Project Controls Expo - 31st Oct 2012
Twickenham Stadium, London

Session B2

The Practical use of Earned Value for real-time forecast and control

Speaker – David Birch

About the Speaker

- **David Birch** - 35 years experience in the delivery of high profile UK and international projects and Programmes for world leading Engineering/Construction contractors.
- 25 years of Project Controls and Operational Management experience
- Since 2008 responsible for the London 2012 Programme Controls group for CLM, the delivery partner to the Olympic Delivery Authority (ODA).
- Previously, delivered projects numerous industry sectors including:
  - ✓ UK & International Oil and Gas
  - ✓ UK Nuclear decommissioning and clean-up
  - ✓ Conventional and Nuclear Energy
  - ✓ Water
  - ✓ Telecoms
  - ✓ Industrial and Infrastructure

EVM - APM Guidelines Forward

Good decisions require good information.

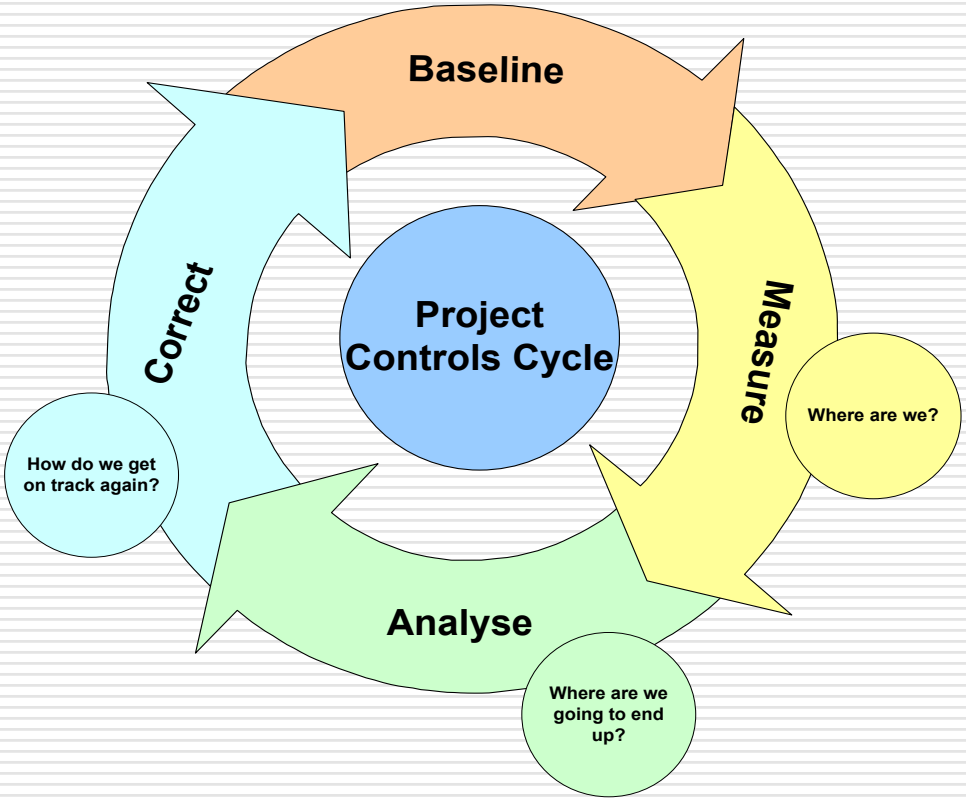
To deliver a complex project to time and cost requires a proper understanding, at regular stages and at an appropriate level of detail, of the relationships between: work done, progress against plan, cost incurred against budget, cash spent and cost to come.

Combining this data leads to an understanding of the actual value of what has been achieved and prevents managers from being either too optimistic or unduly pessimistic about the situation. It enables them to make appropriate judgements as to what corrective actions need to be taken in good time.

Sir John Armitt

Chairman - Olympic Delivery Authority

Classic Project Control Cycle



Project Controls EXPO

EVM System (32 Criteria)

1. Organisation (1-5)
2. Planning, Scheduling and Budgeting (6-15)
3. Actual Costs (16-21)
4. Analysis and Reporting (22-27)
5. Change Management (28-32)

Getting the system right leads to:

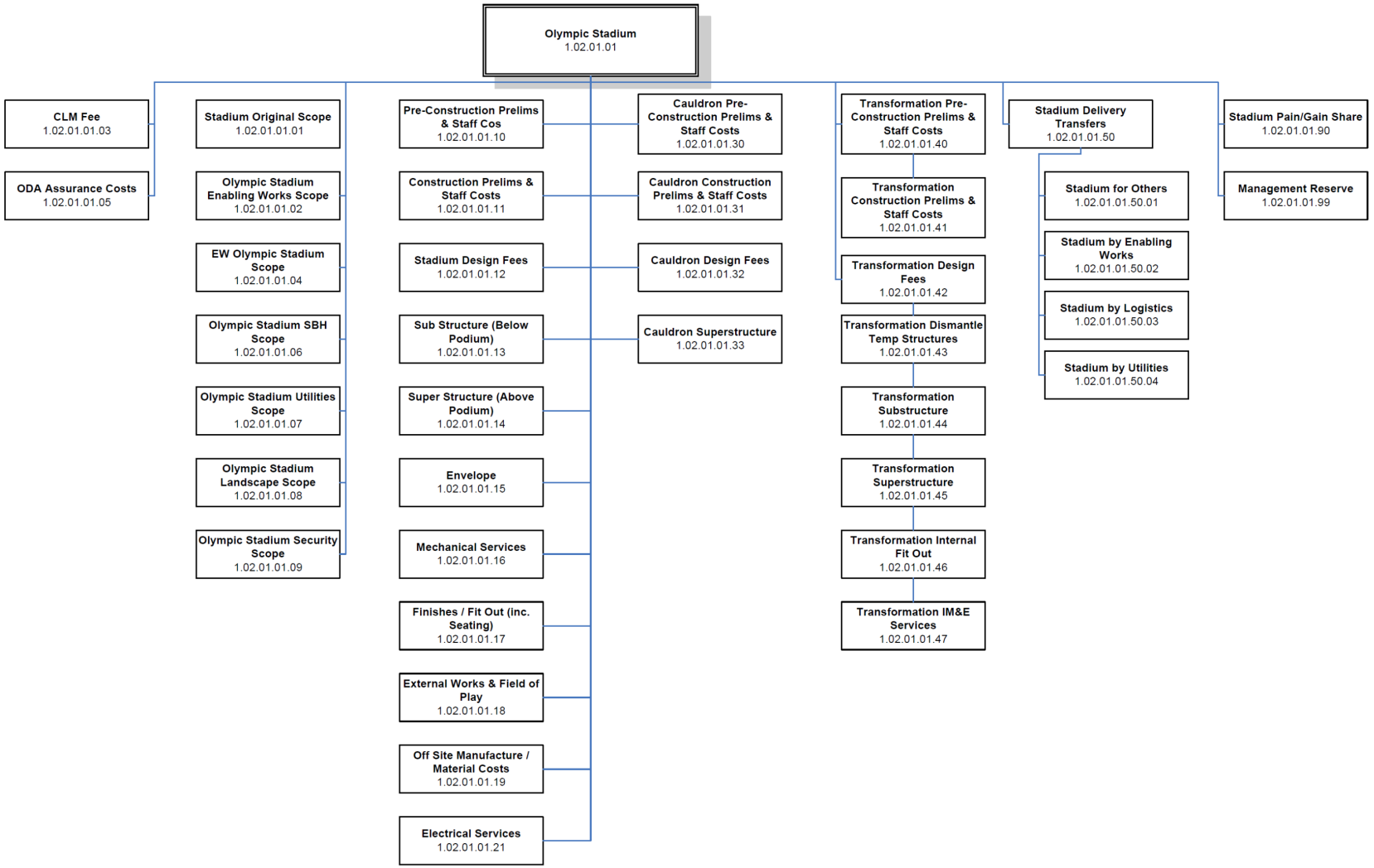
Informed, effective management and decision making by knowing:

- What has been achieved of the plan
- What it has cost to achieve the planned work
- If the work achieved is costing more or less than was planned
- If the project is ahead of or behind the planned schedule

1 - Organisation

- Essential to understand scope and how it will be broken down and delivered (Work Element Definition)
- Key is then to create the ***Work Breakdown Structure (WBS)*** and progressively develop the ***Contract Work Breakdown Structure (CWBS)***
- Who will deliver and be responsible for delivery ***Organisational Breakdown Structure (OBS)***
- **Ensure that the systems (WBS, CWBS and OBS) will support each other and are integrated (via coding)**

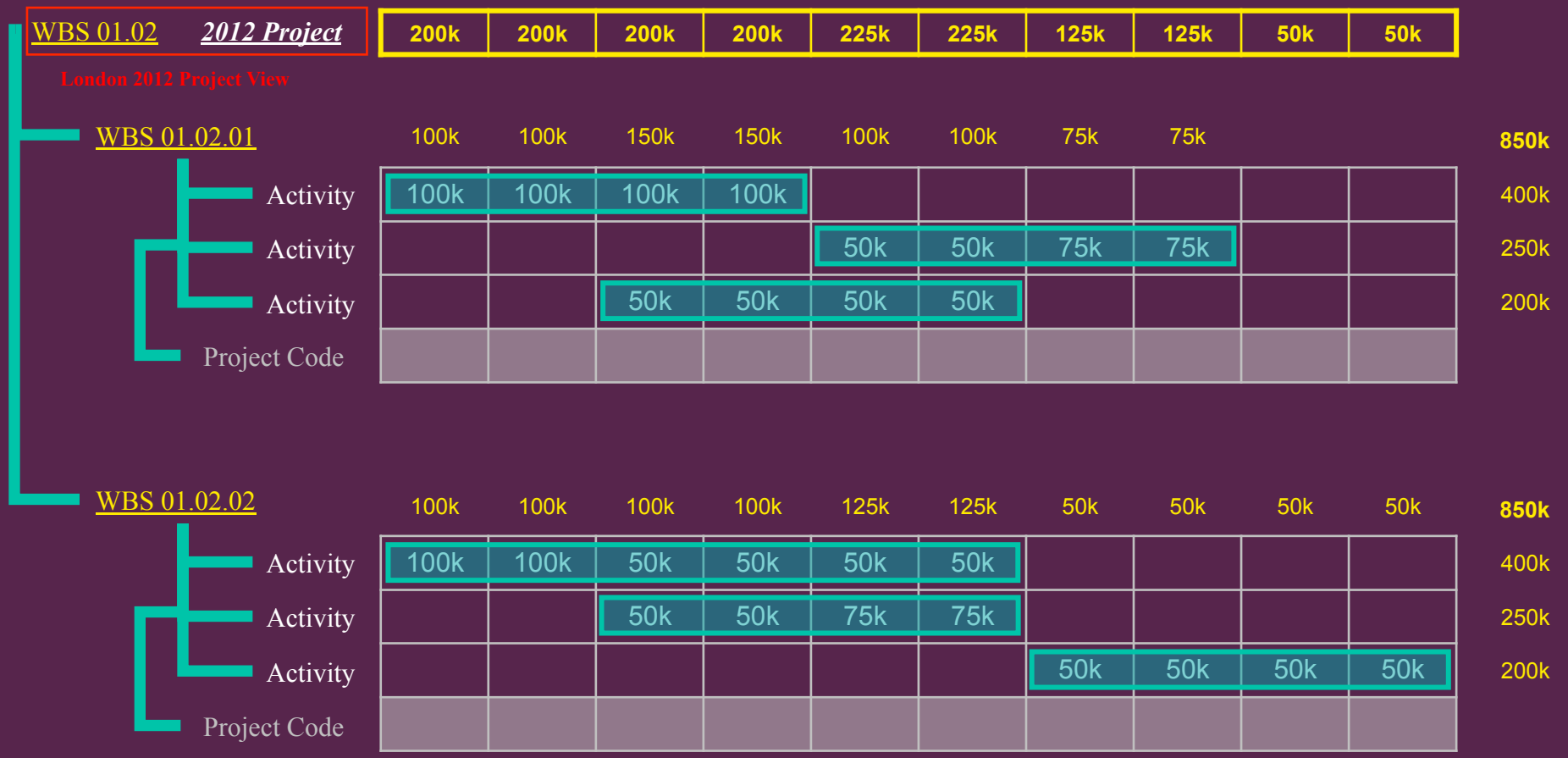
WBS Example



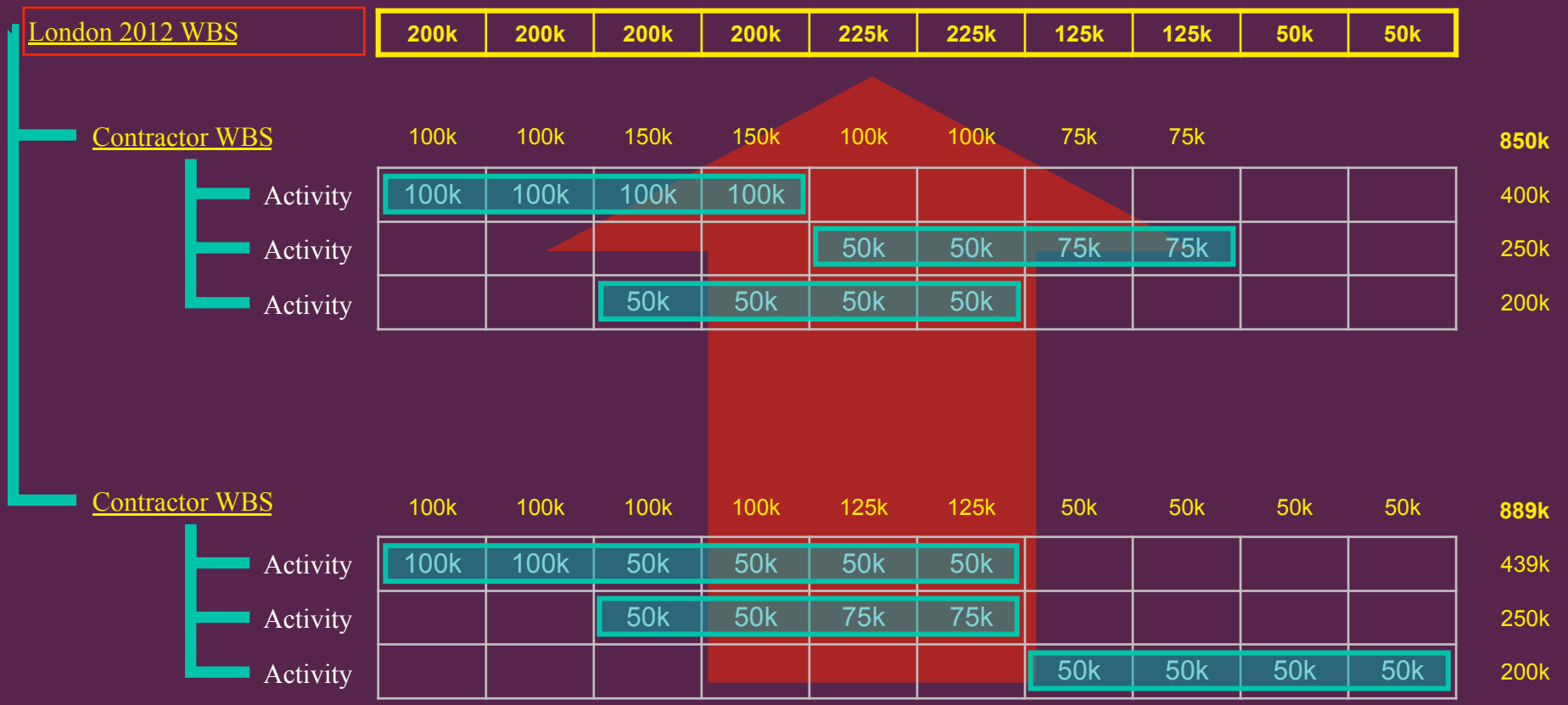
2 – Planning, Scheduling and Budgeting

- Essential to Schedule all the work logically
- Identify the Project Milestone set and the Key Milestones within that set
- Cost Loaded Schedule activities should be aligned with Cost Accounts within the WBS elements
- Establish how the progress will be measured
- Identify Level of Effort (LOE) activities (management, management reserves, prelim's/overheads, etc.)
- Create the Project Estimates and fix the Budgets
- **Baseline and implement Change Control**

Structures – Work Breakdown Structure (WBS)



Structures – Contractor Schedule Summary (WBS)



2 – Objective Measures of Progress

- Milestones
- Percentage Complete
  - ✓ Agreed steps
  - ✓ Evaluated
  - ✓ Once at 100%
- Quantities
- Apportioned Level of Effort
- Level of Effort

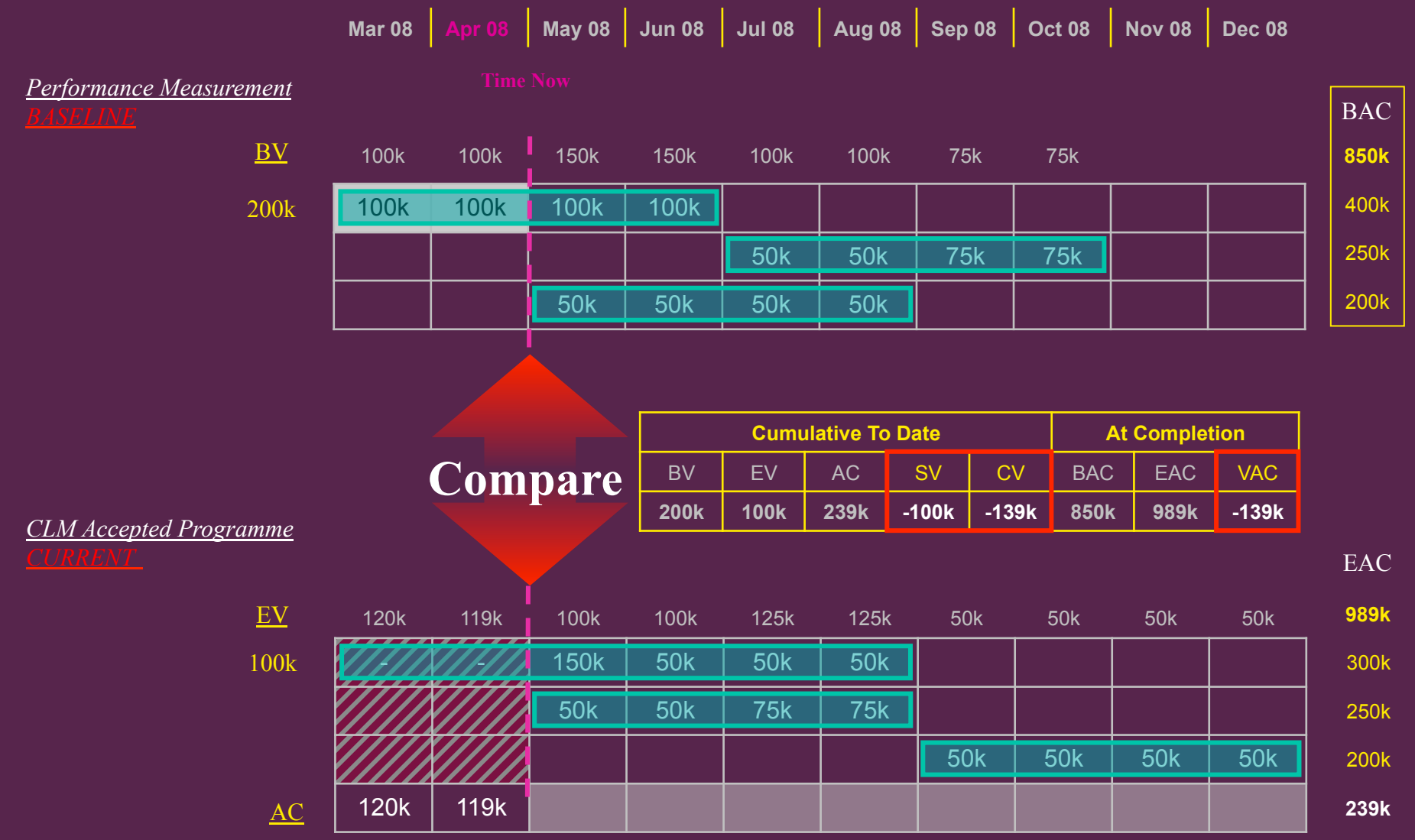
2 – Original Budget Summary

Original Budget	Value in £
1.02.01.01.02 Enabling Works Scope	6,000,000
1.02.01.01.03 Professional Fees	9,534,000
1.02.01.01.05 Assurance Costs	2,750,000
1.02.01.01.10 Pre-Construction Prelims & Staff Cos	8,217,152
1.02.01.01.11 Construction Prelims & Staff Costs	61,645,508
1.02.01.01.12 Design Fees	43,369,372
1.02.01.01.13 Sub Structure (Below Podium)	51,443,996
1.02.01.01.14 Super Structure (Above Podium)	56,846,474
1.02.01.01.15 Envelope	21,668,628
1.02.01.01.16 Mechanical Services	25,454,121
1.02.01.01.17 Finishes / Fit Out (inc. Seating)	36,441,199
1.02.01.01.18 External Works & Field of Play	4,082,243
1.02.01.01.21 Electrical Services	26,919,568
1.02.01.01.43 Transformation Dismantle Temp Structures	15,148,086
Total	**369,520,348**
1.02.01.01.PC Project Contingency	25,246,585
Overall Total	**394,766,933**

3 – Actual Costs

- Essential that Actual Costs (cost accounts) are mapped to WBS
- Ensure that cost collection systems and contractor invoices are broken down into at least the level of the WBS elements
- Understand the material accounting system and ensure plan aligns with when material costs will be recorded (either invoiced or accrued)
- **Keep the mapping up to date at each update (normally monthly)**

Status - Performance To Date

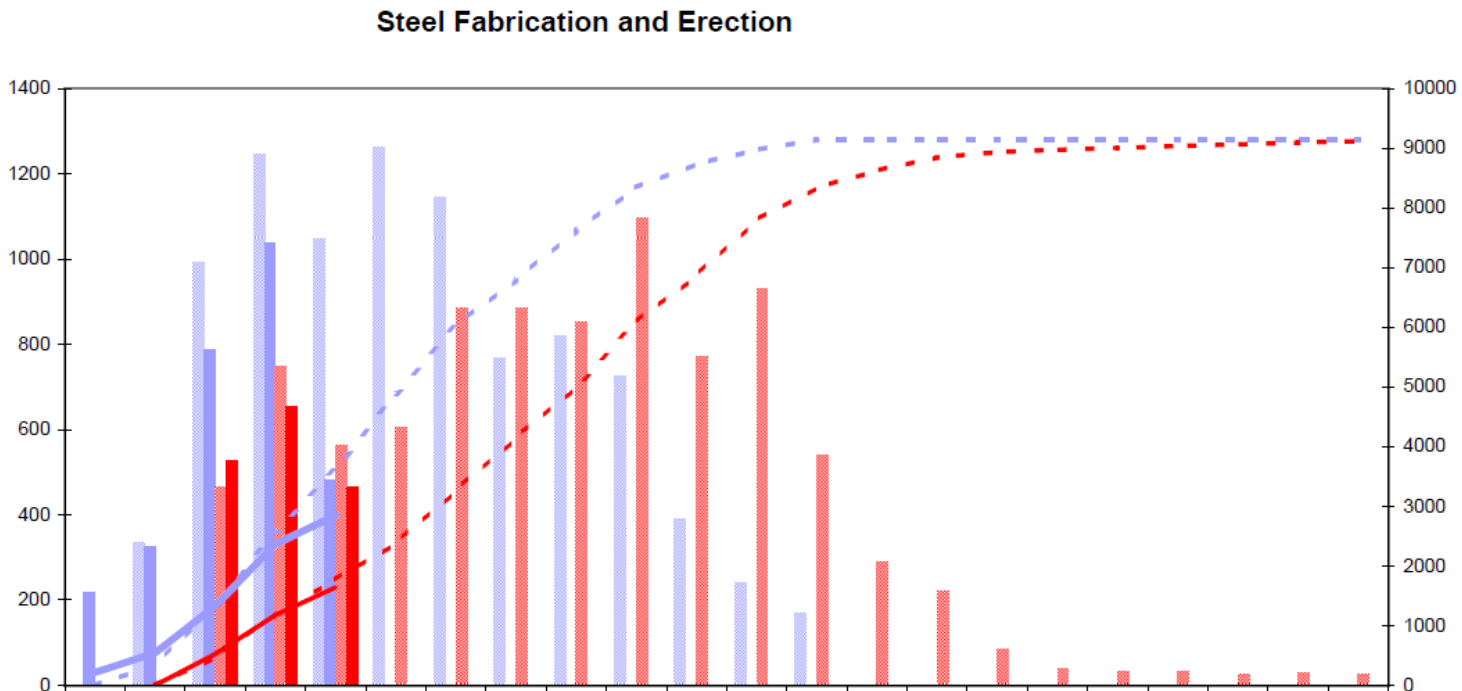


London 2012
06/11/2012

4 – Analysis and Reporting

- Collect progress data and record % complete of each activity (using the rules established at planning phase)
- Compare Baseline Plan with Progress and Actual Costs establishing Schedule Variance (SV) and Cost Variance (CV)
- Forecast *Durations* to complete
- Forecast *Costs* to complete
- Review Milestone completion forecasts against Plan
- Review Anticipated Final Cost to Budget
- Project Team determine project issues/mitigations/plan adjustments
- **Project Team Report the outcome of analysis and plans to complete**

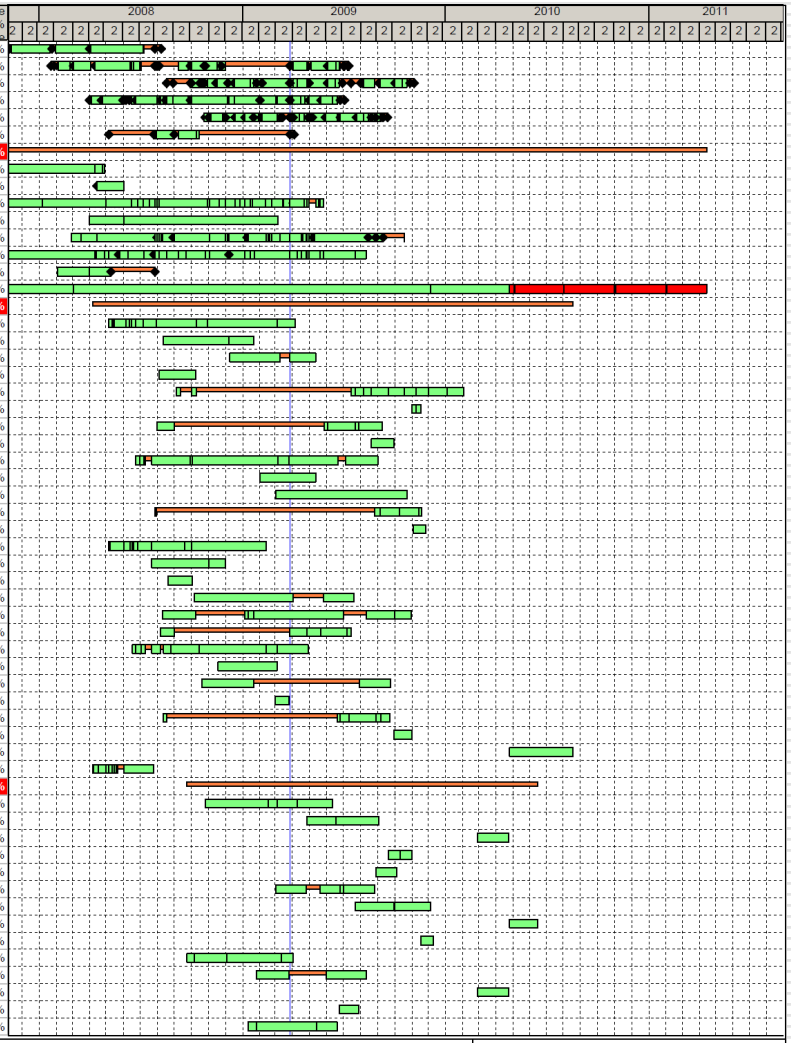
4 – Quantities



	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10
Monthly Planned T	0	336	993	1247	1046	1262	1145	767	821	727	390	239	170									
Monthly T Fabricated	217	326	788	1036	482																	
Monthly Planned T		0	465	747	561	606	884	884	853	1096	771	932	539	288	221	86	39	32	32	28	29	26
Monthly T Erected		0	525	652	464																	
Cumulative Planned Tonnes	0	336	1329	2577	3623	4885	6030	6797	7617	8345	8735	8974	9144	9144	9144	9144	9144	9144	9144	9144	9144	9144
Cumulative Tonnes Fabricated	217	543	1331	2367	2849																	
Cumulative Planned Tonnes		0	465	1212	1773	2379	3264	4148	5000	6097	6868	7800	8339	8627	8848	8934	8973	9005	9037	9065	9094	9120
Cumulative Tonnes Erected		0	525	1178	1642																	

4 – Progress

Activity ID	Activity Name	Start	Finish	Budgeted Total Cost	Planned Value Cost	Earned Value Cost	Performance % Complete
	Package Procurement - RC Sub & Superstructures	06-Nov-07 A	08-Aug-08 A	£0.00	£0.00	£0.00	0%
	Package Procurement - Other Structures Packages	22-Jan-08 A	10-Jul-09	£0.00	£0.00	£0.00	0%
	Package Procurement - Envelope Packages	18-Aug-08 A	05-Nov-09	£0.00	£0.00	£0.00	0%
	Package Procurement - MEP Packages	02-Apr-08 A	03-Jul-09	£0.00	£0.00	£0.00	0%
	Package Procurement - Finishes Packages	24-Oct-08 A	18-Sep-09	£0.00	£0.00	£0.00	0%
	Package Procurement - External Packages	06-May-08 A	03-Apr-09	£0.00	£0.00	£0.00	0%
1.02.01.01.12	Design Fees	18-Jun-07 A	15-Apr-11	£47,348,130.04	£27,885,456.54	£28,061,562.22	59.27%
	Stage D Design	18-Jun-07 A	28-Apr-08 A	£10,047,144.00	£10,047,144.00	£10,047,144.00	100%
	Issue Stage D Design Report	14-Apr-08 A	02-Jun-08 A	£0.00	£0.00	£0.00	0%
	Stage E to Production Information - Structure	18-Jun-07 A	26-May-09	£2,522,571.51	£2,522,572.51	£2,522,572.51	100%
	Stage E to Production Information - Landscape	01-Apr-08 A	06-Mar-09 A	£391,291.00	£391,291.00	£391,291.00	100%
	Stage E to Production Information - Architecture	29-Feb-08 A	19-Oct-09	£3,685,094.05	£3,685,094.05	£3,500,839.34	95%
	Stage E to Production Information - MEP Services	18-Jun-07 A	11-Aug-09	£1,744,764.79	£1,744,766.79	£1,703,530.05	97.64%
	Town Planning - Prepare Application and Consultations	04-Feb-08 A	28-Jul-08 A	£0.00	£0.00	£0.00	0%
	Post Contract Design Fees	18-Jun-07 A	15-Apr-11	£28,957,264.70	£9,494,588.20	£9,896,185.32	34.18%
1.02.01.01.13	Sub Structure (Below Podium)	07-Apr-08 A	17-Aug-10	£64,224,467.00	£39,902,961.56	£41,041,036.28	63.9%
	West Stand GL 2-9 Foundations & Substructure to Podium ...	06-May-08 A	06-Apr-09	£8,879,498.00	£8,879,498.00	£8,789,302.56	98.98%
	West Stand GL 2-9 Podium Level Slab	12-Aug-08 A	20-Jan-09 A	£2,981,264.00	£2,981,264.00	£2,981,264.00	100%
	West Stand GL 2-9 Frame and Upper Floors (inc Pre Cast)	10-Dec-08 A	11-May-09	£1,289,067.00	£1,179,393.58	£1,289,067.00	100%
	West Stand Shell and Core Fit Out (Blockwork / Screeds)	04-Aug-08 A	08-Oct-08 A	£0.00	£0.00	£0.00	0%
	West Stand GL 9-10 Foundations & Substructure to Podiu...	05-Sep-08 A	01-Feb-10	£7,493,366.00	£127,545.00	£127,545.00	1.7%
	West Stand Pod Super Structure.	02-Nov-09	16-Nov-09	£1,277,755.00	£0.00	£0.00	0%
	West Stand GL 1-2 Substructure	31-Jul-08 A	09-Sep-09	£1,661,822.00	£64,506.00	£64,506.00	3.88%
	West Stand GL1-2 Pre Cast Terracing	21-Aug-09	29-Sep-09	£643,005.00	£0.00	£0.00	0%
	North Stand GL 2-8 Foundations & Substructure to Podium	23-Jun-08 A	01-Sep-09	£5,152,474.00	£5,077,628.21	£4,802,131.84	93.2%
	North Stand GL 2-8 Podium Level Slab	02-Feb-09 A	13-May-09	£1,485,234.00	£866,386.50	£965,402.10	65%
	North Stand Fit Out M&E Services	02-Mar-09 A	23-Oct-09	£234,092.00	£0.00	£105,341.40	45%
	North Stand GL 1-2 Substructure	28-Jul-08 A	19-Nov-09	£1,497,798.00	£61,574.00	£61,574.00	4.11%
	North Stand GL 1-2 Pre Cast Terracing	03-Nov-09	26-Nov-09	£188,556.00	£0.00	£0.00	0%
	South Stand GL 2-9 Foundations & Substructure to Podiu...	06-May-08 A	13-Feb-09 A	£6,484,294.00	£6,484,294.00	£6,484,294.00	100%
	South Stand GL 2-9 Podium Level Slab	21-Jul-08 A	01-Dec-08 A	£1,257,055.00	£1,257,055.00	£1,257,055.00	100%
	South Stand GL 2-9 Frame and Upper Floors (inc Pre Cast)	20-Aug-08 A	03-Oct-08 A	£600,682.00	£600,682.00	£600,682.00	100%
	South Stand Shell and Core Fit Out (Blockwork / Screeds)	07-Oct-08 A	21-Jul-09	£2,613,592.00	£2,613,592.00	£2,456,776.48	94%
	South Stand GL 9-10 Foundations & Substructure to Podiu...	11-Aug-08 A	30-Oct-09	£7,376,632.00	£679,128.00	£1,955,696.56	26.51%
	South Stand GL 1-2 Substructure	06-Aug-08 A	14-Jul-09	£1,688,988.00	£219,818.93	£55,710.00	3.3%
	East Stand GL 2-8 Foundations & Substructure to Podium	18-Jun-08 A	29-Apr-09	£5,359,034.00	£5,281,348.34	£5,281,348.34	98.55%
	East Stand GL 2-8 Podium Level Slab	19-Nov-08 A	05-Mar-09 A	£1,465,234.00	£1,465,234.00	£1,465,234.00	100%
	East Stand GL 2-8 Frame & Upper Floors (inc Pre Cast)	20-Oct-08 A	24-Sep-09	£867,008.00	£676,418.00	£676,418.00	78.02%
	East Stand Fit Out M&E Services	28-Feb-09 A	25-Mar-09 A	£234,092.00	£0.00	£234,092.00	100%
	East Stand GL 1-2 Substructure	13-Aug-08 A	21-Sep-09	£1,989,324.00	£93,827.00	£93,827.00	4.72%
	East Stand GL 1-2 Pre Cast Terracing	29-Sep-09	02-Nov-09	£210,832.00	£0.00	£0.00	0%
	Field of Play	26-Apr-10	17-Aug-10	£0.00	£0.00	£0.00	0%
	Site Mobilisation	07-Apr-08 A	25-Jul-08 A	£1,293,769.00	£1,293,769.00	£1,293,769.00	100%
1.02.01.01.14	Super Structure (Above Podium)	23-Sep-08 A	15-Jun-10	£59,976,719.52	£20,565,411.38	£22,264,092.14	37.12%
	West Stand GL 2-9 Frame and Upper Floors (inc Pre Cast)	27-Oct-08 A	11-Jun-09	£11,018,497.52	£8,888,240.63	£8,830,626.32	80.14%
	West Stand Roof Structure & Cable Net	27-Apr-09	02-Sep-09	£5,122,260.00	£0.00	£0.00	0%
	West Stand Roof Finishes & Roof Level Services	26-Feb-10	23-Apr-10	£372,792.00	£0.00	£0.00	0%
	West Stand Pod Super Structure.	21-Sep-09	02-Nov-09	£2,855,051.00	£0.00	£0.00	0%
	West Stand GL1-2 Pre Cast Terracing	28-Aug-09	06-Oct-09	£101,584.00	£0.00	£0.00	0%
	North Stand GL 2-8 Frame & Upper Floors (inc Pre Cast)	02-Mar-09 A	26-Aug-09	£5,301,994.00	£101,584.00	£42,665.28	0.8%
	North Stand Roof Structure & Cable Net	22-Jul-09	03-Dec-09	£5,122,260.00	£0.00	£0.00	0%
	North Stand Roof Finishes & Roof Level Services	26-Apr-10	15-Jun-10	£292,907.00	£0.00	£0.00	0%
	North Stand GL 1-2 Pre Cast Terracing	17-Nov-09	10-Dec-09	£101,584.00	£0.00	£0.00	0%
	South Stand GL 2-9 Frame and Upper Floors (inc Pre Cast)	23-Sep-08 A	01-Apr-09	£5,289,295.00	£5,289,295.00	£5,280,406.40	99.83%
	South Stand Roof Structure & Cable Net	27-Jan-09 A	10-Aug-09	£5,122,260.00	£2,327,826.25	£3,406,575.00	66.51%
	South Stand Roof Finishes & Roof Level Services	26-Feb-10	23-Apr-10	£292,907.00	£0.00	£0.00	0%
	South Stand GL1-2 Pre Cast Terracing	23-Jun-09	28-Jul-09	£88,886.00	£0.00	£0.00	0%
	East Stand GL 2-8 Frame & Upper Floors (inc Pre Cast)	11-Jan-09 A	19-Jun-09	£6,981,858.00	£3,958,465.50	£4,703,819.14	67.37%



Olympic Stadium

Programme summarised to SUMC by WBS

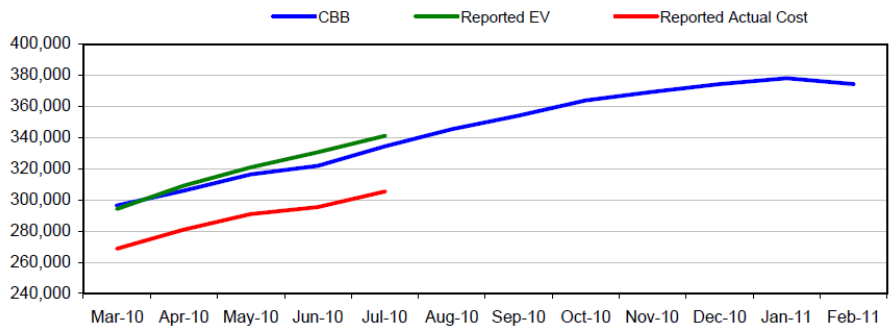
Project Controls EXPO

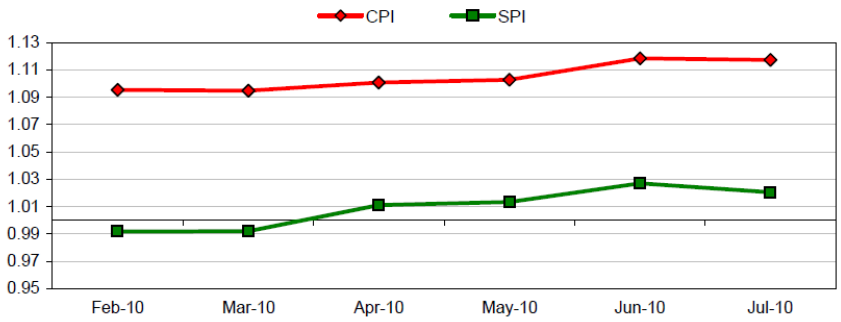
4 – Performance

Jul-10

Stadium

Performance to Date





	Current Period					Cumulative to Date							Budget	% Complete
	Plan	EV	Actual	SV	CV	Plan	EV	Actual	SV	CV	SPI	CPI		
Project Cost Summary Total	12,457	10,613	9,834	-1,844	779	334,274	341,132	305,360	6,858	35,772	**1.02**	**1.12**	409,050	83%
Olympic Stadium Enabling Works Scope	-	-		-	-	6,000	6,000	4,813	-	1,187	**1.00**	**1.25**	6,000	100%
CLM Fee	247	283	248	36	35	8,777	10,687	8,744	1,911	1,944	**1.22**	**1.22**	11,662	92%
ODA Assurance Costs	111	48	5	-63	43	2,447	2,857	2,482	410	375	**1.17**	**1.15**	3,058	93%
Pre-construction & construction staff costs	**2,057**	**1,863**	**966**	**-194**	**897**	**61,648**	**62,666**	**36,117**	**1,019**	**26,549**	**1.02**	**1.74**	**79,863**	**78%**
Stadium Design Fees	714	939	1,016	225	-77	38,236	38,379	36,560	143	1,820	**1.00**	**1.05**	43,369	88%
Sub Structure (Below Podium)	-	-	599	-	-599	54,444	54,444	50,078	-	4,366	**1.00**	**1.09**	54,444	100%
Super Structure (Above Podium)	**176**	**102**	**596**	**-74**	**-494**	**71,465**	**71,472**	**72,822**	**7**	**-1,350**	**1.00**	**0.98**	**71,846**	**99%**
Envelope	3,641	4,166	-66	525	4,232	14,804	19,298	10,262	4,494	9,036	**1.30**	**1.88**	21,669	89%
Mechanical Services	742	435	314	-307	121	22,989	23,239	14,515	250	8,723	**1.01**	**1.60**	25,454	91%
Finishes / Fit Out (inc. Seating)	2,089	2,222	1,559	133	663	29,946	30,683	21,928	737	8,755	**1.02**	**1.40**	36,441	84%
External Works & Field of Play	136	123	547	-13	-424	855	906	1,133	50	-228	**1.06**	**0.80**	4,082	22%
Stadium Pain/Gain Share	-	-	3,267	-	-3,267	-	-	23,576	-	-23,576			-	-
Electrical Services	773	1,082	780	309	302	23,754	23,895	21,841	141	2,055	**1.01**	**1.09**	26,920	89%
Transformation	**37**	**-**	**2**	**-37**	**-2**	**303**	**-**	**488**	**-303**	**-488**			**23,148**	**0%**
Balance of WBS	**1,734**	**-651**	**-**	**-2,385**	**-651**	**-1,393**	**-3,394**	**-**	**-2,001**	**-3,394**	**2.44**		**1,093**	**-311%**

4 – Analysis

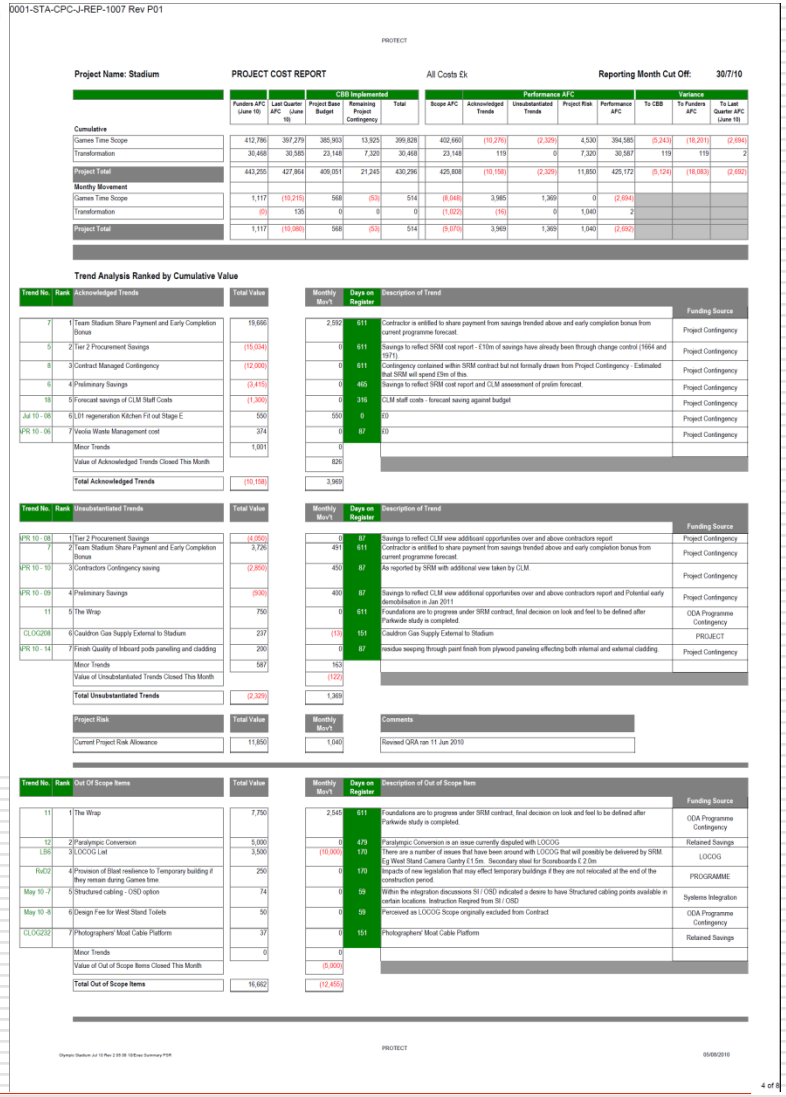
Current Period Schedule Variance Analysis	Current Period Cost Variance Analysis
Issue and Impact	***Issue and Impact***
Period EV is £10,613k for the period against a planned EV of £12,547k. This reflects the out of date baseline plan which does not reflect the actual progress made on the project to date and the forecast early completion. SPI cumulative remains positive at 1.02. Period EV against forecast for the month shows 99.2% predictability.	The monthly CV of £779k reflects the real cost against planned works for the month giving a monthly CPI of 1.08 Actual cost this month was marginally greater than forecast with a predictability of 103.9% The high CV relative to the Envelope this months reflects the ODA's requirement to remove 'accrued costs' relative to inconsistencies within the EV calculations.
Recovery Plan	
Issue and Impact	***Recovery Plan***
EV has been adjusted this month to reflect the over accruals in previous months in respect of Transfer scope works and fees.	There are still some inconsistencies within the coding of actual cost and the allocation of baseline value that need to be resolved. Transformation costs need to be re-baselined
Cumulative Schedule Variance Analysis	**Cumulative Cost Variance Analysis**
Cumulative EV is £341,132k against a cumulative Planned EV of £334,274k (SPI 1.02). Electrical works have now caught up previous programme delays and are on track for early completion. Transformation work has not yet started and is not scheduled to start before the first quarter of 2011. The inconsistency in the baseline plan is producing a negative schedule variance which is not representative at this stage.	Cumulative CPI has been maintained at 1.12 for this month. The negative CV in respect of Superstructure reflects that the Contractors 'milestone payment' entitlements (£2.4m to date) have been costed to a single code rather than spread across various codes. This should be identified as a separate line item in the future. The negative CV in respect of Transformation reflects he inconsistency in the baseline plan which is not representative at this stage.
Recovery Plan	***Recovery Plan***
The Project reporting should move away from 'EV to date'now that we have reached 88% complete to Games time. Transformation works should be re-baselined to reflect current plan.	There are still some inconsistencies within the coding of actual cost and the allocation of baseline value that need to be resolved. Transformation costs need to be re-baselined

4 – Forecasting

Olympic Stadium

BASELINE MILESTONES*

Milestone Description	Baseline	Forecast	Variance	Change	Impact
Receive Telecoms for Connection from Utilities	05-Jul-10	26-Aug-10	-52	-52	
Update Jul10: TS can't progress duct installation works as McNicholas still occupies the area. It isn't holding up any other works for Stadium					
Receive Potable Water from Utilities	04-Jan-10	27-Aug-10	-235	-24	
Update Jul10: Delivery date controlled by Utilities. TS are using temporarily PW supply for commissioning activities.					
Stadium Handover to LOCOG North Compound Area	06-Sep-10	06-Sep-10	0	0	
Stadium Handover to LOCOG for Hospitality Fit Out	06-Sep-10	06-Sep-10	0	0	
Receive Power from Utilities (Final)	N/A	18-Oct-10	N/A	N/A	
Update Jul10: Delivery date controlled by Utilities					
Stadium Handover to LOCOG for POD Village Installation & Fit Out	01-Nov-10	01-Nov-10	0	0	
MTO2 - Stadium Sports Lighting Energised - Contract Date 06May11	18-Mar-11	09-Dec-10	99	40	
Update Jul10: Brought forward in line with Doomsday Testing. This forecast date does not match the P6 archive database but does reflect the true position for July 2010. In P6, integrated schedule logic conflicts are artificially driving out Stadium's planned early Beneficial Possession date of 31 January 2011. This matter will be resolved in August reporting.					
Complete Doomsday Testing	18-Mar-11	23-Dec-10	85	28	
Update Jul10: This month the Contractor's schedule represents the strategy of finishing the project by end of Jan11. This forecast date does not match the P6 archive database but does reflect the true position for July 2010. In P6, integrated schedule logic conflicts are artificially driving out Stadium's planned early Beneficial Possession date of 31 January 2011. This matter will be resolved in August reporting.					
MTO2 - Stadium Beneficial Possession - Contract Date 06Jun11	15-Apr-11	31-Jan-11	74	74	
Update Jul10: This month the Contractor's schedule represents the strategy of finishing the project by end of Jan11. This forecast date does not match the P6 archive database but does reflect the true position for July 2010. In P6, integrated schedule logic conflicts are artificially driving out Stadium's planned early Beneficial Possession date of 31 January 2011. This matter will be resolved in August reporting.					
Beneficial Possession	15-Apr-11	31-Jan-11	74	74	
Update Jul10: This month the Contractor's schedule represents the strategy of finishing the project by end of Jan11. This forecast date does not match the P6 archive database but does reflect the true position for July 2010. In P6, integrated schedule logic conflicts are artificially driving out Stadium's planned early Beneficial Possession date of 31 January 2011. This matter will be resolved in August reporting.					
Commence Field of Play - Lay Final Track	04-Apr-11	04-Apr-11	0	0	
Complete Field of Play - Track Measured & Calibrated	03-Jun-11	03-Jun-11	0	0	
Stadium Completion	06-Jun-11	06-Jun-11	0	0	
Interface Milestone to Security Lockdown	29-Jun-12	29-Jun-12	0	0	



0001-STA-CPC-J-REP-1007 Rev P01

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Project Name: Stadium — **PROJECT COST REPORT** — All Costs £k — **Reporting Month Cut Off: 30/7/10**

	CBB Implemented					Performance AFC					Variance		
	Funders AFC (June 10)	Last Quarter AFC (June 10)	Project Base Budget	Remaining Project Contingency	Total	Scope AFC	Acknowledged Trends	Unsubstantiated Trends	Project Risk	Performance AFC	To CBB	To Funders AFC	To Last Quarter AFC (June 10)
Cumulative													
Games Time Scope	412,786	397,279	385,903	13,925	399,828	402,660	(10,276)	(2,329)	4,530	394,585	(5,243)	(18,201)	(2,694)
Transformation	30,468	30,585	23,148	7,320	30,468	23,148	119	0	7,320	30,587	119	119	2
Project Total	443,255	427,864	409,051	21,245	430,296	425,808	(10,158)	(2,329)	11,850	425,172	(5,124)	(18,083)	(2,692)
Monthly Movement													
Games Time Scope	1,117	(10,215)	568	(53)	514	(8,648)	3,985	1,369	0	(2,694)			
Transformation	(0)	135	0	0	0	(1,022)	(16)	0	1,040	2			
Project Total	1,117	(10,080)	568	(53)	514	(9,670)	3,969	1,369	1,040	(2,692)			

Trend Analysis Ranked by Cumulative Value

Trend No.	Rank	Acknowledged Trends	Total Value	Monthly Mov't	Days on Register	Description of Trend	Funding Source
7	1	Team Stadium Share Payment and Early Completion Bonus	19,666	2,592	611	Contractor is entitled to share payment from savings trended above and early completion bonus from current programme forecast.	Project Contingency
5	2	Tier 2 Procurement Savings	(15,034)	0	611	Savings to reflect SRM cost report - £10m of savings have already been through change control (1664 and 1971).	Project Contingency
8	3	Contract Managed Contingency	(12,000)	0	611	Contingency contained within SRM contract but not formally drawn from Project Contingency - Estimated that SRM will spend £9m of this.	Project Contingency
6	4	Preliminary Savings	(3,415)	0	465	Savings to reflect SRM cost report and CLM assessment of prelim forecast.	Project Contingency
18	5	Forecast savings of CLM Staff Costs	(1,300)	0	316	CLM staff costs - forecast saving against budget	Project Contingency
Jul 10 - 08	6	L01 regeneration Kitchen Fit out Stage E	550	550	0	LD	Project Contingency
APR 10 - 06	7	Veolia Waste Management cost	374	0	87	LD	Project Contingency
		Minor Trends	1,001	0			
		Value of Acknowledged Trends Closed This Month		826			
		Total Acknowledged Trends	(10,158)	3,969			

Trend No.	Rank	Unsubstantiated Trends	Total Value	Monthly Mov't	Days on Register	Description of Trend	Funding Source
APR 10 - 08	1	Tier 2 Procurement Savings	(4,050)	0	87	Savings to reflect CLM view additional opportunities over and above contractors report	Project Contingency
7	2	Team Stadium Share Payment and Early Completion Bonus	8,726	401	611	Contractor is entitled to share payment from savings trended above and early completion bonus from current programme forecast.	Project Contingency
APR 10 - 10	3	Contractors Contingency saving	(2,850)	450	87	As reported by SRM with additional view taken by CLM.	Project Contingency
APR 10 - 09	4	Preliminary Savings	(930)	400	87	Savings to reflect CLM view additional opportunities over and above contractors report and Potential early demobilisation in Jan 2011	Project Contingency
11	5	The Wrap	750	0	611	Foundations are to progress under SRM contract, final decision on look and feel to be defined after Parkwide study is completed.	ODA Programme Contingency
CLOG208	6	Cauldron Gas Supply External to Stadium	237	(13)	151	Cauldron Gas Supply External to Stadium	PROJECT
APR 10 - 14	7	Finish Quality of Inboard pods panelling and cladding	200	0	87	Residue seeping through paint finish from plywood paneling effecting both internal and external cladding.	Project Contingency
		Minor Trends	587	163			
		Value of Unsubstantiated Trends Closed This Month		(122)			
		Total Unsubstantiated Trends	(2,329)	1,369			

Project Risk	Total Value	Monthly Mov't	Comments
Current Project Risk Allowance	11,850	1,040	Revised QRA ran 11 Jun 2010

Trend No.	Rank	Out Of Scope Items	Total Value	Monthly Mov't	Days on Register	Description of Out of Scope Item	Funding Source
11	1	The Wrap	7,750	2,545	611	Foundations are to progress under SRM contract, final decision on look and feel to be defined after Parkwide study is completed.	ODA Programme Contingency
12	2	Paralympic Conversion	5,000	0	479	Paralympic Conversion is an issue currently disputed with LOCOG	Retained Savings
LB6	3	LOCOG List	3,500	(10,000)	170	There are a number of issues that have been around with LOCOG that will possibly be delivered by SRM. Eg West Stand Camera Gantry £1.5m. Secondary steel for Scoreboards £ 2.0m	LOCOG
RvD2	4	Provision of Blast resilience to Temporary building if they remain during Games time.	250	0	170	Impacts of new legislation that may effect temporary buildings if they are not relocated at the end of the construction period.	PROGRAMME
May 10 -7	5	Structured cabling - OSD option	74	0	59	Within the integration discussions SI / OSD indicated a desire to have Structured cabling points available in certain locations. Instruction Reqired from SI / OSD	Systems Integration
May 10 -8	6	Design Fee for West Stand Toilets	50	0	59	Perceived as LOCOG Scope originally excluded from Contract	ODA Programme Contingency
CLOG232	7	Photographers' Moat Cable Platform	37	0	151	Photographers' Moat Cable Platform	Retained Savings
		Minor Trends	0	0			
		Value of Out of Scope Items Closed This Month		(5,000)			
		Total Out of Scope Items	16,662	(12,455)			

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Olympic Stadium Jul 10 Rev 2 09 08 10 Exec Summary PDR — 05/08/2010

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4 – Project Manager Summary

Executive Summary	
Critical Issues	**Action/Recovery Plan**
a) Resolution of gas supply for Cauldron and pipe route b) Completion of LOCOG back of house drainage design c) Decision of colour of Mondo track d) Instruction required regarding WRAP procurement and construction including any lighting e) Delivery of remaining main services to agreed schedule	a) ODA to agree Cauldron design with LOCOG b) TS to produce updated design which is then to be agreed with Enabling Works and then subsequently with LOCOG c) ODA to agree with LOCOG d) SRM preparing Gap Analysis

Progress

Actual physical % complete (to games time) equates to 88.4% against planned of 86.5%, which represents 1.9% actual progress in the period.

All major elements of the building are now in place. All areas of the building are progressively now being brought to completion and progress measurement based on production outputs is no longer meaningful. In future progress will be assessed against Team Stadium's area completion schedule, the commissioning programme and the CASE schedule.

Substantial completion of the TS scope is now being targeted for 31st January 2011. This assumes remaining utilities are provided in line with agreements. The scope that will remain outstanding is being defined but will include the Mondo surfacing to the FOP. Acceptance of ACP22, which reflects this plan, has been deferred pending submission of Team Stadium's detailed close out strategy. The contractor will make this available by the 31st August 2010.

The Initial Take Over meeting (minus 6 months) has been deferred to 16th August to suit holiday arrangements. The CASE schedule has been reviewed in detail with the allocated owners of each section in preparation for this meeting.

100% of roof fabric panels have now been installed into position to the South, West and East stands.

Cost

The overall cost position on the Project remains positive with cumulative CPI being maintained at 1.12. Performance AFC has reduced further this month by £2.7m reflecting further reductions in trends, agreement of CE's and agreement of final accounts. Final Cost certainty has now been achieved in respect of 53% of trade package costs. Further savings are expected in the Performance AFC from now until the end of the year to secure the target AFC. This does not however allow for any future costs relating to the Wrap and ODA / LOCOG issues currently considered to be out of scope. Should any of these costs have to be borne by the Project, the AFC will increase accordingly.

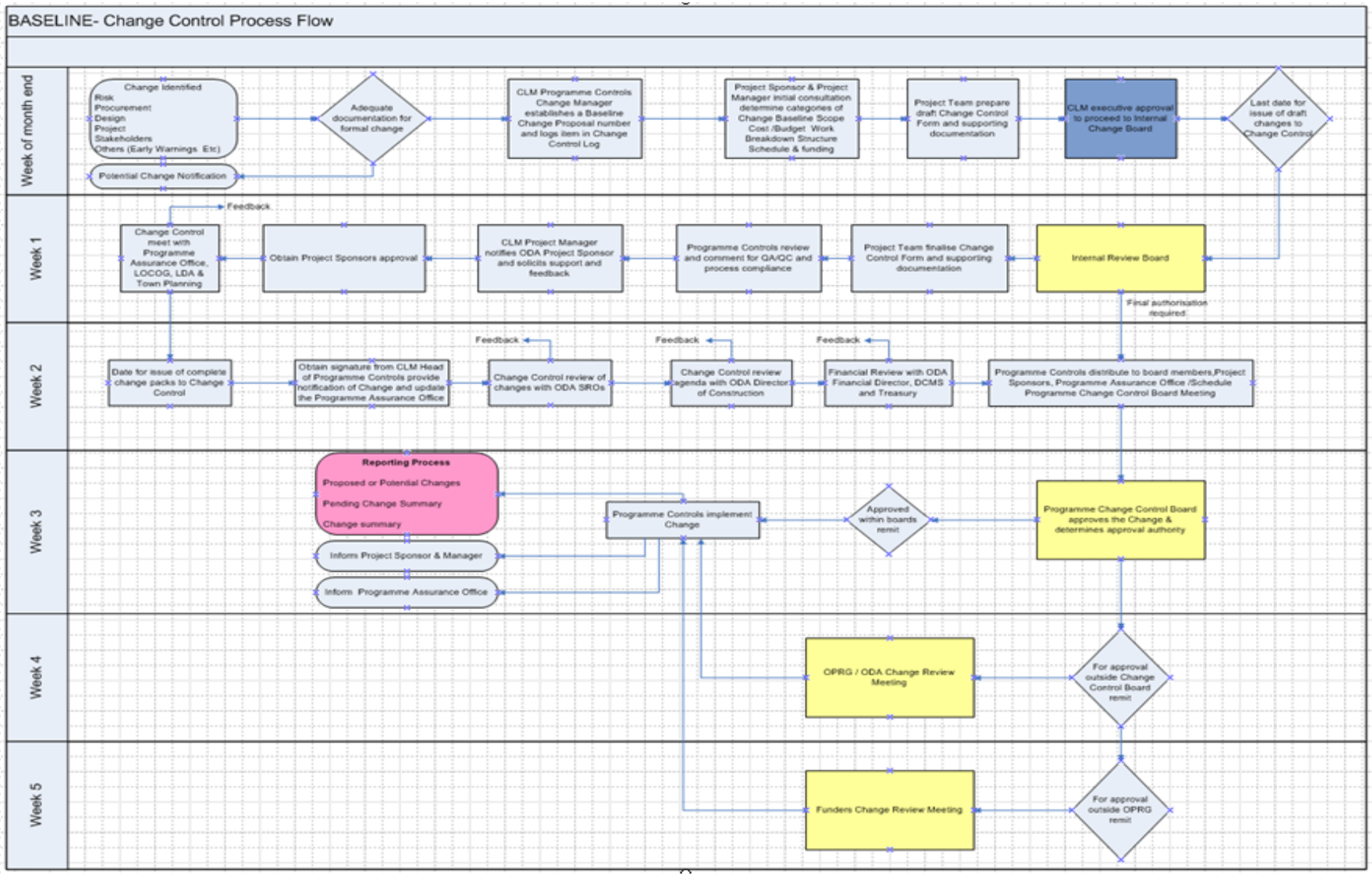
5 – Change Management

Once the Baseline is agreed, published and fixed

- The Original Budget should be FROZEN
- Change Control should start and formal monthly change reviews should be held and recorded
- Approved Changes should be incorporated into the Current Baseline (ONLY APPROVED CHANGES – need strong Governance)
- Retrospective Changes should be strongly discouraged
- Contingency and Risk Management essential processes
- **Current Baseline should reflect realistically achievable targets**

When status and forecasts show significant variance to Baseline raise a change for Management approval.

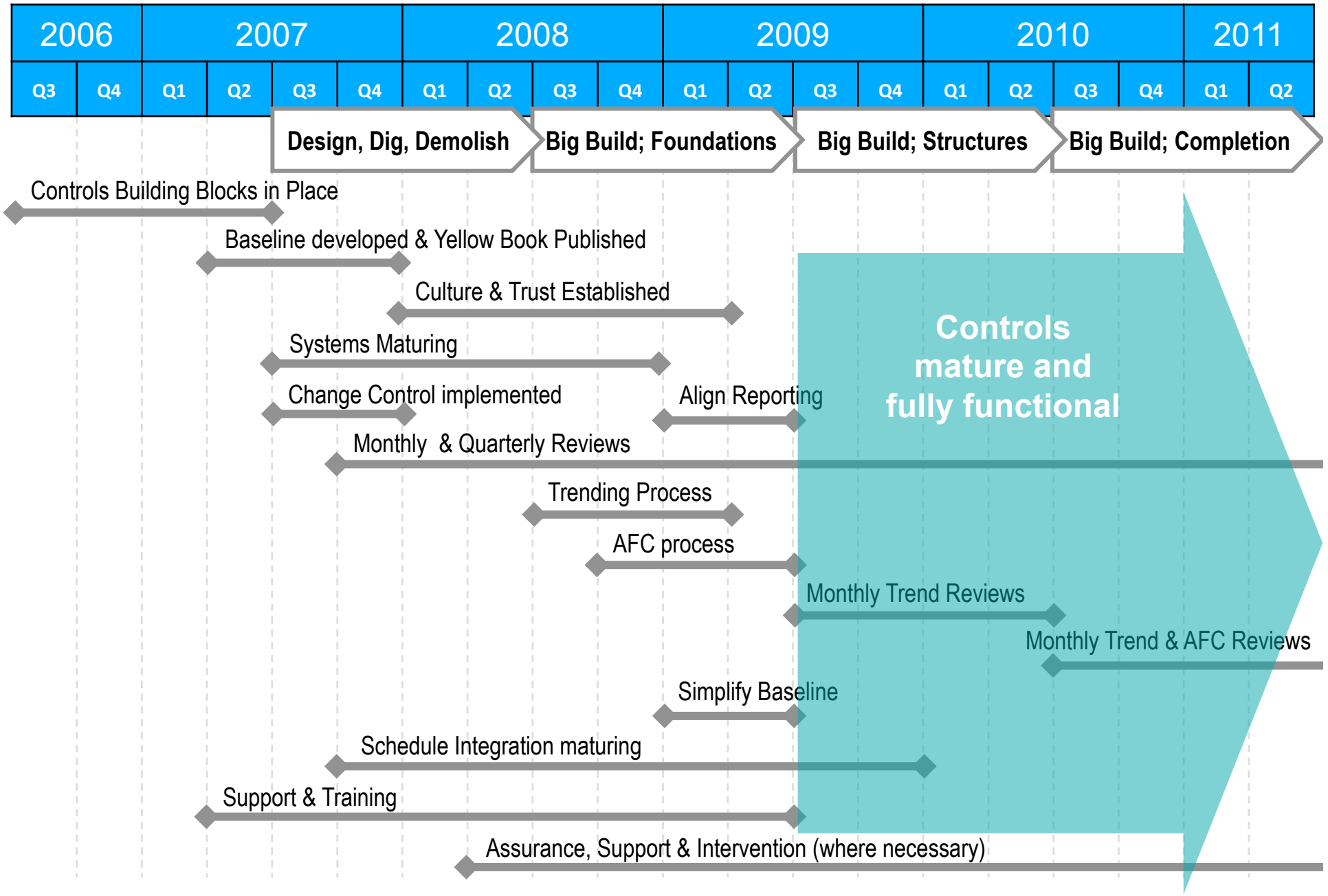
5 – Change Process within Monthly Cycle



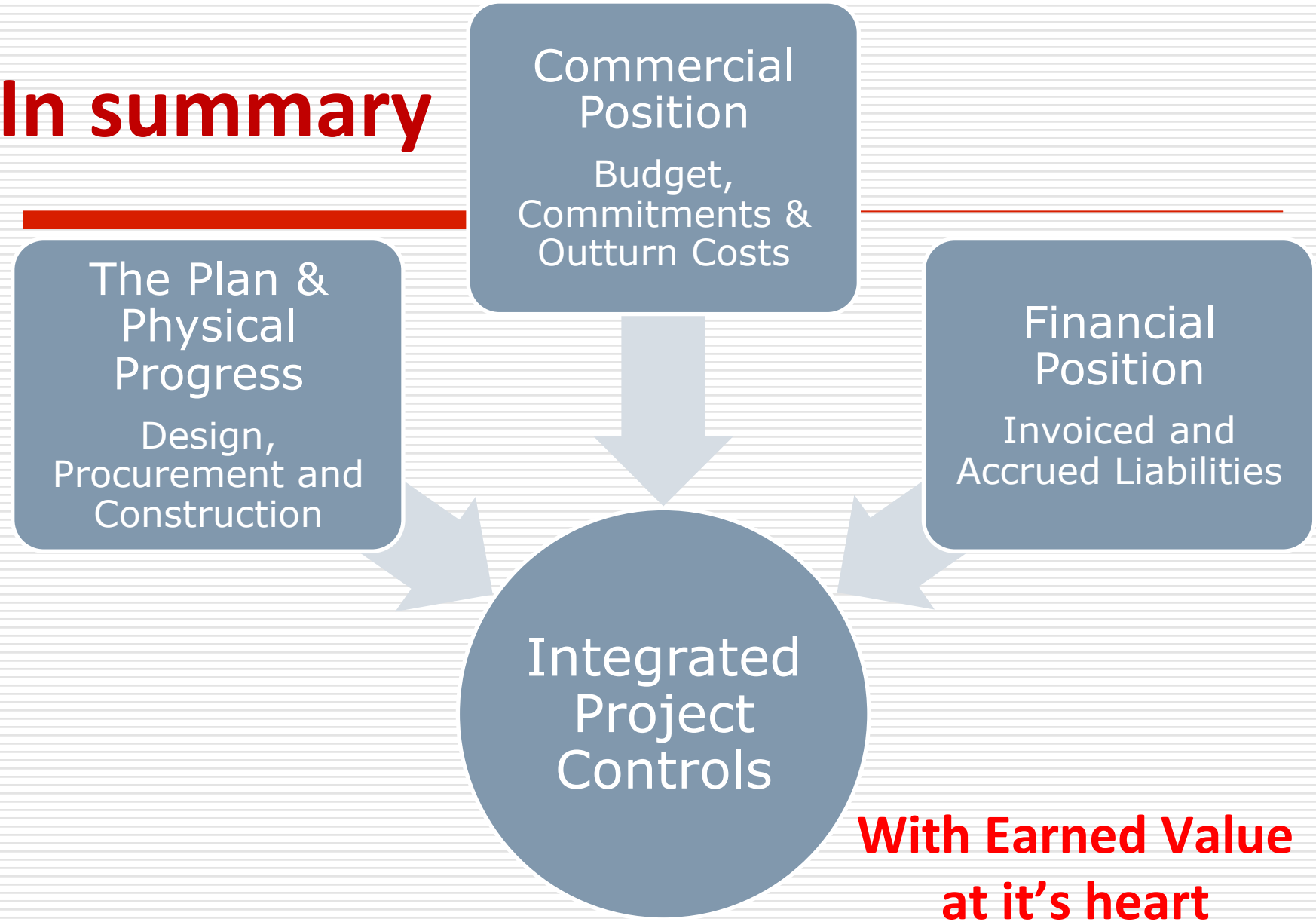
Creating a Control Culture

- Do not under estimate the effort required to set up an effective control system
- Once set up the team and contractors need to understand how it will work
- Training is essential (team, contractor and executive)
- Establishing a culture will take time, start early.....
- **The time and effort will be worth it**

London 2012 - Maturity Timeline



In summary



With Earned Value at it's heart

Project Controls EXPO

Thank You

Questions

Project Controls EXPO