Project Dashboard Design

Rafael Appe, Ronald Carns, Kristin Dexter, Jaime Jack, Katy Sorrells, Benjamin Srock

Embry-Riddle Aeronautical University Worldwide Campus

Plan, Direct, Control Project

PMGT 614

Instructor: Jimmie Flores

## **Table of Contents**

2
3
4
4
4
6
9
12
13

# List of Figures

Figure 1.	Project Schedule.	5
Figure 2.	Project Risk	7
Figure 3.	Project Quality Control	8
Figure 4.	Project Budget	.0
Figure 5.	Project Dashboard	2

#### Introduction

The dashboard tool provides customers and leadership staff a real-time graphical view of critical project information such as project schedule, costs, issues, quality, and risks. The information is typically posted to a company website offering the customers, leadership and project team with real-time access to project information to providing the progress of the project. While the real-time access to project information in a graphical or chart format is the key benefit of this tool, the other two advantages of the dashboard are its ease of access and up-to-date information (Dow & Taylor, 2015).

#### **Project Dashboard Design**

The below provides a high-level dashboard summary for the schedule, costs, risks, and quality associated with the production of the Poseidon Extreme B1000 bicycle. This dashboard is intended for the customer to utilize to see the progress of the production of their product. The four elements were chosen by the customer to track on the dashboard. Thus the project team created the dashboard to display schedule, risk, quality, and budget.

### Schedule

The schedule and budget update daily for the customer while the risks and quality are updated as needed. The schedule is the most important element for the customer as the project must stay on schedule to enter the market on time; however, the budget is affected by any schedule delays. Thus the customer needs to monitor it closely as well. Reporting the risks and quality allows the customer to observe any issues which can affect the overall schedule and budget giving them the opportunity to work with the project manager and team to determine if corrective action is needed.

The schedule dashboard provides detailed progress of activities that have started or been delayed. The activity start order is pulled from the network diagram or Gantt chart. The

#### PROJECT DASHBOARD DESIGN

dashboard indicates that period five is the current reporting period, as shown by the green border on the progress diagram. There are eight activities that indicate 0% completed, but only three of them show up in red. The red activities of work package 1.4 were scheduled to start during period five. However, but due to an approved change request triggered by cost overruns, the scope of the project has removed this deliverable from the project. The remaining 0% activities are scheduled to start during period six, and therefore have no status to report at this time, and are indicated with a white status.

Project WBS#	% Complete	Status	Progress (Days)									
1.000.0010000000000	complete		1	2	3	4	5	6				
1.1 Frame Set	100%											
1.1.1 Frame	100%							-				
1.1.2 Handlebar	100%						8	-				
1.1.3 Fork	100%						1	1				
1.1.4 Seat	100%							-				
1.2 Crank Seat	100%							1				
1.2.1 Pedals	100%						-	1				
1.2.2 Bearings	100%							1				
1.2.3 Crank Arms	100%											
1.2.4 Sprocket	100%						-	1				
1.3 Wheels	100%		1					1				
1.3.1 Front Wheel	100%							1				
1.3.2 Rear Wheel	100%	1.00						1				
1.3.3 Training Wheels	100%		1				15	1				
1.4 Training Wheels	e%						-					
1.4.1 Wheels	chi-						10	1				
1.4.2 Support system	0%						8					
1.5 Braking System	100%		-		-		-					
1.5.1 Levers	100%							F				
1.5.2 Cables	100%		-		-	-	-	t				
1.5.3 Pads / Mechanisms	100%		-			-	-	-				
1.6 Shifting System	108%		-	-			1	-				
1.6.1 Denailers	100%		-	-			-	t				
1.6.7 Cables	100%						1	1				
1.6.3 Levers	100%				-		1	1				
1.7 integration	69%	-					-	-				
1.7.1 Concept	100%		11				1	1				
1.7.2 Design	100%	· · · · · · · · ·	_				-	r				
1.7.3 Assembly	75%						1	1				
1.7.4 Testing	0%						1					
1.7.4.1 Component Test	0%		-				-	h				
1.7.4.2 Product Test	0%						1	Ē				
1.7.4.3 Customer Test	0%							E				
1.8 Phone Dock	100%						-	1				
I.8.1 Mount	100%						-	F				
1.8.2 Power Supply	108%		-				-	-				
1.8.3 Bluetooth	100%						-	1				
1.9 Project Management	75%	_	25%				E	E				
1.9.1 Initiation	100%				-	-	-	F				
1.9.2 Freliminary Plan	100%						1	-				
1.9.3 Planning	100%		-				-	-				
1.9.4 Production	50%		-				-	-				
1.9.5 Closeout	0%		-		-		1	1				

Figure 1. Project Schedule.

#### PROJECT DASHBOARD DESIGN

Deliverable 1.7, Integration, is indicating yellow status. This is due to the reported 69% complete, which is slightly behind the scheduled 83% completion schedule during period five. The customer can see that work package 1.7.3 has not been completed yet and therefore is responsible for the yellow status for deliverable 1.7. However, period five is currently in process and the activities that indicate behind at this current snapshot in time may finish on time, and on schedule. The dashboard should be checked at the end of the period to verify the scheduled completion of these activities.

Deliverable 1.9, Project Management, is also indicating slightly behind. The same explanation for 1.7 applies to this deliverable as well. The customer can see that work package 1.9.4 is dragging down the schedule for the overall deliverable. This work package may still complete on time and schedule by the end of period five. The dashboard should be checked at the end of period five for an up-to-date status.

#### Risk

The risk management dashboard reports the risks from the risk register and their current status. This project is reporting two high risks, four moderate risks, and three low risks. The risks indicated in red have been realized to some extent, and the appropriate risk responses have been activated. The project schedule and cost overruns were attributed to the same problem with the training wheels. A change in the project scope was indicated in the risk response to protect the business value of the completed product. The customer approved the removal of deliverable 1.4 which then brought the project back under control. This change also was a risk on the risk register under the title of "Change in Customer Requirements." The impact of the scope change brought the project back under control and therefore was not a negative impact on the project.

No. High Risks         2           No. Moderate Risks         4           No. Low Risks         3           Risk Identified         Action           Risk Identified         Action           Personnel Injury         Accept           Matenal Weakness         Mitigate           Project Schedule Overrun         Mitigate           Project Cost Overrun         Mitigate           Difficult in outsourting subassemblies         Transfer           Phone dock vendor unable to deliver supplies         Mitigate           Change in oustomer requirements         Accept           Rate of defect parts is underestimated         Transfer           Active Risk Responses         Scope change (1.4)           Scope change (1.4)         processed           Contingecy funds used         30%	4 3 h Status Ate ate for ate tor for ate tor	In. Moderate Risks In. Low Risks Isk identified ersonnel Injury fatenal Weakness roject Schedule Overrun roject Cost Overrun ack of Specific Skills ifficult in outsourcing
No. Moderate Risks 4 No. Low Risks 3 Risk Identified Action Stat Personnel Injury Accept Matenal Weakness Mittigate Project Schedule Overrun Mittigate Project Cost Overrun Mittigate Difficult in outsourcing subassemblies Phone dock vendor unable to deliver supplies Change In customer Accept Rate of defect parts is Transfer	3 h Status tte ste ste for for tta tta ter	In. Moderate Risks In. Low Risks Isk identified ersonnel Injury fatenal Weakness roject Schedule Overrun roject Cost Overrun ack of Specific Skills ifficult in outsourcing
No. Low Risks 3 Risk identified Action Stat Personnel Injury Accept Matenal Weakness Mittigate Project Schedule Overrun Mittigate Lack of Specific Skills Transfer Difficult in outsourcing subassemblies Phone dock vendor unable to deliver supplies Change in customer Rote of defect parts is Rate of defect parts is	n Status ate ate ate for for ata ata	Io. Low Risks isk Identified ersonnel Injury tatenal Weakness roject Schedule Overrun roject Cast Overrun calc of Specific Stills ifficult in outsourcing
Personnel Injury Accept Material Weakness Mitigate Project Schedule Overrun Mitigate Lack of Specific Skills Transfer Difficult in outsourcing subassemblies Transfer Phone dock vendor unable to deliver supplies Change in customer requirements Accept Rite of defect parts is underestimated Active Risk Responses Scope change (1.4) processed	nt internationalista internati	ersonnel Injury fatenal Weakness roject Schedule Overrun roject Cost Overrun ack of Specific Skills ifficult in outsoursing
Personnel Injury Accept Material Weakness Mitigate Project Schedule Overrun Mitigate Project Cost Overrun Mitigate Lack of Specific Skills Transfer Difficult in subsourcing subassemblies Phone dock vendor unable to deliver supplies Change in customer requirements Rite of defect parts is Transfer	nt internationalista internati	ersonnel Injury fatenal Weakness roject Schedule Overrun roject Cost Overrun ack of Specific Skills ifficult in outsoursing
Material Weakness Mitigate Project Schedule Overrun Mitigate Project Cost Overrun Mitigate Lack of Specific Skills Transfer Difficult in outsourcing subassemblies Phone dock vendor unable to deliver supplies Change in customer requirements Rate of defect parts is underestimated Active Rink Responses Scope change (1.4) processed	ate	faterial Weakness roject Schedule Overrun roject Cost Overrun ack of Specific Skills ifficult in outsourcing
Project Schedule Overrun Mitigste Project Cost Overrun Mitigste Lack of Specific Skills Transfer Difficult in autsourcing subassemblies Phone dock vendor unable to deliver supplies Change in customer requirements Rate of defect parts is underestimated Accept Accept Scope change (1.4) processed	nte fer nta nta nta fer	raject Schedule Overrun raject Cast Overrun ack of Specific Skills ifficult in autsourcing
Project Cost Overrun Mittigste Lack of Specific Skills Transfer Difficult in outsourring subassemblies Transfer Phone dock vendor unable to deliver supplies Change in customer requirements Accept Rate of defect parts is underestimated Active Risk Responses Scope change (1.4) processed	nte	roject Cost Overrun ack of Specific Skills ifficult in autsourcing
Lack of Specific Skills Transfer Difficult in outsourcing Subassemblies Transfer Phone dock vendor unable to deliver supplies Change in customer requirements Accept Rate of defect parts is underestimated Active Risk Responses Scope change (1.4) processed	ter tar ta ter	ack of Specific Skills ifficult in outsourcing
Difficult in outsourcing subasssemblies Phone dock vendor unable to deliver supplies Change in customer requirements Rate of defect parts is underestimated Active Risk Responses Scope change (1.4) processed	tor ata a fer	ifficult in autsourcing
subasssemblies Frankror Phone dock vendor unable to deliver supplies Change in customer requirements Rikte of defect parts is underestimated Active Risk Responses Scope change (1.4) processed	nto n fer	
Unable to deliver supplies Mitigate Change in customer requirements Ride of defect parts is Underestimated Active Risk Responses Scope change (1.4) Processed	n fer	ubasssemblies
Change in customer requirements Accept Rise of defect parts is underestimated Transfer Active Risk Responses Scope change (1.4) processed	ter	
Rate of defect parts is underestimated Active Risk Responses Scope change (1.4) processed		hange in customer
Active Risk Responses Scope change (1.4) processed		and an other station of all the state of the
Active Risk Responses Scope change (1.4) processed		
Scope change (1.4) processed		
Scope change (1.4) processed	105	Active Risk P
Contingecy funds used 30%		
Party and the second	3095	ontingecy funds used

## Figure 2. Project Risk

The active risk responses up to this reporting point in the project have been a change in project scope and the commitment of a portion of the contingency funds. Each risk response indicates green status which represents that the responses have had the desired effect on returning the project to a controlled status. Other than green status indicates that the planned responses were ineffective at returning the project to a controlled status, and an additional response is required.

### Quality

The customer's reputation will be damaged if the project does not meet a specific quality standard. Damage to the organization's reputation will affect future sales and operations. For this reason, the customer has defined quality as a KPI.

The quality dashboard lists current statuses of specific quality functions. The dashboard indicates that there are two deviations from the product specification as displayed by the yellow box. From this information, the customer can drill down to see that the two deviations that have been detected are pending PM approval for corrective action.

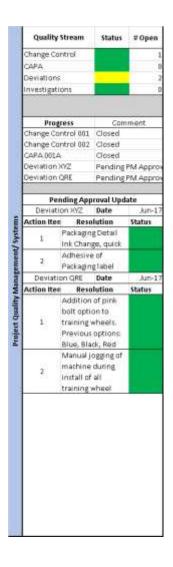
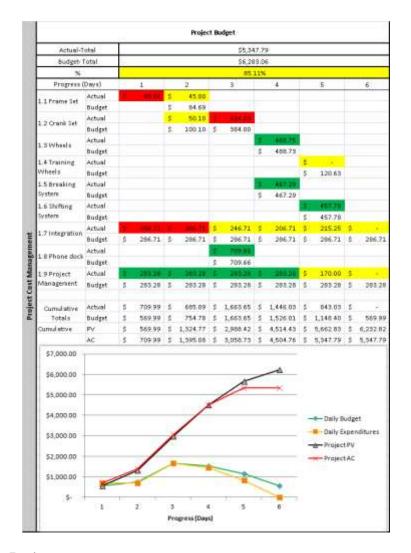


Figure 3. Project Quality Control

The next lower section provides detail as to each deviation resolution action and the team's progress at implementing the solution. Each identified deviation on the dashboard has two resolution/action items. These items will address how the quality deviation is resolved. Resolution is either acceptance of the deviation through redefining the product specification or correcting the deviation. The correction may require rework of the components and therefore will require additional funding.

#### **Budget**

The budget dashboard provides the actual total of the current project versus the budgeted total before the start of production. Currently, the project is at 85% of the planned budget. Each work package is also broken down to provide the actual cost of the work versus the budgeted cost. Each work package for each period has a planned budget with a specific color code assigned for any deviations of the planned budget. Red indicates the actual costs exceeded the budget, yellow indicates actual costs are under budget and green indicates the actual costs did not deviate at all from the budget. Looking at work package 1.1, period one, the actual costs exceed budget, and thus the box is highlighted. However, it does not mean the entire project will go over budget, only that the actual costs for that particular work item exceeded costs. Therefore, the team will need to monitor the work in 1.1 closely to avoid additional costs overruns for that work package.



#### Figure 4. Project Budget

Continuing to work package 1.2 both items deviated from the budget with one item highlighted yellow indicating an under budget actual cost. The cost overrun continues and worsens in period three, turning the status red. The next item, 1.3, maintained the planned budget in actual costs and is highlighted green. Work package 1.4 has been removed from the scope of the project, but the original budget amount is still indicated for this deliverable. Deliverables 1.5 Braking System and 1.6 Shifting systems did not deviate from the budget which is indicated with the green color code. Deliverable 1.7 Integration shows several deviations in each period whether the actual costs were over or under the planned costs. Time periods one and two indicate an overrun in costs, while time periods three through five were below the planned budget. Work has not yet begun for period six. The work for the last two work packages, 1.8 Phone Dock and 1.9 Project Management, are highlighted green for no deviations except for period five due to work still in progress.

Overall, the project looks to stay on budget if the team monitors the rest of the project closely and takes corrective action for any items looking to exceed budget. The team will also need to investigate why some of the actual costs deviate on the lower side of the budget for the future production of these bicycles. The budget dashboard provides the customer with the desired information breaking down the budget for each work package in each period to see how the costs are being broken out for this project.

# Appendix A

Froject WBS#	5	Status	P	nogres	s (Days)		Date	25-Jun		Quality Stream	Status	# Open						P	oject D	udget					
6.084550.03550	Complete		1 1	9	4 5	6	No. High Risks	2		Change Control	0	4		Actual Te	tat	1				25,34	7.79				
1.1 Frame Set	100%						No. Moderate Risks	4		CAPA		0		fudget-T	etal .					\$6,20	3.08				
1.1.1 Frame	100%						No. Low Risks	3		Deviations		2				-				85.1	194				
1.1.2 Haridlebar	100%						000100000000000000000000000000000000000	10 GS	- 3	Investigations		0		Progress II	10/16)		1	2		3	4	5.	6.		
1.1.3 Fork	100%						Risk Identified	Action Sta	tus					2202	Actual	1	10.35	\$ 45	0.0	~					
1.1.4 Seat	100%						Personnel Injury	Accept					1.1.	Frame Set	tudget			\$ 84	49						
1.2 Crank Sent	100%						Material Weakness	Mitigate		Progress	Com	ment		Crienk Set	Actual			2. 55	10.	1.2.2					
1.2.1 Pedals	100%						Project Schedule Overrun	Mitigate		Change Control 001	Closed	00N00 77	1.21	Cristik Set	Budget			1 100	10 1	884.00					
1.2.2 Bearings	100%						Project Cost Overnun	Mitigate		Change Control 002	Closed		Change Control 002 Closed		1.00	Wheels	Actual					1. 199	T 418.75		
1.2.3 Crank Arms	100%						Lack of Specific Skills Transfer		GAPA 001A	filosed		1.51	everes.	Budget.						\$ 466.73	-				
1.2.4 Spracket	100%						Difficult in outsourcing	Transfer		Deviation XV2	Pending	sing PM Approv		Framing Actual	Actual							5 -			
1.3 Wheels	100%						subasssemblies	Transfer.		Deviation QRE	Pending	PM Approv	Whe	eda .	Budget							3 120.6	8.1		
1.3.1 Front Wheel	100%						Phone dock vendor	in the second		Sector Western	- 1192-0110	svimiaisy.	151	breaking	Actual					1	2 847.08	19 10380			
1.3.2 Rear Wheel	100%						unable to deliver supplies	Mitigate		Pending Appr	oval Upd	ate	tyst	20	Budget						\$ 467,29	-			
1.3.3 Training Wheels	100%						Change in customer	1000		Deviation XVZ	Date	Jun-17	Jun-17	183	Shifting	Actual	il.						1 817.7		
1.4 Training Wheels	0%				1.00		requirements	Accept		Action Resol	ution	Status	Syst	1879	dudget.							5 457.7	3		
1.41 Wheels	0%						Rate of defect parts is	automatical line		Packaging	Detail		10.00		Actual	1	10011	-	10.1	246.71	\$ 206.71	\$ 215.2	÷ -		
1.4.2 Support system	0%						Underestimated	Transfer		Ini: Chang	e, quici		111/1	Integration	Budget	α.	206.71	5 305	71 5	206.71	\$ 206.73	3 266.7	2 286.7		
1.5 Braking System	100%						E			Adhestve	at		£	SE 1003	Actual					708-se					
5.5.1 Levers	100%						Active Risk R	esponses.	-	2 Packaging	(label		F 184	Phone dock	Budget				1	705.66					
1.5.2 Cables	100%						Scope change (1.4)	processed		Deviation ORE	Date	Jun-17	100	Project	Actual	1	266.28	1 299	10.00	Dela Del	1 259.24	\$ 170.0			
1.5.3 Pads / Mechanisms	100%			-			Contingers funds used	30%		Action Iten Resol	ution	Status			Budget	31	185.28	\$ 283	28 E	209.28	\$ 289.28	\$ 263.2	5 263.2		
1.6 Shifting System	100%			-			· · · · · · · · · · · · · · · · · · ·	10000		Addition	of pink		8		0000		20.0.20	- 500	72,00		: CKC500002				
1.6.1 Denalers	100%				- 65		traject			bolt optio			¥	mulative	Actual	8	709.95	5 605	3 . 90	1,663.65	\$ 1,446.03	5 849.0	1 5 -		
1.6.2 Cables	100%				E.S.		2			1 training w	menels.		<b>T</b>		Budget	5	569.99	\$ 754	78 5	1.661.65	\$ 1,526.01	5 1.140.4	569.9		
1.6.9 Levers	100%				100					Previous	iptions		Curr	witte	PV .	5.	565.90	\$ 1,324	77 ±	2,968.43	5 4.514.43	\$ 1,662.8	5 6,752.8		
1.7 Integration	69%				1					Blue, Blad	k, Red		10.00		AC	8	709.95	\$ 1,595	2 80	3.058.73	\$ 4,504.76	\$ 5.847.7	\$ 5,347.7		
1.7.1 Concept	100%	1								Manual jo	eging of		1.1	7.000.00 -											
1.7.2 Design	100%									mathing			12	100000											
1.7.3 Accembly	25%				13					2 install of a	48		1.00	6.000.00							-4				
1.7.4 Testing	0%	_								training w	hool		107	2,2224,224						to	-				
1.7.4.1 Component Test	0%												1.5	5,000.00						1	~				
1:7.4.2 Product Test	0%																		1	22					
1.7.4.3 Customer Test	0%												5	4.000.00									Budget.		
1.8 Phone Dock	100%																	/					Expenditures		
5.8.1 Mount	100%												5	5,000.00				A			_		661 C		
1.8.2 Power Supply	100%																/					-B-Prop	ETPV		
1.8.3 Bluetooth	100%												- 5	2,000.00			/					Froj	ctAC		
1.9 Project Management	25%	-			13								1.2			-	6/		-	-					
1.9.1 Initiation	100%	-											1.2	1.000.00	10	-				-	-				
1.9.2 Preliminary Plan	100%																				-				
1.9.3 Flanning	100%													100	1	1 8	2	S 11	4						
1.9.4 Production	60%	-			1 1 3										1	- 8	5	Progress	Davel	- ST	(B)				
1.9.5 Closeout	0%				1		24											- contraster	and a						

Figure 5. Project Dashboard

## References

Dow, W., & Taylor, B. (2015). *Project management communication tools*. Renton, WA: Dow Publishing, LLC.