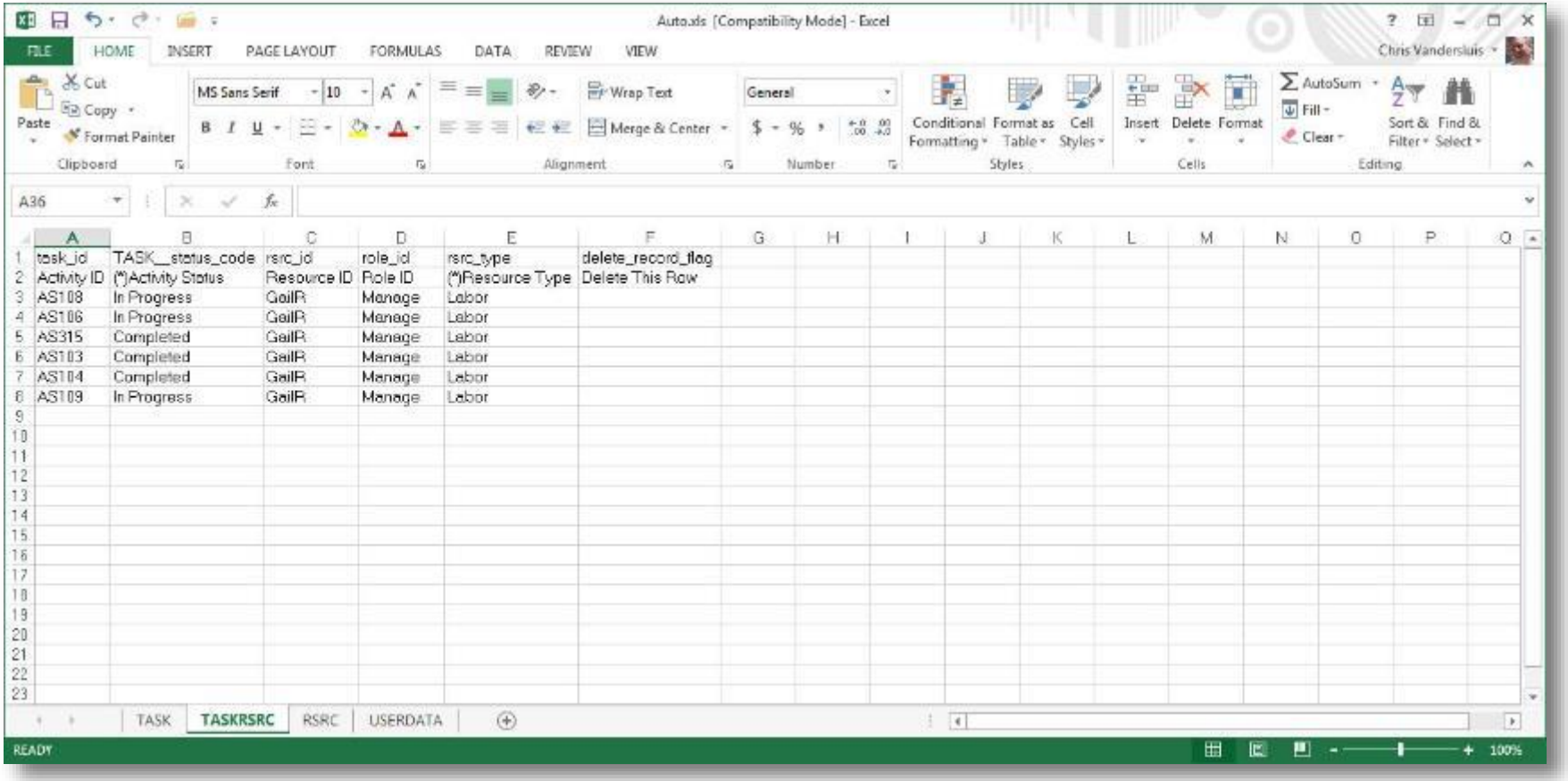
The Excel Workbook format comes from P6



Auto.xls [Compatibility Mode] - Excel

	A	B	C	D	E	F	G	H
1	task_code	status_code	wbs_id	task_name	act_start_date	act_end_date	resource_list	delete_record_flag
2	Activity ID	Activity Status	WBS Code	Activity Name	Actual Start	Actual Finish	(*)Resources	Delete This Row
3	AS103	Completed	Auto.Hard.Robot	Install Robot Base	20/04/2005 8:00:00 AM	04/05/2005 5:00:00 PM	Gail Robinson	
4	AS104	Completed	Auto.Hard.Robot	Run Sealant, Air, and Water Piping	19/04/2005	20/05/2005 5:00:00 PM	Plumber, Gail Robinson	
5	AS106	Completed	Auto.Hard.Robot	Set & Connect Robots	12/03/2012		Gail Robinson	
6	AS108	Completed	Auto.Hard.Systems	Install System Controller	11/07/2005		Gail Robinson	
7	AS109	Completed	Auto.Hard	Test & Debug Line A	05/07/2012		Wendy Resner, Field Engineer, Gail Robinson	
8	AS315	Completed	Auto.Hard	Install Electrical Power	20/04/2005 8:00:00 AM	13/05/2005 5:00:00 PM	Gail Robinson	

The Excel Workbook format comes from P6



	A	B	C	D	E	F
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4	AS106	In Progress	GailR	Manage	Labor	
5	AS315	Completed	GailR	Manage	Labor	
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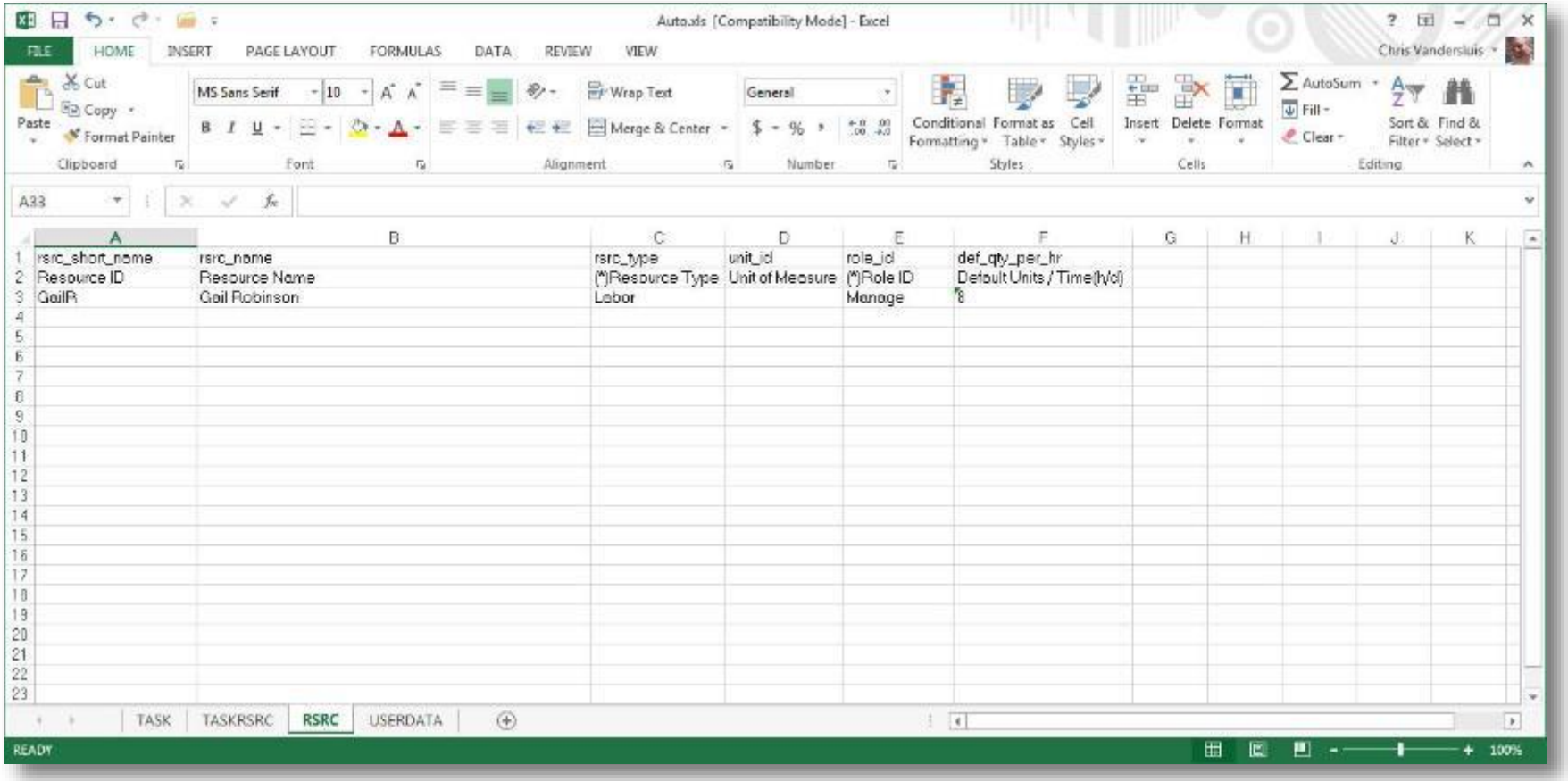
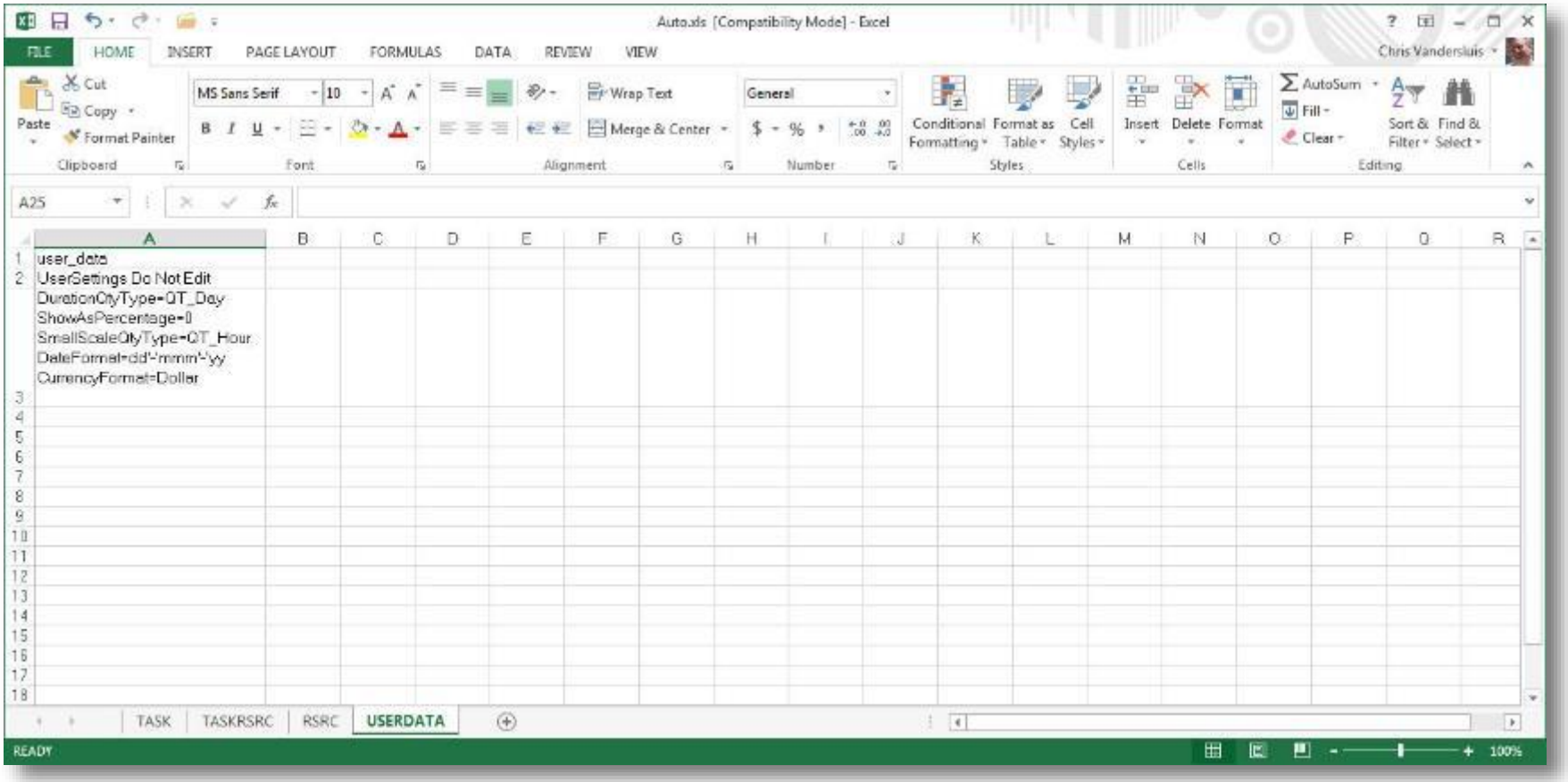
8	AS109	In Progress	GailR	Manage	Labor	

The Excel Workbook format comes from P6



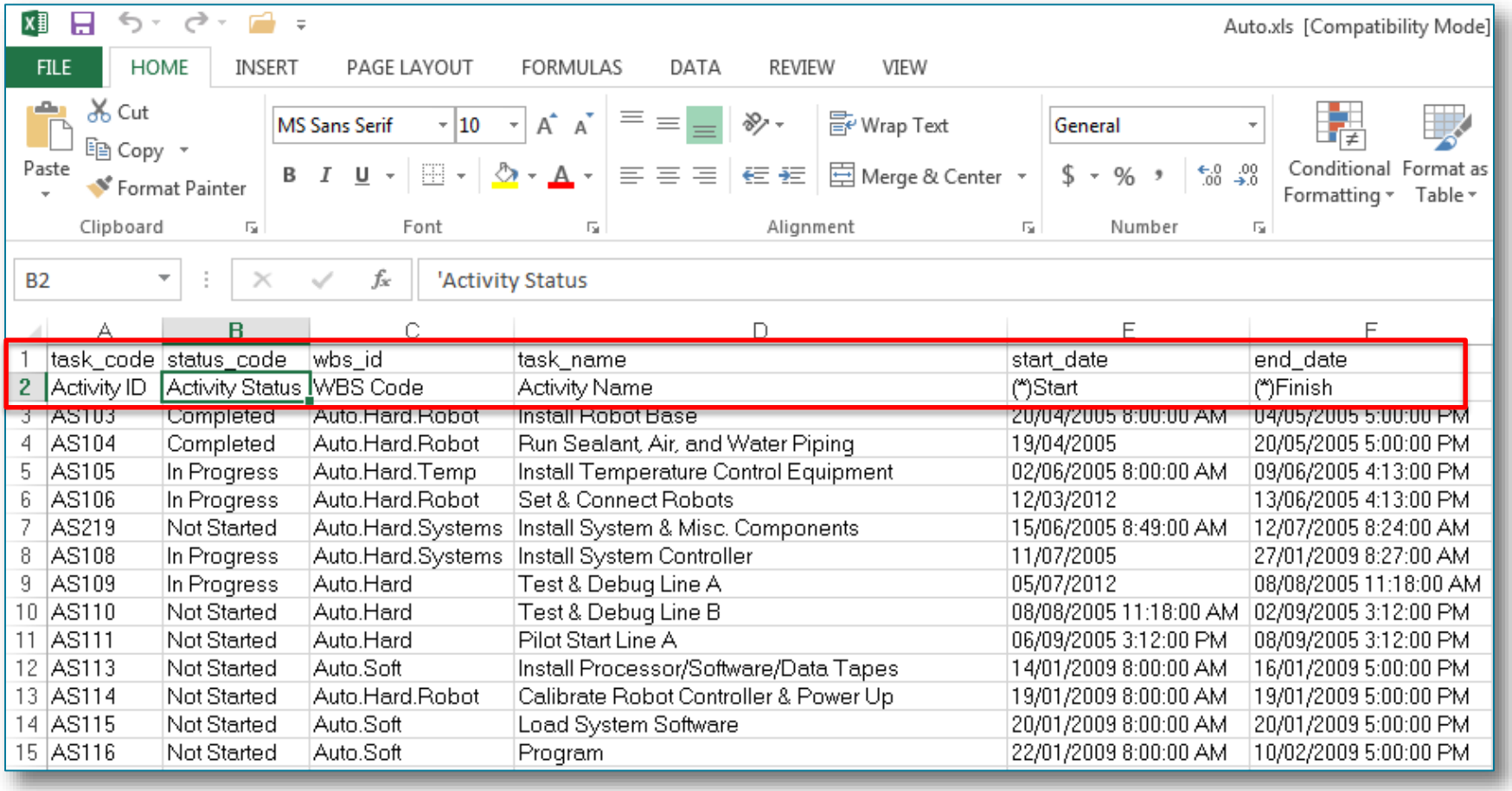
The Excel Workbook format comes from P6



Importing timesheet data into P6

- With the list of records already defined in your design, you can now look to export from your external timesheet system into P6
- If you use Progress Reporter or already had a linked timesheet like TimeControl for doing progress of course, this might not be required
- We're using an export from the HMS system TimeControl in these examples

Get the format of your Excel from P6



	A	B	C	D	E	F
1	task_code	status_code	wbs_id	task_name	start_date	end_date
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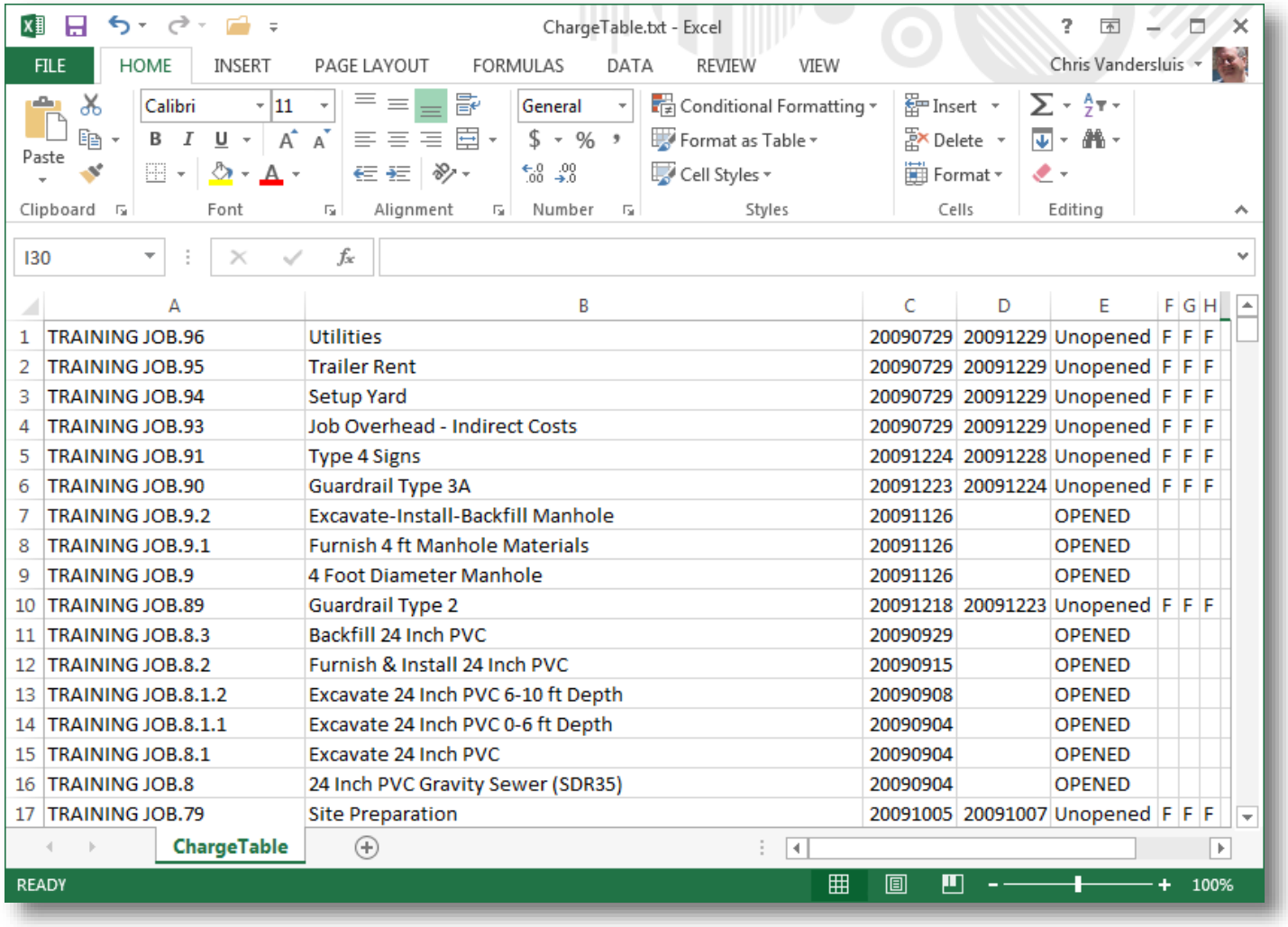
4	AS104	Completed	Auto.Hard.Robot	Run Sealant, Air, and Water Piping	19/04/2005	20/05/2005 5:00:00 PM
5	AS105	In Progress	Auto.Hard.Temp	Install Temperature Control Equipment	02/06/2005 8:00:00 AM	09/06/2005 4:13:00 PM
6	AS106	In Progress	Auto.Hard.Robot	Set & Connect Robots	12/03/2012	13/06/2005 4:13:00 PM
7	AS219	Not Started	Auto.Hard.Systems	Install System & Misc. Components	15/06/2005 8:49:00 AM	12/07/2005 8:24:00 AM
8	AS108	In Progress	Auto.Hard.Systems	Install System Controller	11/07/2005	27/01/2009 8:27:00 AM
9	AS109	In Progress	Auto.Hard	Test & Debug Line A	05/07/2012	08/08/2005 11:18:00 AM
10	AS110	Not Started	Auto.Hard	Test & Debug Line B	08/08/2005 11:18:00 AM	02/09/2005 3:12:00 PM
11	AS111	Not Started	Auto.Hard	Pilot Start Line A	06/09/2005 3:12:00 PM	08/09/2005 3:12:00 PM
12	AS113	Not Started	Auto.Soft	Install Processor/Software/Data Tapes	14/01/2009 8:00:00 AM	16/01/2009 5:00:00 PM
13	AS114	Not Started	Auto.Hard.Robot	Calibrate Robot Controller & Power Up	19/01/2009 8:00:00 AM	19/01/2009 5:00:00 PM
14	AS115	Not Started	Auto.Soft	Load System Software	20/01/2009 8:00:00 AM	20/01/2009 5:00:00 PM
15	AS116	Not Started	Auto.Soft	Program	22/01/2009 8:00:00 AM	10/02/2009 5:00:00 PM

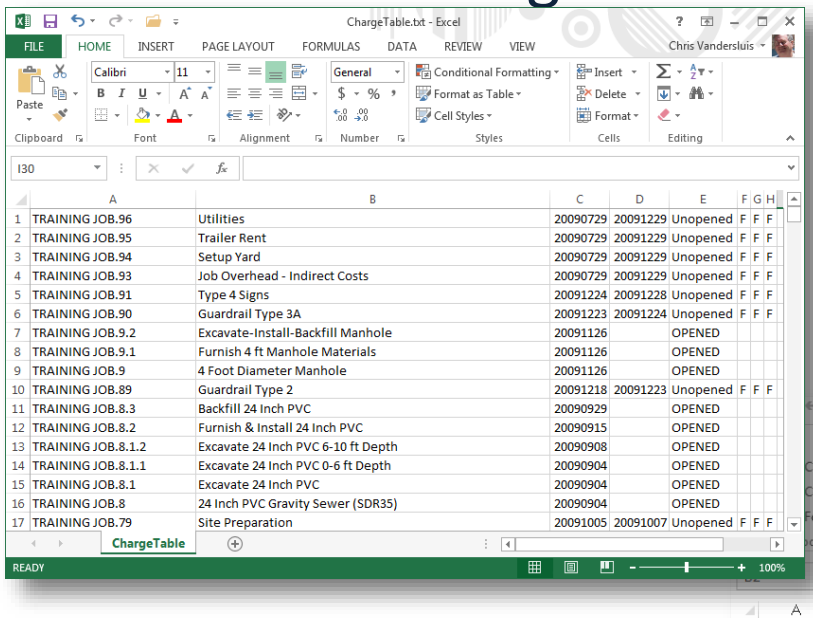
Example TimeControl Export



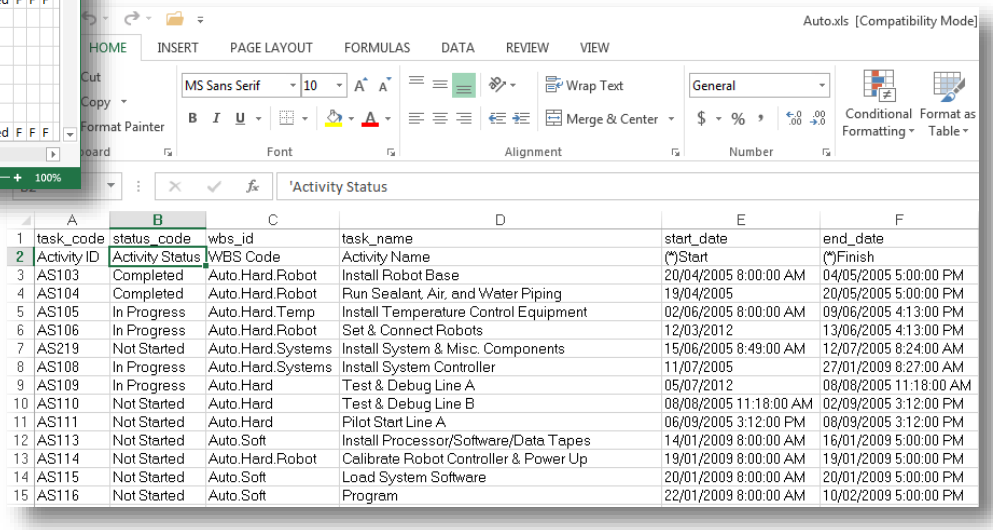
	A	B	C	D	E	F	G	H
1	TRAINING JOB.96	Utilities	20090729	20091229	Unopened	F	F	F
2	TRAINING JOB.95	Trailer Rent	20090729	20091229	Unopened	F	F	F
3	TRAINING JOB.94	Setup Yard	20090729	20091229	Unopened	F	F	F
4	TRAINING JOB.93	Job Overhead - Indirect Costs	20090729	20091229	Unopened	F	F	F
5	TRAINING JOB.91	Type 4 Signs	20091224	20091228	Unopened	F	F	F
6	TRAINING JOB.90	Guardrail Type 3A	20091223	20091224	Unopened	F	F	F
7	TRAINING JOB.9.2	Excavate-Install-Backfill Manhole	20091126		OPENED			
8	TRAINING JOB.9.1	Furnish 4 ft Manhole Materials	20091126		OPENED			
9	TRAINING JOB.9	4 Foot Diameter Manhole	20091126		OPENED			
10	TRAINING JOB.89	Guardrail Type 2	20091218	20091223	Unopened	F	F	F
11	TRAINING JOB.8.3	Backfill 24 Inch PVC	20090929		OPENED			
12	TRAINING JOB.8.2	Furnish & Install 24 Inch PVC	20090915		OPENED			
13	TRAINING JOB.8.1.2	Excavate 24 Inch PVC 6-10 ft Depth	20090908		OPENED			
14	TRAINING JOB.8.1.1	Excavate 24 Inch PVC 0-6 ft Depth	20090904		OPENED			
15	TRAINING JOB.8.1	Excavate 24 Inch PVC	20090904		OPENED			
16	TRAINING JOB.8	24 Inch PVC Gravity Sewer (SDR35)	20090904		OPENED			
17	TRAINING JOB.79	Site Preparation	20091005	20091007	Unopened	F	F	F

Transforming the data in Excel

- We need to change this…



	A	B	C	D	E	F	G	H
1	TRAINING JOB.96	Utilities	20090729	20091229	Unopened	F	F	F
2	TRAINING JOB.95	Trailer Rent	20090729	20091229	Unopened	F	F	F
3	TRAINING JOB.94	Setup Yard	20090729	20091229	Unopened	F	F	F
4	TRAINING JOB.93	Job Overhead - Indirect Costs	20090729	20091229	Unopened	F	F	F
5	TRAINING JOB.91	Type 4 Signs	20091224	20091228	Unopened	F	F	F
6	TRAINING JOB.90	Guardrail Type 3A	20091223	20091224	Unopened	F	F	F
7	TRAINING JOB.9.2	Excavate-Install-Backfill Manhole	20091126		OPENED			
8	TRAINING JOB.9.1	Furnish 4 ft Manhole Materials	20091126		OPENED			
9	TRAINING JOB.9	4 Foot Diameter Manhole	20091126		OPENED			
10	TRAINING JOB.89	Guardrail Type 2	20091218	20091223	Unopened	F	F	F
11	TRAINING JOB.8.3	Backfill 24 Inch PVC	20090929		OPENED			
12	TRAINING JOB.8.2	Furnish & Install 24 Inch PVC	20090915		OPENED			
13	TRAINING JOB.8.1.2	Excavate 24 Inch PVC 6-10 ft Depth	20090908		OPENED			
14	TRAINING JOB.8.1.1	Excavate 24 Inch PVC 0-6 ft Depth	20090904		OPENED			
15	TRAINING JOB.8.1	Excavate 24 Inch PVC	20090904		OPENED			
16	TRAINING JOB.8	24 Inch PVC Gravity Sewer (SDR35)	20090904		OPENED			
17	TRAINING JOB.79	Site Preparation	20091005	20091007	Unopened	F	F	F



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3	AS103	Completed	Auto.Hard.Robot	Install Robot Base	20/04/2005 8:00:00 AM	04/05/2005 5:00:00 PM
4	AS104	Completed	Auto.Hard.Robot	Run Sealant, Air, and Water Piping	19/04/2005	20/05/2005 5:00:00 PM
5	AS105	In Progress	Auto.Hard.Temp	Install Temperature Control Equipment	02/06/2005 8:00:00 AM	09/06/2005 4:13:00 PM
6	AS106	In Progress	Auto.Hard.Robot	Set & Connect Robots	12/03/2012	13/06/2005 4:13:00 PM
7	AS219	Not Started	Auto.Hard.Systems	Install System & Misc. Components	15/06/2005 8:49:00 AM	12/07/2005 8:24:00 AM
8	AS108	In Progress	Auto.Hard.Systems	Install System Controller	11/07/2005	27/01/2009 8:27:00 AM
9	AS109	In Progress	Auto.Hard	Test & Debug Line A	05/07/2012	08/08/2005 11:18:00 AM
10	AS110	Not Started	Auto.Hard	Test & Debug Line B	08/08/2005 11:18:00 AM	02/09/2005 3:12:00 PM
11	AS111	Not Started	Auto.Hard	Pilot Start Line A	06/09/2005 3:12:00 PM	08/09/2005 3:12:00 PM
12	AS113	Not Started	Auto.Soft	Install Processor/Software/Data Tapes	14/01/2009 8:00:00 AM	16/01/2009 5:00:00 PM
13	AS114	Not Started	Auto.Hard.Robot	Calibrate Robot Controller & Power Up	19/01/2009 8:00:00 AM	19/01/2009 5:00:00 PM
14	AS115	Not Started	Auto.Soft	Load System Software	20/01/2009 8:00:00 AM	20/01/2009 5:00:00 PM
15	AS116	Not Started	Auto.Soft	Program	22/01/2009 8:00:00 AM	10/02/2009 5:00:00 PM

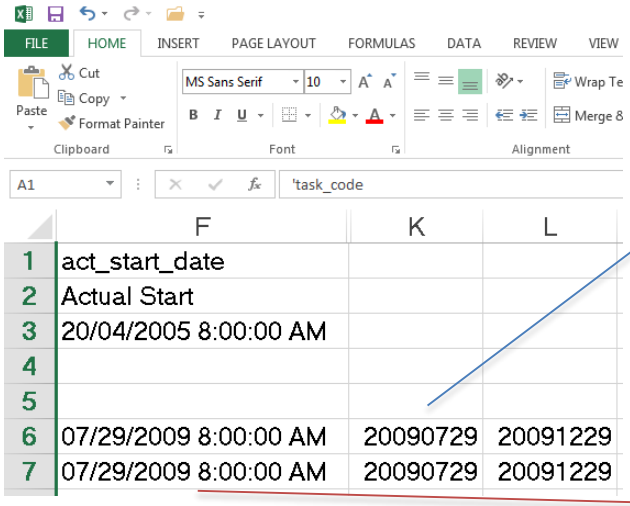
- …to this

Two great tips…

1. Create a template that reads from an unformatted Excel file

2. Transform the data that requires it into the exact format required

Excel Magic – date formats



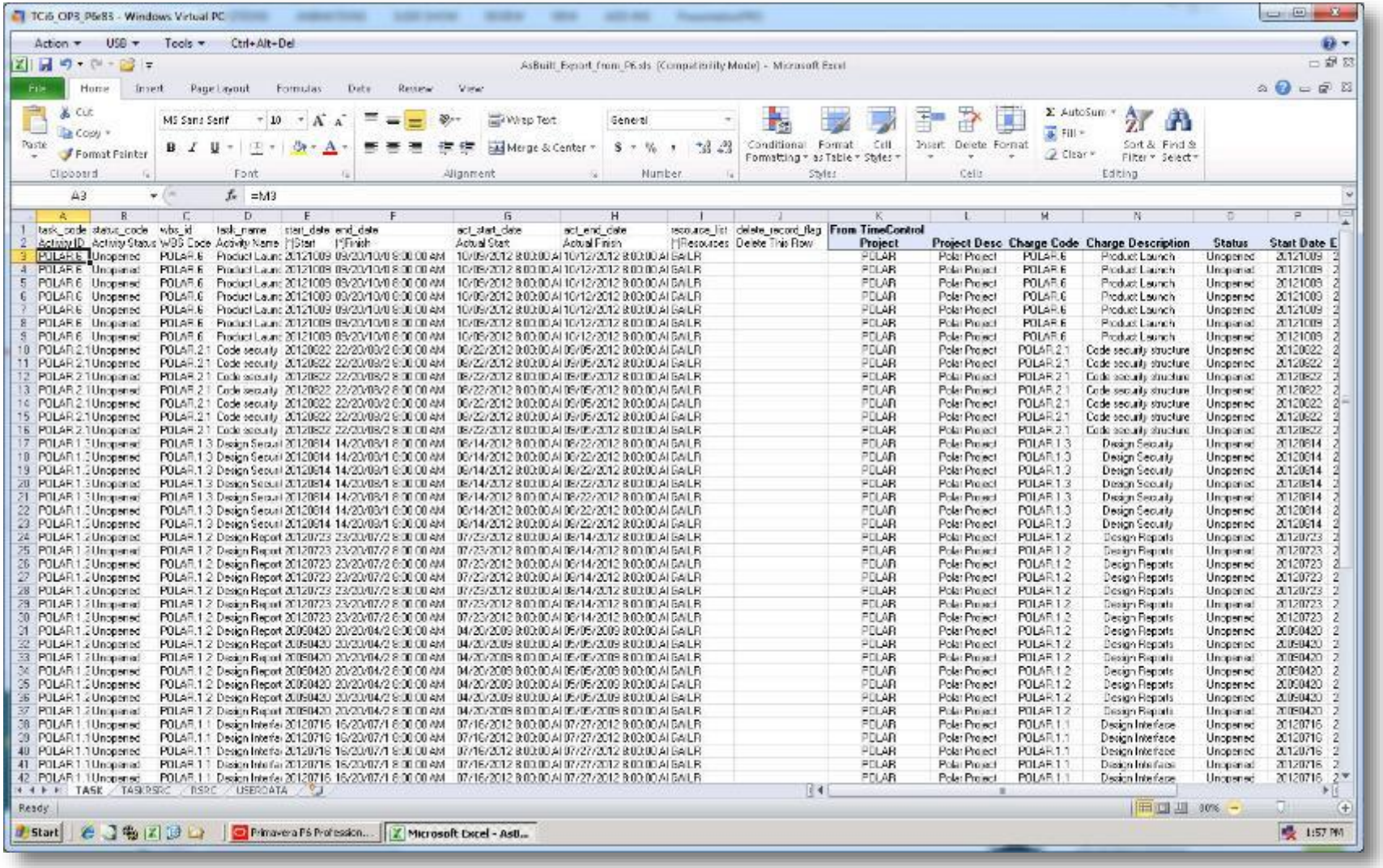
This

Must become this

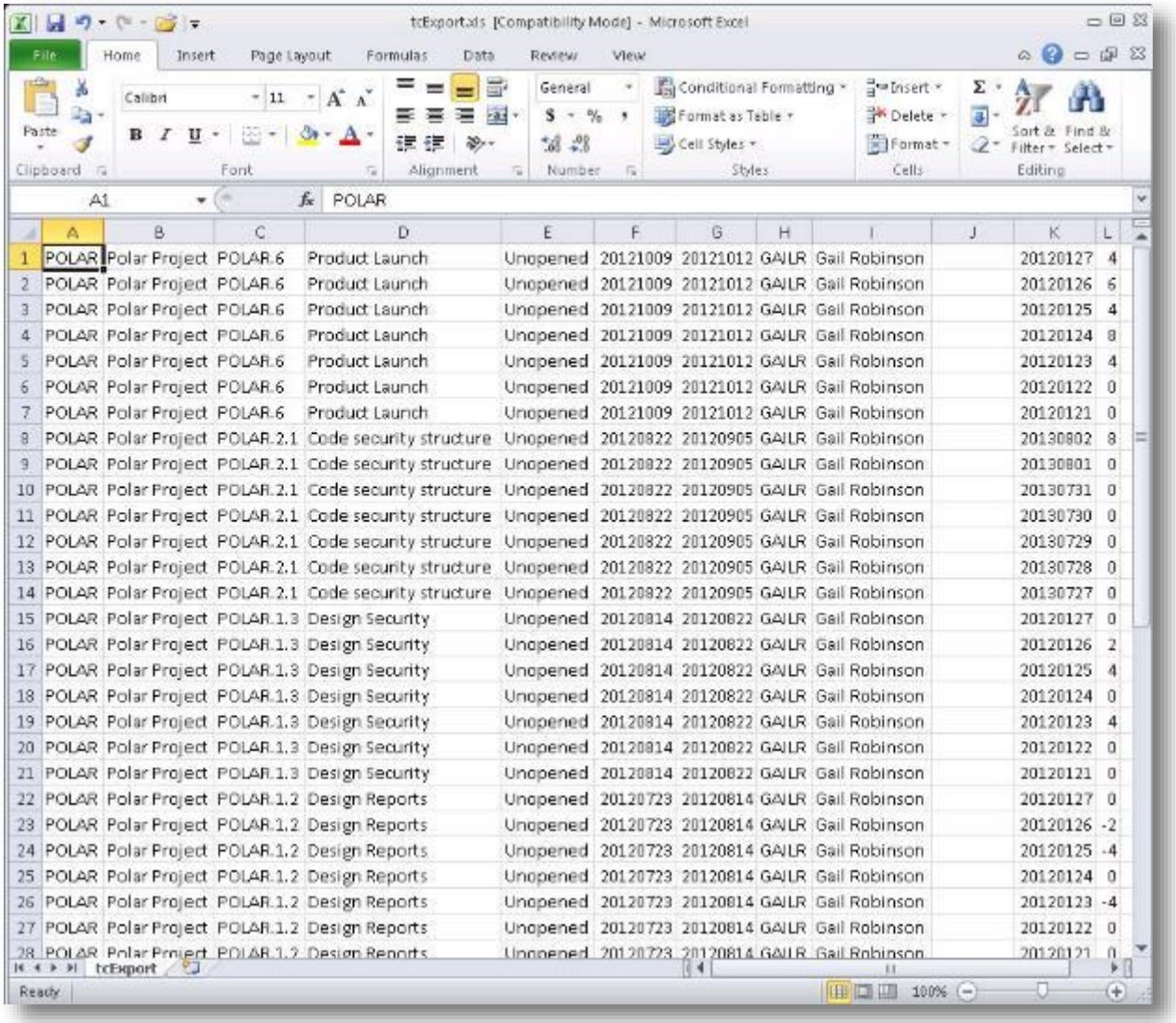
- Excel comes to the rescue:

=CONCATENATE(MID(K6,5,2),"/",MID(K6,7,2),"/",MID(K6,1,4)," ","8:00:00 AM")

Transposing from unformatted to formatted



Before



tcExport.xls [Compatibility Mode] - Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K	L
1	POLAR	Polar Project	POLAR.6	Product Launch	Unopened	20121009	20121012	GAILR	Gail Robinson		20120127	4
2	POLAR	Polar Project	POLAR.6	Product Launch	Unopened	20121009	20121012	GAILR	Gail Robinson		20120126	6
3	POLAR	Polar Project	POLAR.6	Product Launch	Unopened	20121009	20121012	GAILR	Gail Robinson		20120125	4
4	POLAR	Polar Project	POLAR.6	Product Launch	Unopened	20121009	20121012	GAILR	Gail Robinson		20120124	8
5	POLAR	Polar Project	POLAR.6	Product Launch	Unopened	20121009	20121012	GAILR	Gail Robinson		20120123	4
6	POLAR	Polar Project	POLAR.6	Product Launch	Unopened	20121009	20121012	GAILR	Gail Robinson		20120122	0
7	POLAR	Polar Project	POLAR.6	Product Launch	Unopened	20121009	20121012	GAILR	Gail Robinson		20120121	0
8	POLAR	Polar Project	POLAR.2.1	Code security structure	Unopened	20120822	20120905	GAILR	Gail Robinson		20130802	8
9	POLAR	Polar Project	POLAR.2.1	Code security structure	Unopened	20120822	20120905	GAILR	Gail Robinson		20130801	0
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11	POLAR	Polar Project	POLAR.2.1	Code security structure	Unopened	20120822	20120905	GAILR	Gail Robinson		20130730	0
12	POLAR	Polar Project	POLAR.2.1	Code security structure	Unopened	20120822	20120905	GAILR	Gail Robinson		20130729	0
13	POLAR	Polar Project	POLAR.2.1	Code security structure	Unopened	20120822	20120905	GAILR	Gail Robinson		20130728	0
14	POLAR	Polar Project	POLAR.2.1	Code security structure	Unopened	20120822	20120905	GAILR	Gail Robinson		20130727	0
15	POLAR	Polar Project	POLAR.1.3	Design Security	Unopened	20120814	20120822	GAILR	Gail Robinson		20120127	0
16	POLAR	Polar Project	POLAR.1.3	Design Security	Unopened	20120814	20120822	GAILR	Gail Robinson		20120126	2
17	POLAR	Polar Project	POLAR.1.3	Design Security	Unopened	20120814	20120822	GAILR	Gail Robinson		20120125	4
18	POLAR	Polar Project	POLAR.1.3	Design Security	Unopened	20120814	20120822	GAILR	Gail Robinson		20120124	0
19	POLAR	Polar Project	POLAR.1.3	Design Security	Unopened	20120814	20120822	GAILR	Gail Robinson		20120123	4
20	POLAR	Polar Project	POLAR.1.3	Design Security	Unopened	20120814	20120822	GAILR	Gail Robinson		20120122	0
21	POLAR	Polar Project	POLAR.1.3	Design Security	Unopened	20120814	20120822	GAILR	Gail Robinson		20120121	0
22	POLAR	Polar Project	POLAR.1.2	Design Reports	Unopened	20120723	20120814	GAILR	Gail Robinson		20120127	0
23	POLAR	Polar Project	POLAR.1.2	Design Reports	Unopened	20120723	20120814	GAILR	Gail Robinson		20120126	-2
24	POLAR	Polar Project	POLAR.1.2	Design Reports	Unopened	20120723	20120814	GAILR	Gail Robinson		20120125	-4
25	POLAR	Polar Project	POLAR.1.2	Design Reports	Unopened	20120723	20120814	GAILR	Gail Robinson		20120124	0
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27	POLAR	Polar Project	POLAR.1.2	Design Reports	Unopened	20120723	20120814	GAILR	Gail Robinson		20120122	0
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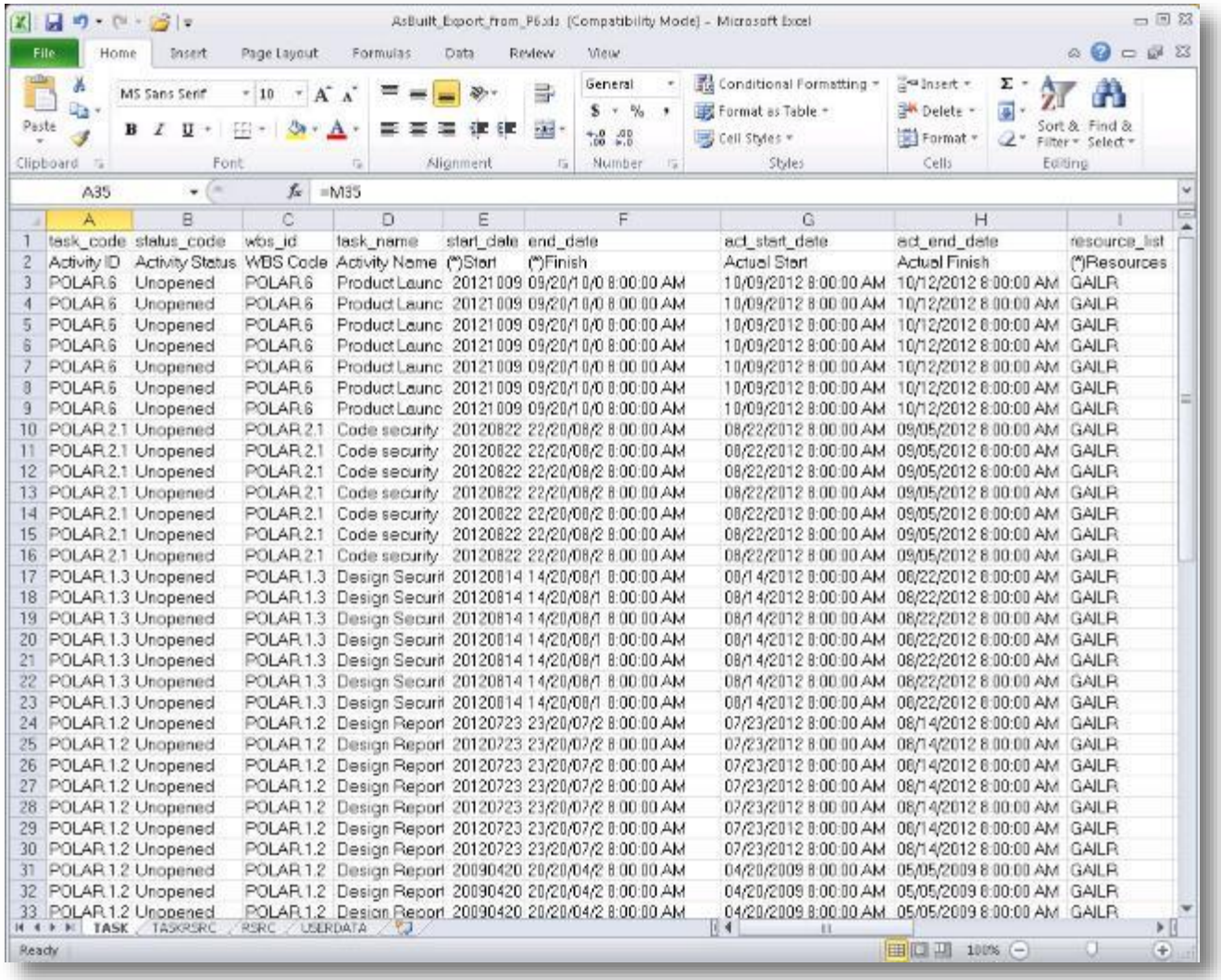
After



	A	B	C	D	E	F	G	H	I
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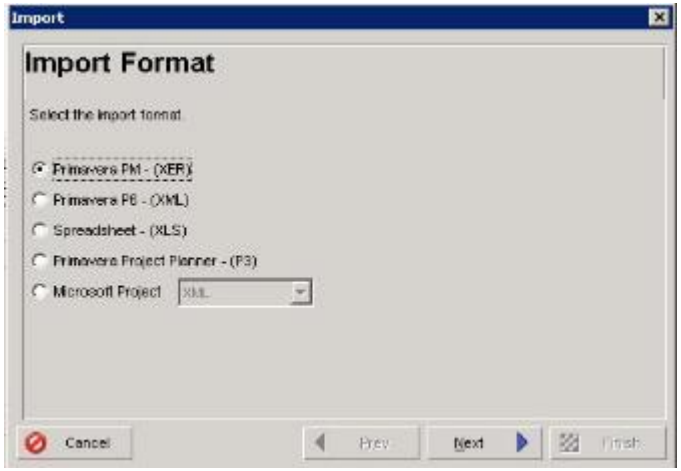
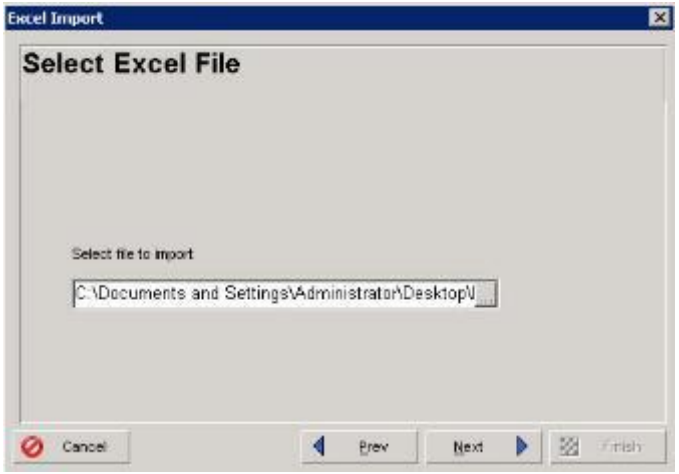
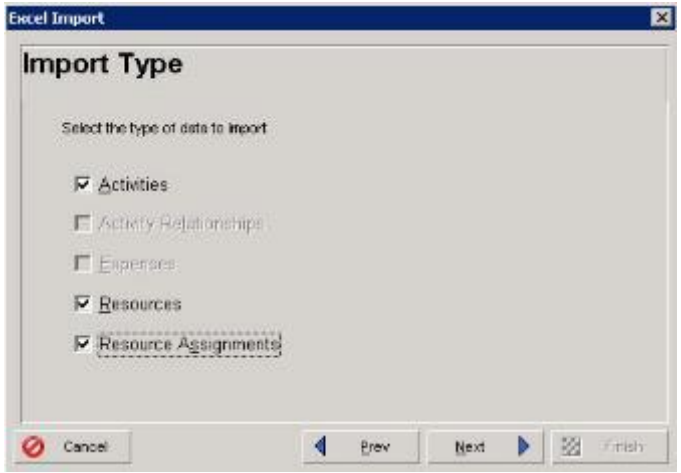
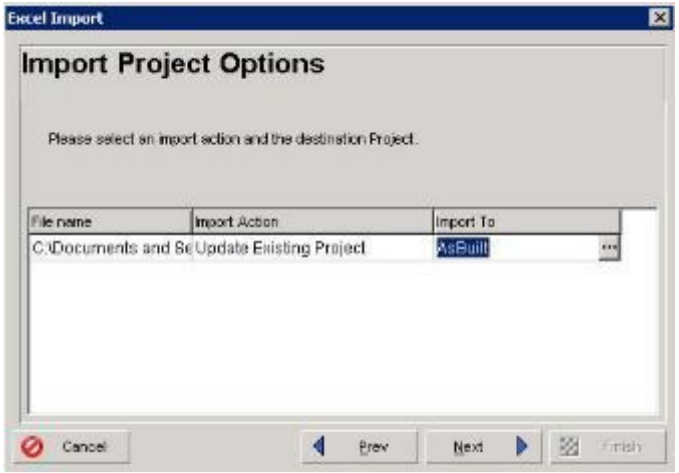
2	Activity ID	Activity Status	WBS Code	Activity Name	(*)Start	(*)Finish	Actual Start	Actual Finish	(*)Resources
3	POLAR.6	Unopened	POLAR.6	Product Launc	20121009	09/20/10/0 8:00:00 AM	10/09/2012 8:00:00 AM	10/12/2012 8:00:00 AM	GAILR
4	POLAR.6	Unopened	POLAR.6	Product Launc	20121009	09/20/10/0 8:00:00 AM	10/09/2012 8:00:00 AM	10/12/2012 8:00:00 AM	GAILR
5	POLAR.6	Unopened	POLAR.6	Product Launc	20121009	09/20/10/0 8:00:00 AM	10/09/2012 8:00:00 AM	10/12/2012 8:00:00 AM	GAILR
6	POLAR.6	Unopened	POLAR.6	Product Launc	20121009	09/20/10/0 8:00:00 AM	10/09/2012 8:00:00 AM	10/12/2012 8:00:00 AM	GAILR
7	POLAR.6	Unopened	POLAR.6	Product Launc	20121009	09/20/10/0 8:00:00 AM	10/09/2012 8:00:00 AM	10/12/2012 8:00:00 AM	GAILR
8	POLAR.6	Unopened	POLAR.6	Product Launc	20121009	09/20/10/0 8:00:00 AM	10/09/2012 8:00:00 AM	10/12/2012 8:00:00 AM	GAILR
9	POLAR.6	Unopened	POLAR.6	Product Launc	20121009	09/20/10/0 8:00:00 AM	10/09/2012 8:00:00 AM	10/12/2012 8:00:00 AM	GAILR
10	POLAR.2.1	Unopened	POLAR.2.1	Code security	20120822	22/20/08/2 8:00:00 AM	08/22/2012 8:00:00 AM	09/05/2012 8:00:00 AM	GAILR
11	POLAR.2.1	Unopened	POLAR.2.1	Code security	20120822	22/20/08/2 8:00:00 AM	08/22/2012 8:00:00 AM	09/05/2012 8:00:00 AM	GAILR
12	POLAR.2.1	Unopened	POLAR.2.1	Code security	20120822	22/20/08/2 8:00:00 AM	08/22/2012 8:00:00 AM	09/05/2012 8:00:00 AM	GAILR
13	POLAR.2.1	Unopened	POLAR.2.1	Code security	20120822	22/20/08/2 8:00:00 AM	08/22/2012 8:00:00 AM	09/05/2012 8:00:00 AM	GAILR
14	POLAR.2.1	Unopened	POLAR.2.1	Code security	20120822	22/20/08/2 8:00:00 AM	08/22/2012 8:00:00 AM	09/05/2012 8:00:00 AM	GAILR
15	POLAR.2.1	Unopened	POLAR.2.1	Code security	20120822	22/20/08/2 8:00:00 AM	08/22/2012 8:00:00 AM	09/05/2012 8:00:00 AM	GAILR
16	POLAR.2.1	Unopened	POLAR.2.1	Code security	20120822	22/20/08/2 8:00:00 AM	08/22/2012 8:00:00 AM	09/05/2012 8:00:00 AM	GAILR
17	POLAR.1.3	Unopened	POLAR.1.3	Design Securit	20120814	14/20/08/1 8:00:00 AM	08/14/2012 8:00:00 AM	08/22/2012 8:00:00 AM	GAILR
18	POLAR.1.3	Unopened	POLAR.1.3	Design Securit	20120814	14/20/08/1 8:00:00 AM	08/14/2012 8:00:00 AM	08/22/2012 8:00:00 AM	GAILR
19	POLAR.1.3	Unopened	POLAR.1.3	Design Securit	20120814	14/20/08/1 8:00:00 AM	08/14/2012 8:00:00 AM	08/22/2012 8:00:00 AM	GAILR
20	POLAR.1.3	Unopened	POLAR.1.3	Design Securit	20120814	14/20/08/1 8:00:00 AM	08/14/2012 8:00:00 AM	08/22/2012 8:00:00 AM	GAILR
21	POLAR.1.3	Unopened	POLAR.1.3	Design Securit	20120814	14/20/08/1 8:00:00 AM	08/14/2012 8:00:00 AM	08/22/2012 8:00:00 AM	GAILR
22	POLAR.1.3	Unopened	POLAR.1.3	Design Securit	20120814	14/20/08/1 8:00:00 AM	08/14/2012 8:00:00 AM	08/22/2012 8:00:00 AM	GAILR
23	POLAR.1.3	Unopened	POLAR.1.3	Design Securit	20120814	14/20/08/1 8:00:00 AM	08/14/2012 8:00:00 AM	08/22/2012 8:00:00 AM	GAILR
24	POLAR.1.2	Unopened	POLAR.1.2	Design Report	20120723	23/20/07/2 8:00:00 AM	07/23/2012 8:00:00 AM	08/14/2012 8:00:00 AM	GAILR
25	POLAR.1.2	Unopened	POLAR.1.2	Design Report	20120723	23/20/07/2 8:00:00 AM	07/23/2012 8:00:00 AM	08/14/2012 8:00:00 AM	GAILR
26	POLAR.1.2	Unopened	POLAR.1.2	Design Report	20120723	23/20/07/2 8:00:00 AM	07/23/2012 8:00:00 AM	08/14/2012 8:00:00 AM	GAILR
27	POLAR.1.2	Unopened	POLAR.1.2	Design Report	20120723	23/20/07/2 8:00:00 AM	07/23/2012 8:00:00 AM	08/14/2012 8:00:00 AM	GAILR
28	POLAR.1.2	Unopened	POLAR.1.2	Design Report	20120723	23/20/07/2 8:00:00 AM	07/23/2012 8:00:00 AM	08/14/2012 8:00:00 AM	GAILR
29	POLAR.1.2	Unopened	POLAR.1.2	Design Report	20120723	23/20/07/2 8:00:00 AM	07/23/2012 8:00:00 AM	08/14/2012 8:00:00 AM	GAILR
30	POLAR.1.2	Unopened	POLAR.1.2	Design Report	20120723	23/20/07/2 8:00:00 AM	07/23/2012 8:00:00 AM	08/14/2012 8:00:00 AM	GAILR
31	POLAR.1.2	Unopened	POLAR.1.2	Design Report	20090420	20/20/04/2 8:00:00 AM	04/20/2009 8:00:00 AM	05/05/2009 8:00:00 AM	GAILR
32	POLAR.1.2	Unopened	POLAR.1.2	Design Report	20090420	20/20/04/2 8:00:00 AM	04/20/2009 8:00:00 AM	05/05/2009 8:00:00 AM	GAILR
33	POLAR.1.2	Unopened	POLAR.1.2	Design Report	20090420	20/20/04/2 8:00:00 AM	04/20/2009 8:00:00 AM	05/05/2009 8:00:00 AM	GAILR

P6 import menu

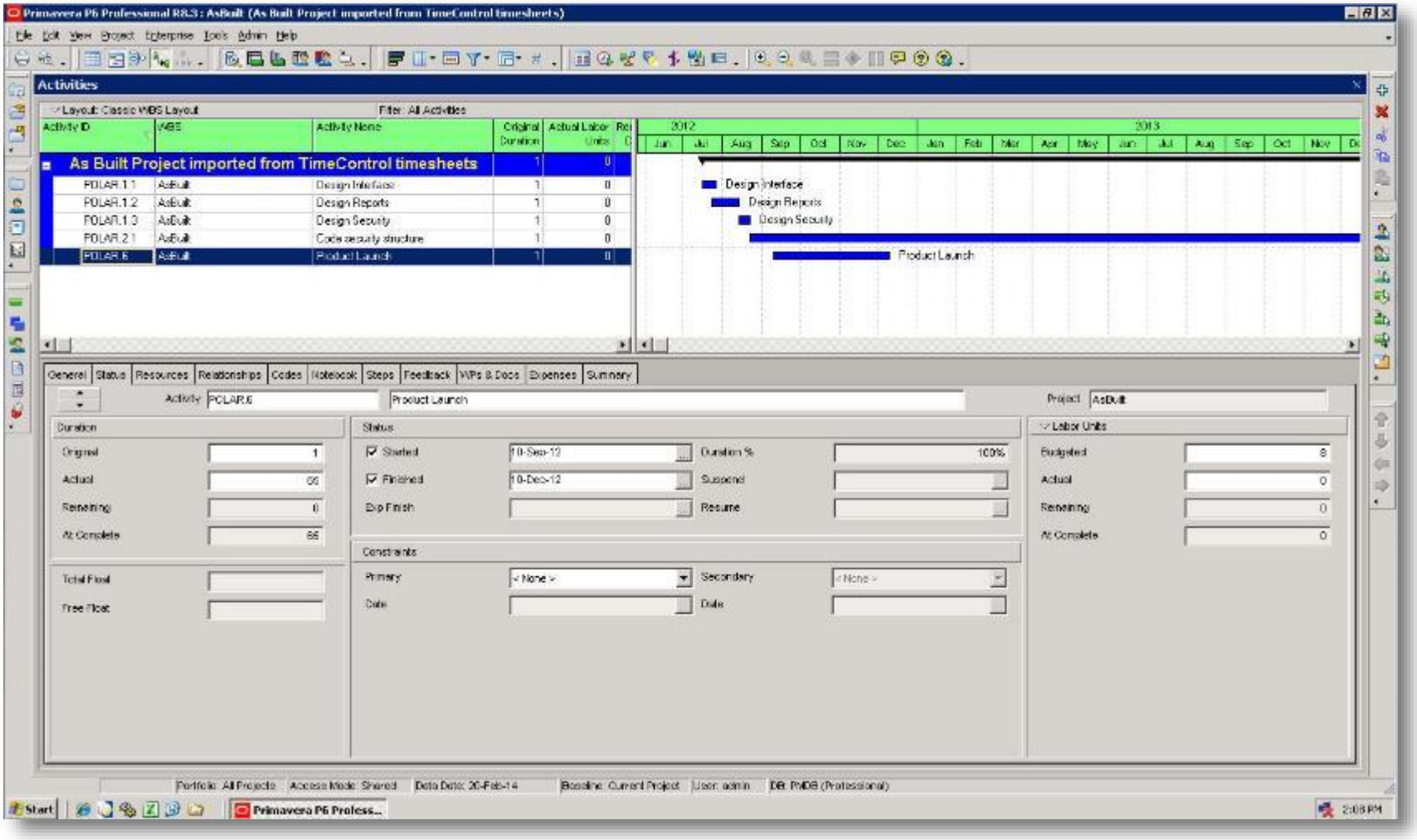








Our data is now imported



Now that this information is in P6 what do I do with it?

- Graph it in a Barchart
- Compare the Effort to the elapsed duration
- Do a variance report against other summary estimates
- Look for:
  - Gaps in work
  - Excessive effort
  - Unexpectedly low effort
  - Excessive duration
  - Activities that seem out of sequence

What won't we get

- Logic
- Baseline/Budget
- Narrative
- Context

What else could we get

- Cost
- Summary
- User Defined groupings for accounting, payroll etc.
- Non-task effort
- Project vs. non-project effectiveness
- Work on non-role activities

Real World examples

Dofasco steel

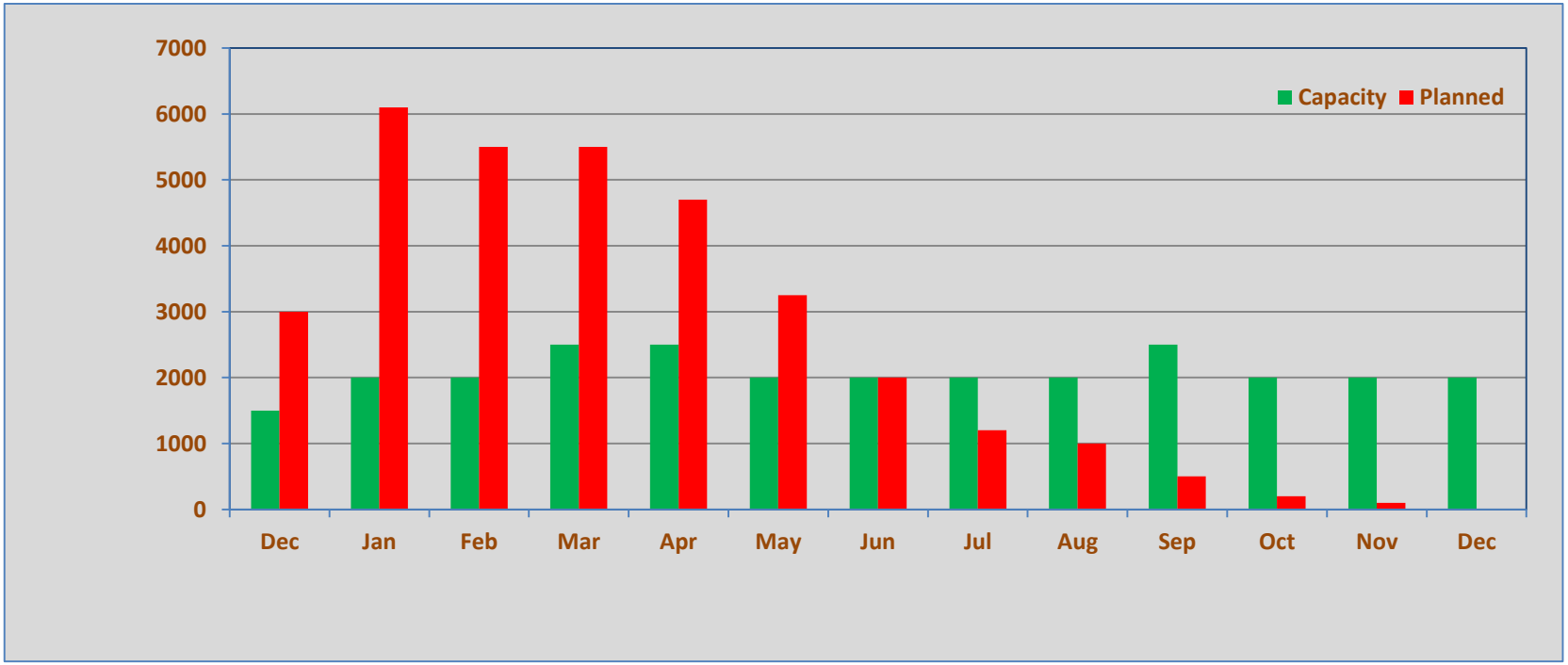
- The 6.5 day schedule
- HMS worked with Canada's Dofasco Steel to help create As-Built shutdown schedules
- The original schedule was 6.5 days for a hot mill semi-annual shutdown.
- By using As-Built schedules and incrementally improving the schedule, the shutdown was brought to under 5 days saving Dofasco millions of dollars per year

One of our own examples at HMS

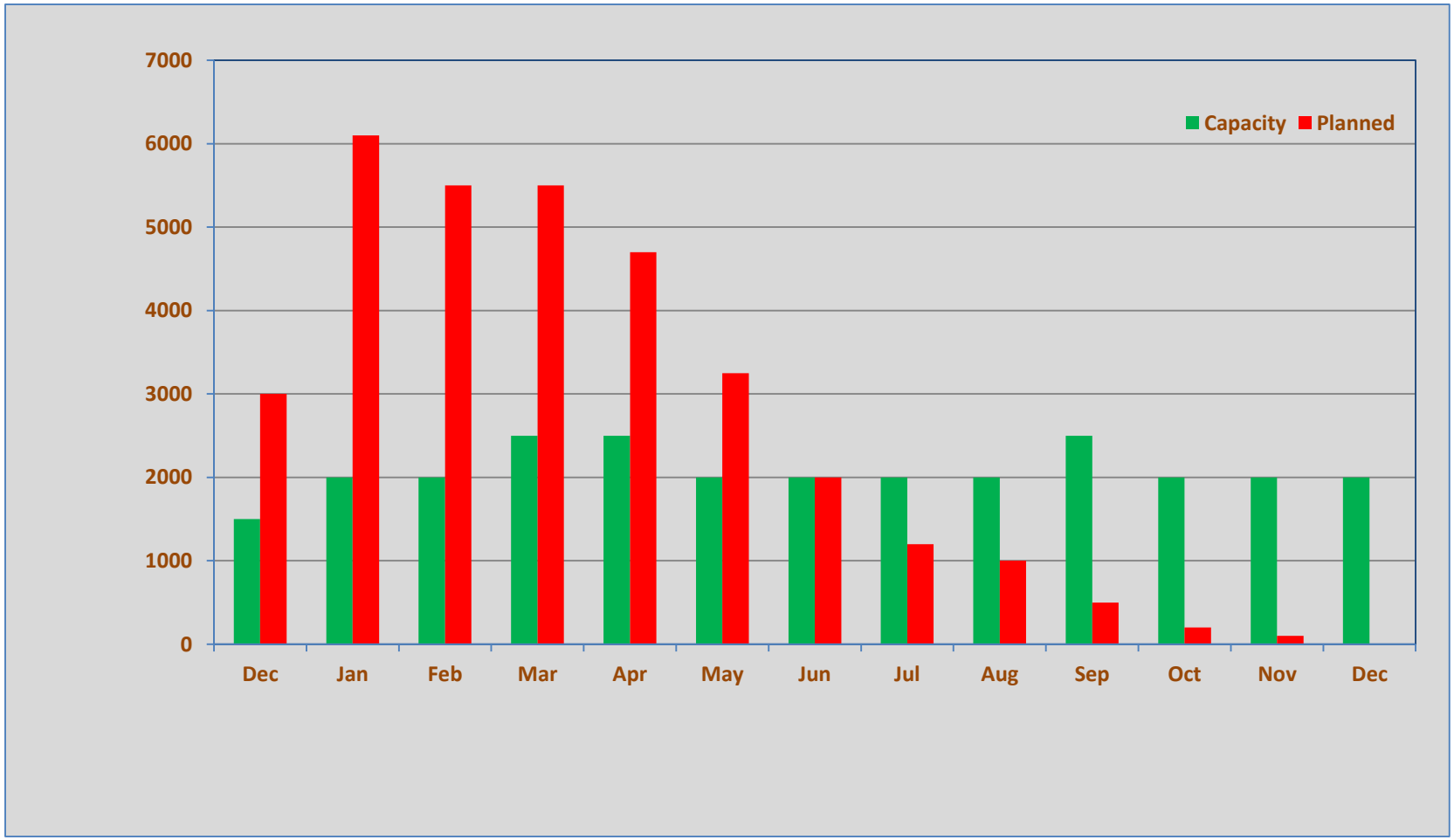
- In a project at our own HMS we had numerous tasks which had been planned but not tracked.
- One type of design task in particular was problematic
- Baseline
  - 5 days duration
  - 40 hours effort
- Actual
  - 15 days duration
  - 35 hours expended
- As a result, we were able to improve our forward estimates

North American Education Provider

- A large North American education provider asked us to help with a resource capacity management problem.
- The planned schedule looked like this:



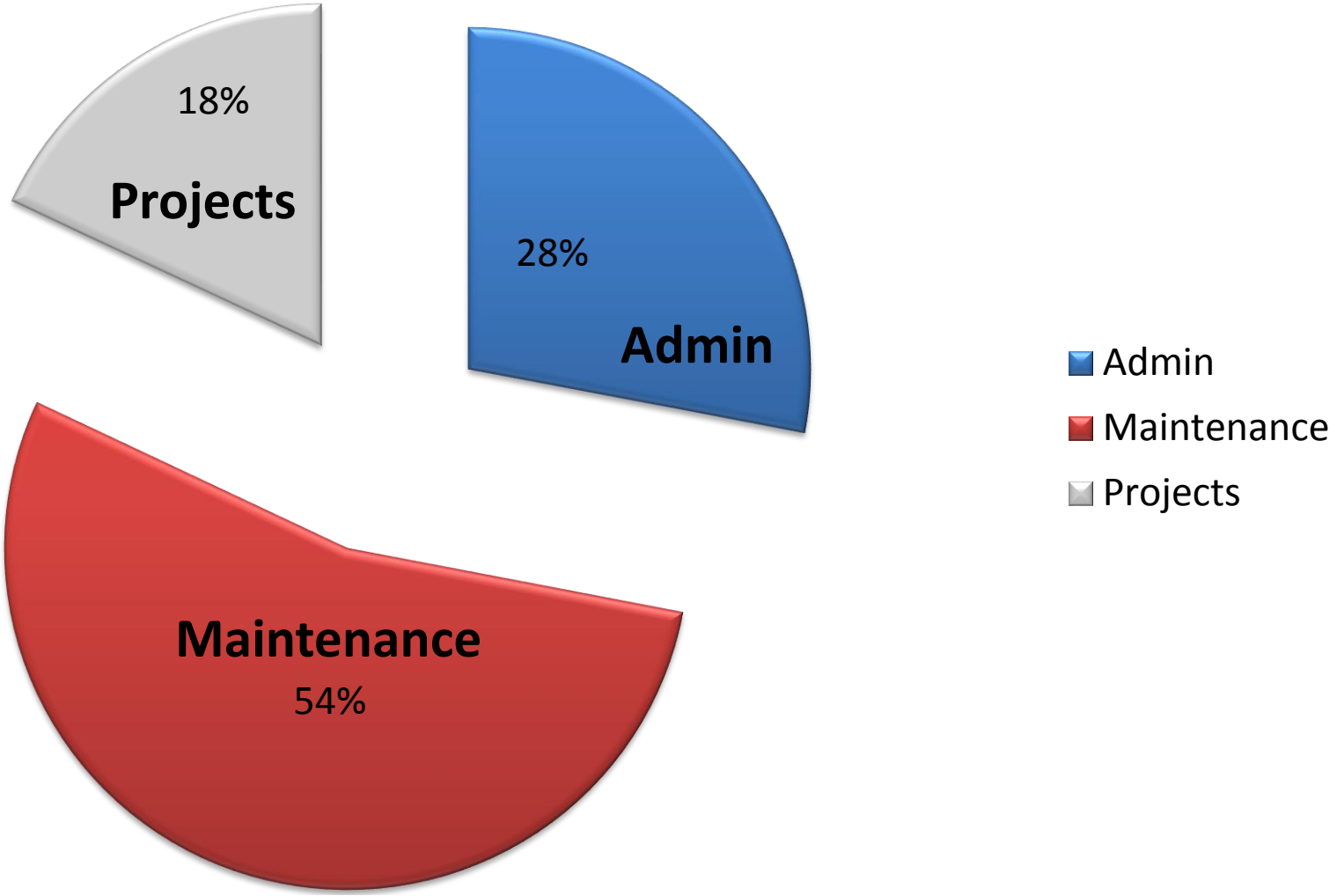
Overloaded project staff



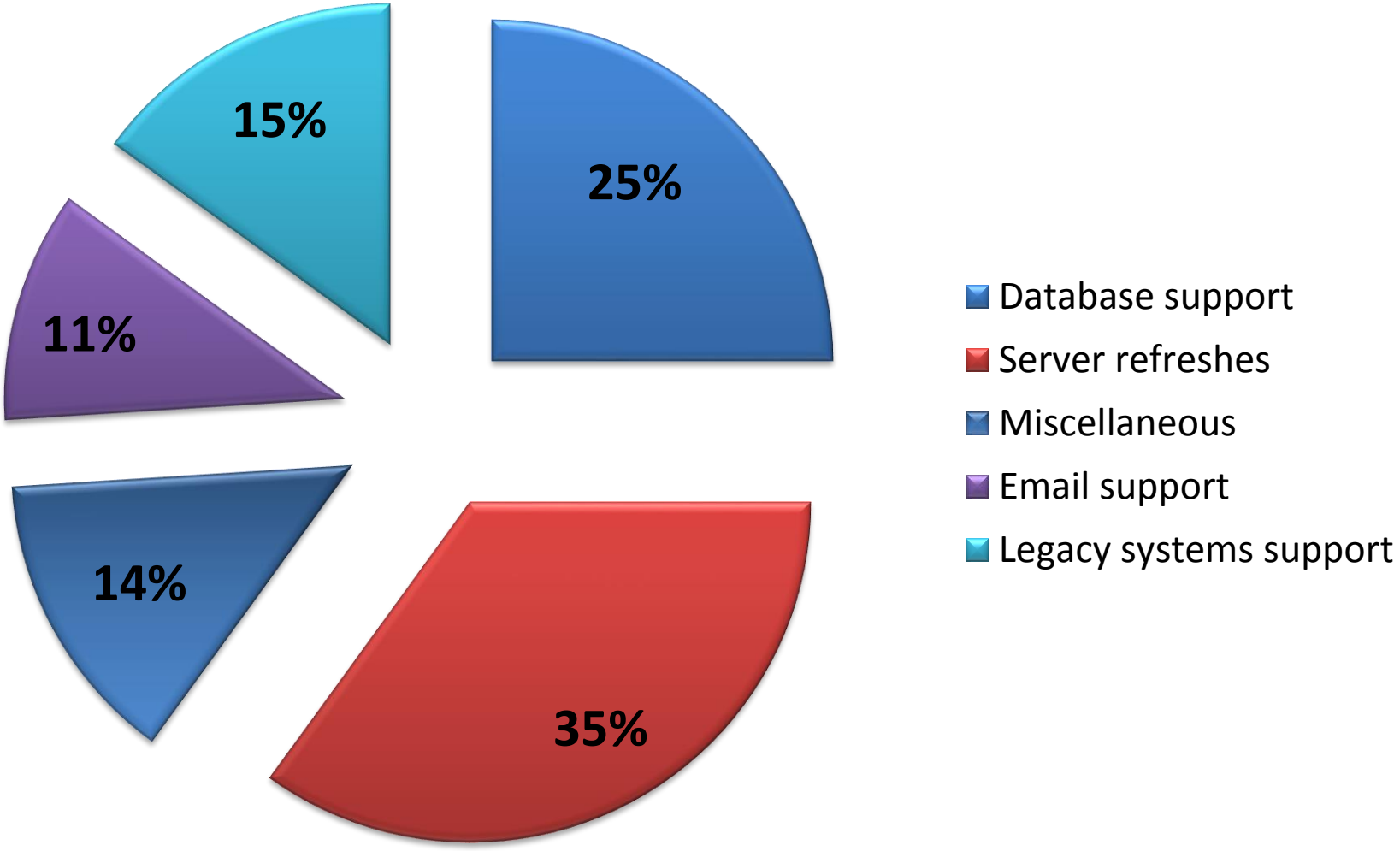
Applying As-Built analsis

- We had extensive timesheet information and were able to categorize where time was going

Maintenance dominated



Maintenance details



Results

- In interviews by management following our As-Built analysis it was determined that:
  - Team leaders had figured out that if they broke their projects into many 3-day durations they could get their project done immediately under operations rather than being prioritized within the portfolio
  - Management changed internal procedures to force projects back into the project prioritization structure

Conclusions

- Even when there has not been a formal project tracking process so far, an As-Built schedule can give insight into what actually happened in a particular project
- Actual timesheet information is an obvious place to start looking for As-Built data
- If there is contention for invoicing following a project or even litigation, creating the As-Built schedule can be a powerful tool to show what actually happened
- If there were extraneous factors such as weather, environment or almost anything else, narratives in the timesheet data can be used to highlight the As-Built schedule

Thank you!

For more information:

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