



TSP
The Solid Project

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Report #3

Client: Northrop Grumman

California State University San Marcos

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EXECUTIVE COMMUNICATION

Thomas Usrey
Northrop Grumman
16765 W. Bernardo Dr.
San Diego, CA 92127

Dear Mr. Usrey,

Thank you for meeting with us for Prototype I on March 13. Since our last meeting, we have made the appropriate revisions to our previous report. Phase III concludes an updated project requirement list, a product breakdown structure in hierarchical form, and a work breakdown structure in hierarchical form. During this phase of the project, we have began researching alternative frameworks in which the workflow tree can render. We have explored both WAMP and XAMPP as potential backends. Our goal for Phase IV is to completely implement administrator mode for the workflow widget, add the node collapse feature, add the zoom feature, and add the custom CSS theme feature.

So far, our project has accrued an approximate cost of \$6,931.00 with an estimated completion cost of \$15,051.00

If you have any questions or concerns regarding the project, please do not hesitate to contact us via email or Slack. We are very excited to work with you and look forward to our next meeting where we will present our Prototype II.

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew Affa", is written over a light gray horizontal line.

Matthew Affa
Project Lead
solidprojectcsusm@gmail.com

CC: Dr. Shaun-Inn Wu

Stakeholder Approval

I _____(print), approve the current project and continuation under the predetermined terms by The Solid Project team, will provide any non-confidential materials that contributes to the overall success of the project, and will allow The Solid Project team to manage all deliverables set by the project sponsor.

Client Signature: _____ Date: ____/____/____

Application Development

Business Context

Northrop Grumman is an American global aerospace and defense technology company. They develop integrated Communications, Navigation and Identification systems for tactical aircraft, covert communications and tactical radio systems for the Department of Defense and other national security clients. Their product development involves mechanical, electrical, software, and engineering.

Business Problem

Northrop Grumman works on multiple projects that vary in size across multiple organizations. As they continue to grow, leaders are required to manage more projects and more people. The company currently uses homegrown workflow applications and data management solutions to manage their processes and need a software solution for collecting, analyzing, controlling data. Northrop Grumman would like to standardize their workflow and bring more interactive visualizations to increase tool efficiency while maintaining the best user experience for workflow, layout, and scheduling (Gantt).

Project Proposal

We propose a Web-based workflow visualization tool using a widget. This widget will be styled using CSS and have the functionalities that include adding multiple workflow objects, altering / adding workflow status, and displaying capabilities within Northrop Grumman's supported browsers.

Statement of Deliverables

- Working widget will be able to take in JSON information and display it in a workflow diagram.
- Widget will be dynamic so user can add (including insert), remove, edit and update existing workflow states.
- Workflow widget will have new features such as admin mode, zoom, node collapse/expansion, and have a new theme with custom options.
- Second working widget will display a visual representation of the Northrop Grumman manufacturing shop floor.
- Will work on IE11+, Firefox 45+, and on Edge.
- Documentation
- Source Code

What form or medium will your deliveries be in:

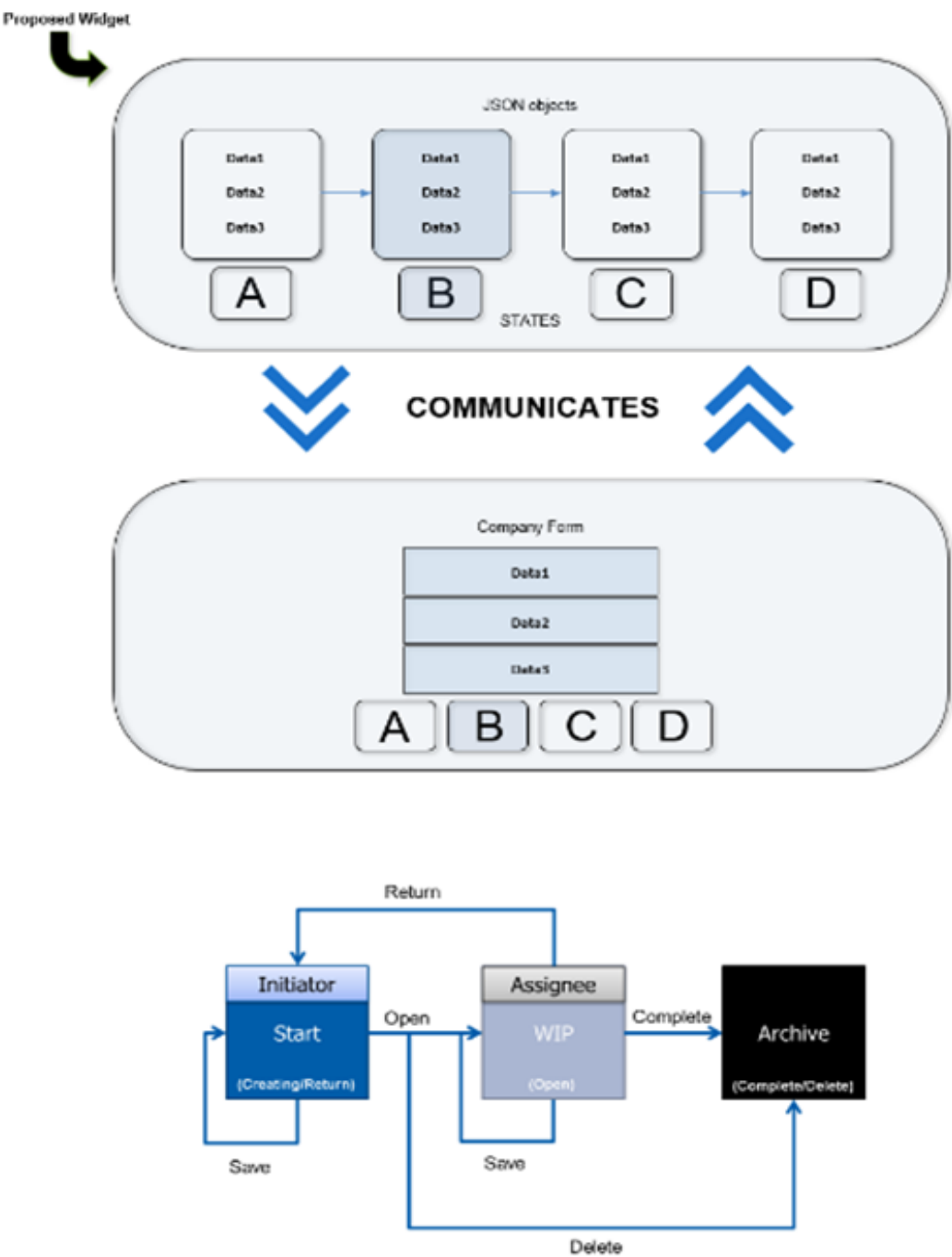
Executable source code customer can run on their local machine via web browser (IE+11, Firefox 45+, and Edge)

Project Measures of Success Outline

<u>Phase</u>	<u>Details</u>
1	<ul style="list-style-type: none"> ● Hold JAD1 meeting on site at. 2/8/18 <ul style="list-style-type: none"> ○ Discuss communication method. ○ Discuss the customer's problem. ○ Define project scope and requirements. ○ Request source code from previous group. ● Set up tools for project. <ul style="list-style-type: none"> ○ Slack for communication. ○ Google Drive for documentation. ○ Trello for task management. ○ Github for development platform.
2	<ul style="list-style-type: none"> ● Research & Review Vortek Solutions documents and source code. ● Hold JAD2 meeting on site. <ul style="list-style-type: none"> ○ Discuss issues and concerns. ○ Confirm project requirements. ○ Review Report 1. ● Finalize Report 1.
3	<ul style="list-style-type: none"> ● Download and Run Vortek Solutions source code ● Implement Admin Interface Prototype. ● Finalize Report 2. <ul style="list-style-type: none"> ○ Hold Prototype 1 meeting on site. ○ Present admin interface prototype. ○ Get feedback. ○ Discuss briefly next phase of the project. ● Make changes to admin interface prototype if needed.
4	<ul style="list-style-type: none"> ● Implement different themes for workflow diagram. ● Finalize Report 3. ● Hold Prototype 2 meeting on site. <ul style="list-style-type: none"> ○ Present themes for workflow diagram prototype. ○ Get feedback. ○ Discuss briefly next phase of the project. ● Make changes to workflow diagram prototype if needed.
5	<ul style="list-style-type: none"> ● Implement shop floor visualization. ● Thorough testing of all functionalities.

	<ul style="list-style-type: none"> Finalize Report 4. Present final product.
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Visual Representation



Requirements Matrix

Requirement #	Requirement Description	Task ID	Implemented (Yes/No)
R1	Widgets will run on IE 11+.	50	YES
R2	Widgets will run on Firefox 45+.	50	YES
R3	Widgets will run on Edge.	50	YES
R4	Workflow widget will receive JSON data from source, including incomplete data. Must save in the same format as received.	50	YES
R5	Widget will render data in a workflow diagram.	50	YES
R6	Workflow widget will be interactive to the browser.	64	YES
R7	Widget will display a shop floor visualization.	67	NO
R8	Workflow widget will self contain D3 object.	50	NO
R9	Workflow widget theme can be styled with CSS.	53	NO
R10	Workflow widget will have an admin mode (edit, insert node, add branch)	40	NO
R11	Workflow widget will have zoom feature	55	YES
R12	Workflow widget will have node collapse/expand feature	54	YES

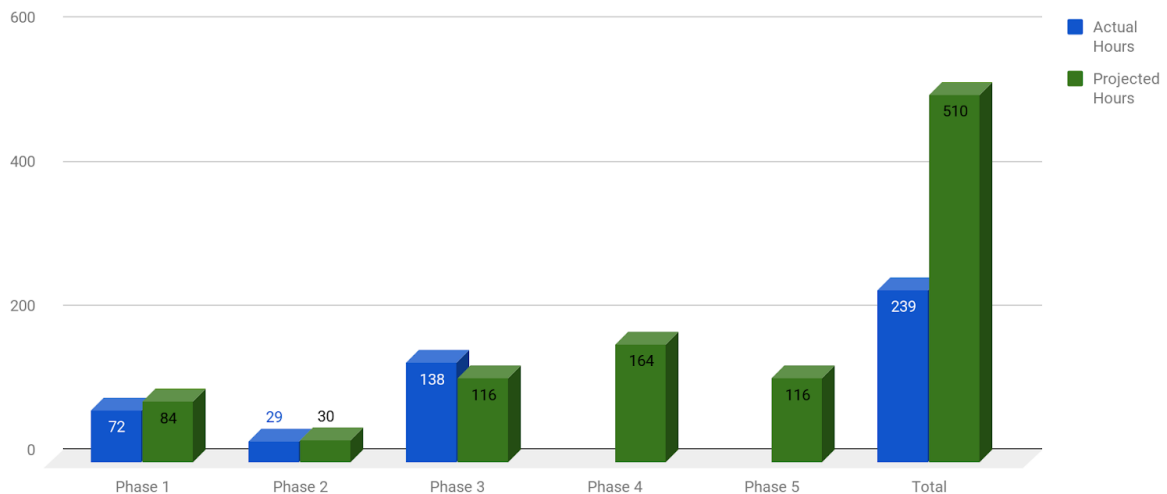
Project Management

Initial Project Cost Tracking Chart

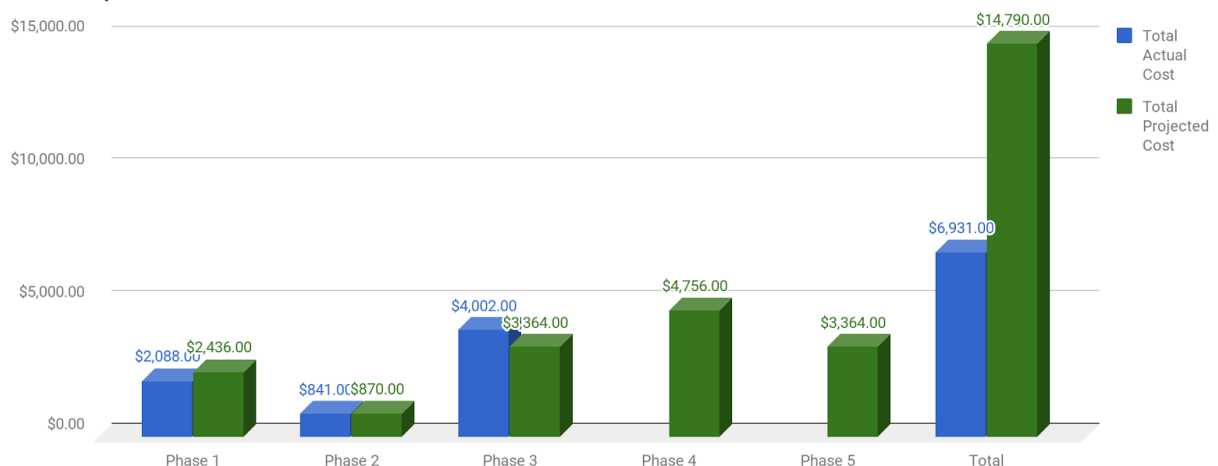
Project Milestone				Total Project Cost Estimate			
Phases	Actual Hours	Rate	Total Actual Cost	Phases	Projected Hours	Rate	Total Projected Cost
Phase 1	72	29	\$2,088.00	Phase 1	84	29	\$2,436.00
Phase 2	29	29	\$841.00	Phase 2	30	29	\$870.00
Phase 3	138	29	\$4,002.00	Phase 3	116	29	\$3,364.00
Phase 4				Phase 4	164	29	\$4,756.00
Phase 5				Phase 5	116	29	\$3,364.00
Total	239		\$6,931.00	Total	510		\$14,790.00

We are currently in Phase 4. The projected cost for this phase is \$4,756 and is due April 17, 2018.

Actual & Projected Hours



Actual & Projected Cost

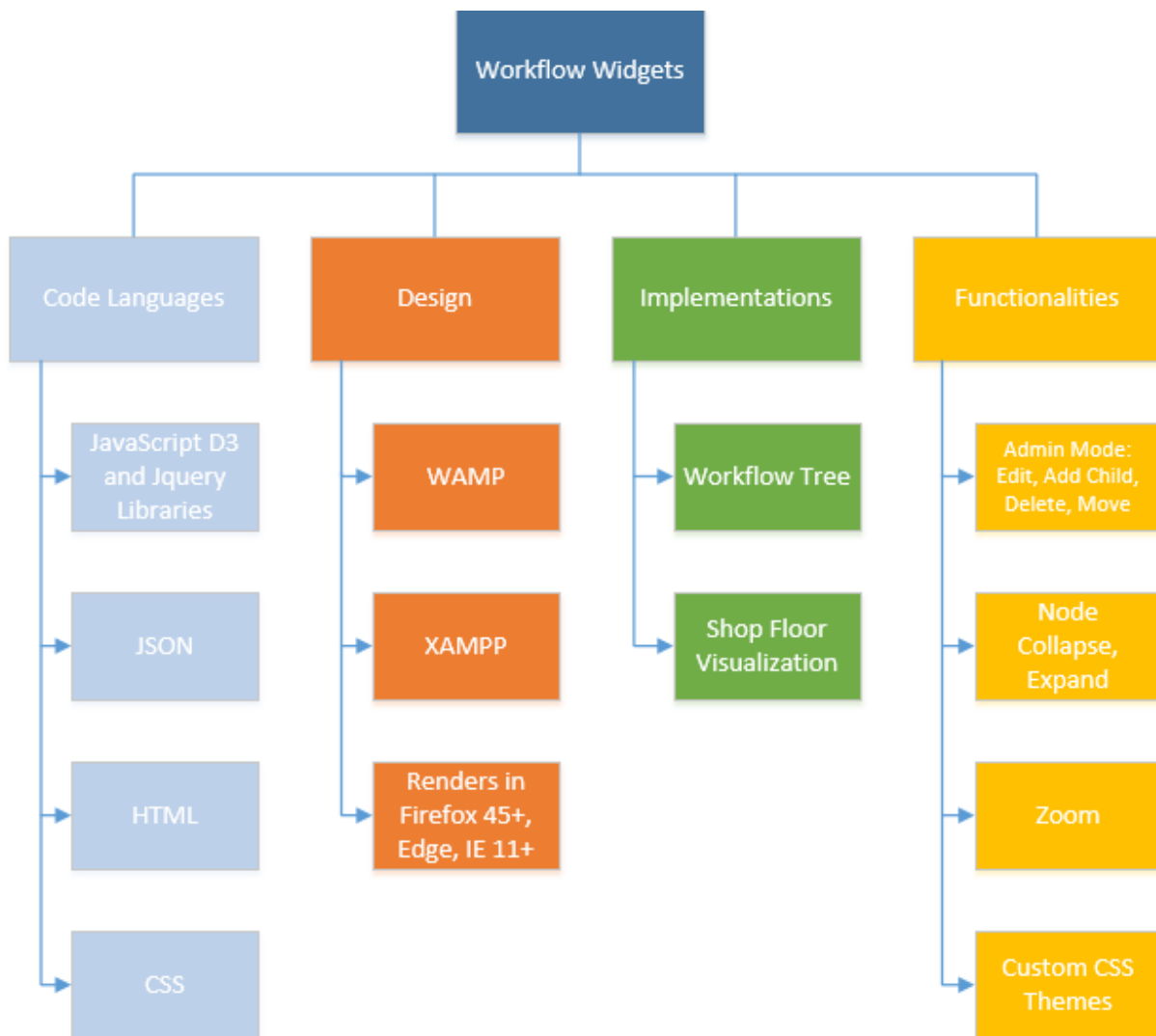


Schedule of Tasks

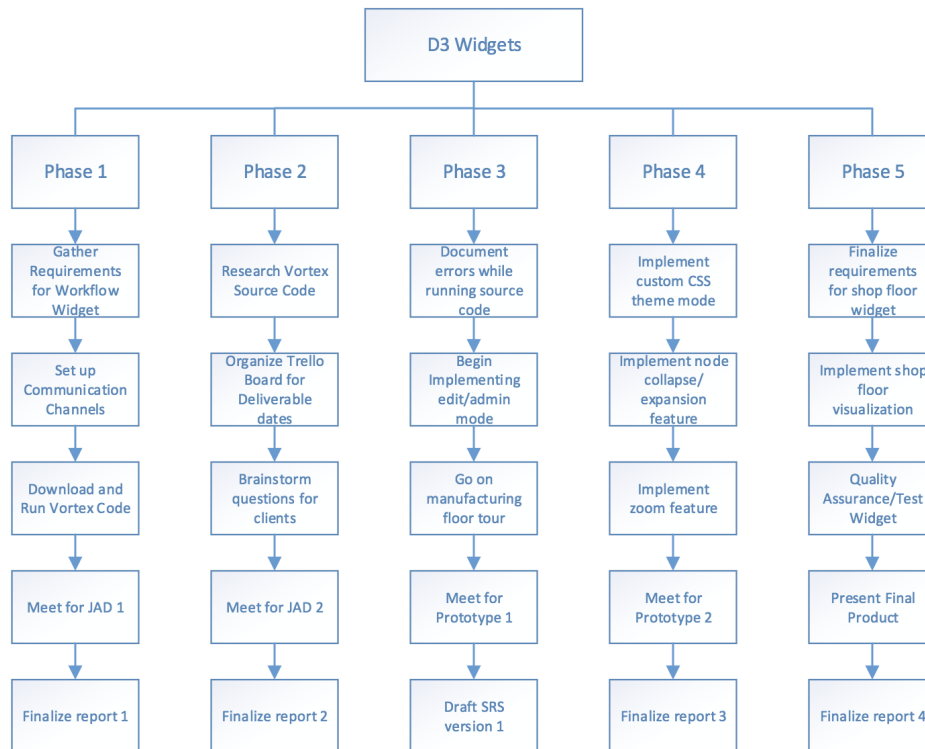
ID	TASK NAME	DURATION	START	FINISH	TEAM MEMBER	% COMPLETED
1	Phase 1 (Week 2- Week 5 ends 2/20)					
2	Design business logo & prepare business cards/ name tags	2	2/2/2018	2/3/2018	Crystele	100.00%
3	Finalize business cards	1	2/5/2018	2/5/2018	Crystele	100.00%
4	Purchase Avery Printable Template Paper for business cards, name tags, and name tag badges	2	2/6/2018	2/6/2018	Crystele, Henry	100.00%
5	Print business cards & name tags	0.5	2/7/2018	2/7/2018	Crystele	100.00%
6	Collect photos of each team member	0.5	2/6/2018	2/6/2018	Crystele	100.00%
7	Define and appoint team roles to each team member	2	2/1/2018	2/1/2018	All	100.00%
8	Obtain Project Management Software & Create Trello Board	1	2/1/2018	2/1/2018	Crystele	100.00%
9	Download MS Project from CSUSM apps	4	2/1/2018	2/1/2018	All	100.00%
10	Define mission & scope	4	2/5/2018	2/7/2018	All	100.00%
11	Draft possible company mission statement,objective, and team norms	8	2/5/2018	2/7/2018	All	100.00%
12	Schedule Initial meeting to obtain user requirements	1	2/6/2018	2/6/2018	Matt	100.00%
13	Documentation: Prepare JAD1 Meeting Agenda	2	2/6/2018	2/6/2018	Crystele	100.00%
14	JAD1: Think of specific questions for Client	8	2/6/2018	2/7/2018	All	100.00%
15	Meet with Client and Dr. Wu for JAD1	4	2/8/2018	2/8/2018	All	100.00%
16	Finalize JAD1 Agenda Meeting Notes and Email JAD1 Agenda to Client & Dr. Wu	2	2/8/2018	2/8/2018	Matt, Crystele	100.00%
17	Obtain Vortek Solution Source Code & GitHub information and Upload to Team GitHub	2	2/13/2018	2/13/2018	Matt	100.00%
18	Set-Up Slack Communication & Give Team Members Access	1	2/1/2018	2/1/2018	Crystele	100.00%
19	Set-Up Google Drive & Give Team Members Access	1	2/1/2018	2/1/2018	Crystele	100.00%
20	Set-Up & Each Team member has access to the Trello Board to Manage Project	1	2/1/2018	2/1/2018	Crystele	100.00%
21	Set-Up GitHub for Development Platform	1	2/1/2018	2/1/2018	Henry	100.00%
22	Review & Research technologies used in previous project	12	2/13/2018	2/18/2018	All	100.00%
23	Meeting with Dr. Wu regarding JAD1 Meeting & Report 1 Draft	4	2/15/2018	2/15/2018	All	100.00%
24	Make Corrections to Report 1	8	2/15/2018	2/20/2018	All	100.00%
25	Phase 2 (Week 4 - Week 5 ends 2/20)					
26	Research and Review Vortek Solutions Documentation and Source Code	12	2/15/2018	2/20/2018	All	100.00%
27	Organize Trello board w/ due dates, documentation requirements, assigning task cards, etc	2	2/1/2018	5/15/2018	Crystele	100.00%
28	Documentation : Draft JAD2 Meeting Agenda	4	2/17/2018	2/18/2018	Matt, Crystele	100.00%
29	JAD2: Think of specific questions for Client	1	2/16/2018	2/18/2018	All	100.00%
30	Meet with Client and Dr. Wu for JAD2	4	2/19/2018	2/19/2018	All	100.00%
31	Finalize JAD2 Agenda Meeting notes and Email JAD2 Agenda to Client & Dr. Wu	2	2/19/2018	2/19/2018	Matt, Crystele	100.00%
32	Finalize Report 1 Corrections	4	2/15/2018	2/19/2018	All	100.00%
33	Phase 3 (Week 5 - Week 8)					
34	Download and Run Vortek Solutions source code	3	2/23/2018	2/25/2018	Henry,Matt,Victor	100.00%
35	Meeting with Broc from Vortek Solutions to obtain a better understanding of previous project	4	2/22/2018	2/22/2018	All	100.00%
36	Download all dependencies for source code	1	2/23/2018	2/25/2018	All	100.00%
37	Document any errors and successes in running source code	1	2/23/2018	2/25/2018	All	100.00%
38	Angular 2 Implement Admin Interface Prototype and document any roadblocks,errors, and successes	36	2/26/2018	3/13/2018	All	100.00%
39	Angular 2 Changes/Edit Admin Interface Prototype	16	2/26/2018	3/13/2018	All	100.00%
40	Documentation: Prepare & Draft Report 2	20	2/23/2018	2/26/2018	All	100.00%
41	Meeting with Dr. Wu regarding JAD2 Meeting & Report 2 Draft	4	3/1/2018	3/1/2018	All	100.00%
42	Make corrections to Report 2	8	3/2/2018	3/5/2018	All	100.00%
43	Finalize Report 2	4	3/5/2018	3/5/2018	All	100.00%
44	Schedule & Confirm manufacturing tour with client	1	2/26/2018	2/26/2018	Matt, Crystele	100.00%
45	Manufacturing Tour at NGC	4	3/6/2018	3/6/2018	All	100.00%
46	Schedule & Confirm Prototype I meeting	1	2/26/2018	2/26/2018	Matt, Crystele	100.00%
47	Draft SRS version 1	8	3/8/2018	3/18/2018	All	100.00%
48	Team Zoom Meeting	4	3/8/2018	3/8/2018	All	100.00%
49	Documentation & Team Meeting 3/11 : Prepare & Draft Prototype I Meeting Agenda	18	3/10/2018	3/12/2018	All	100.00%
50	Meet with Client and Dr. Wu for Prototype I	4	3/13/2018	3/13/2018	All	100.00%
51	Finalize Prototype I Meeting Agenda Notes and Email Meeting Agenda to Client & Dr. Wu	1	3/13/2018	3/15/2018	Matt, Crystele	100.00%
52	Phase 4 (Week 9 - Week 12)					
53	Draft Implement Code different themes for workflow diagram	36	3/16/2018	3/24/2018	All	100.00%
54	Draft Implement Code node collapse/expansion feature	36	3/24/2018	3/29/2018	All	100.00%
55	Draft Implement Code zoom feature	36	3/29/2018	4/3/2018	All	100.00%
56	Research on rendering D3 Library & Research on other technologies/ applications/ tools	36	3/16/2018	3/30/2018	All	75.00%
57	Moving away from Angular 2: Implement Admin Interface & Change/Edit prototype	16	4/3/2018	4/8/2018	All	
58	Documentation: Prepare & Draft Report 3	16	3/15/2018	3/26/2018	All	100.00%
59	Meeting with Dr. Wu regarding Prototype I Meeting and Report 3 Draft Corrections	4	3/29/2018	3/29/2018	All	
60	Make Corrections to Report 3	8	3/29/2018	4/2/2018	All	
61	Finalize Report 3	4	4/2/2018	4/2/2018	All	

62	Schedule & Confirm Prototype II meeting	1	4/3/2018	4/5/2018	Matt, Crystele	50.00%
63	Documentation: Prepare & draft Prototype II Meeting Agenda	2	4/7/2018	4/8/2018	Matt, Crystele	
64	Meet with Client and Dr. Wu for Prototype II	4	4/10/2018	4/12/2018	All	
65	Finalize Prototype II Meeting Agenda Notes and Email Meeting Agenda to Client & Dr. Wu	1	4/10/2018	4/12/2018	Matt, Crystele	
66	Phase 5 (Week 13 - Week 16)					
67	Implement shop floor visualization	40	4/13/2018	4/20/2018	All	
68	Quality Assurance / Testing Widget	16	4/20/2018	4/23/2018	All	
69	Documentation: Prepare & Draft Report 4	16	4/16/18	4/19/2018	All	
70	Meeting with DrWu regarding Prototype II Meeting Agenda & Report 4 Draft Corrections	4	4/19/2018	4/19/2018	All	
71	Make Corrections to Report 4	8	4/20/2018	4/22/2018	All	
72	Finalize Report 4	4	4/23/2018	4/23/2018	All	
73	Prepare / Draft Final Product Presentation	16	4/26/2018	5/8/2018	All	
74	Change/Edit Final Product Presentation	8	5/9/2018	5/9/2018	All	
75	Present Final Product	4	5/15/2018	5/15/2018	All	
			*Durations are in hrs			

Product Breakdown Structure



Work Breakdown Structure



Statement of Deliverables

Deliverables	Dates
Report 1	2/20/2018
Report 2	3/6/2018
Prototype 1	3/15/2018
Report 3	4/3/2018
Prototype 2	4/12/2018
Report 4	4/24/2018
Other Deliverables:	
1. SRS	

- 2. Documented Code**
- 3. User Documentation**
- 4. Working Examples**

Outline of Resources

What resources we will need from Northrop Grumman:

- They have provided us with the following material:
 - 1. Vortek Solutions Source Code
 - 2. Project Presentation
- Timely feedback on requirements clarification and approval.
- Northrop Grumman will not provide us with access to their network and production data.

What resources we need from the Instructor:

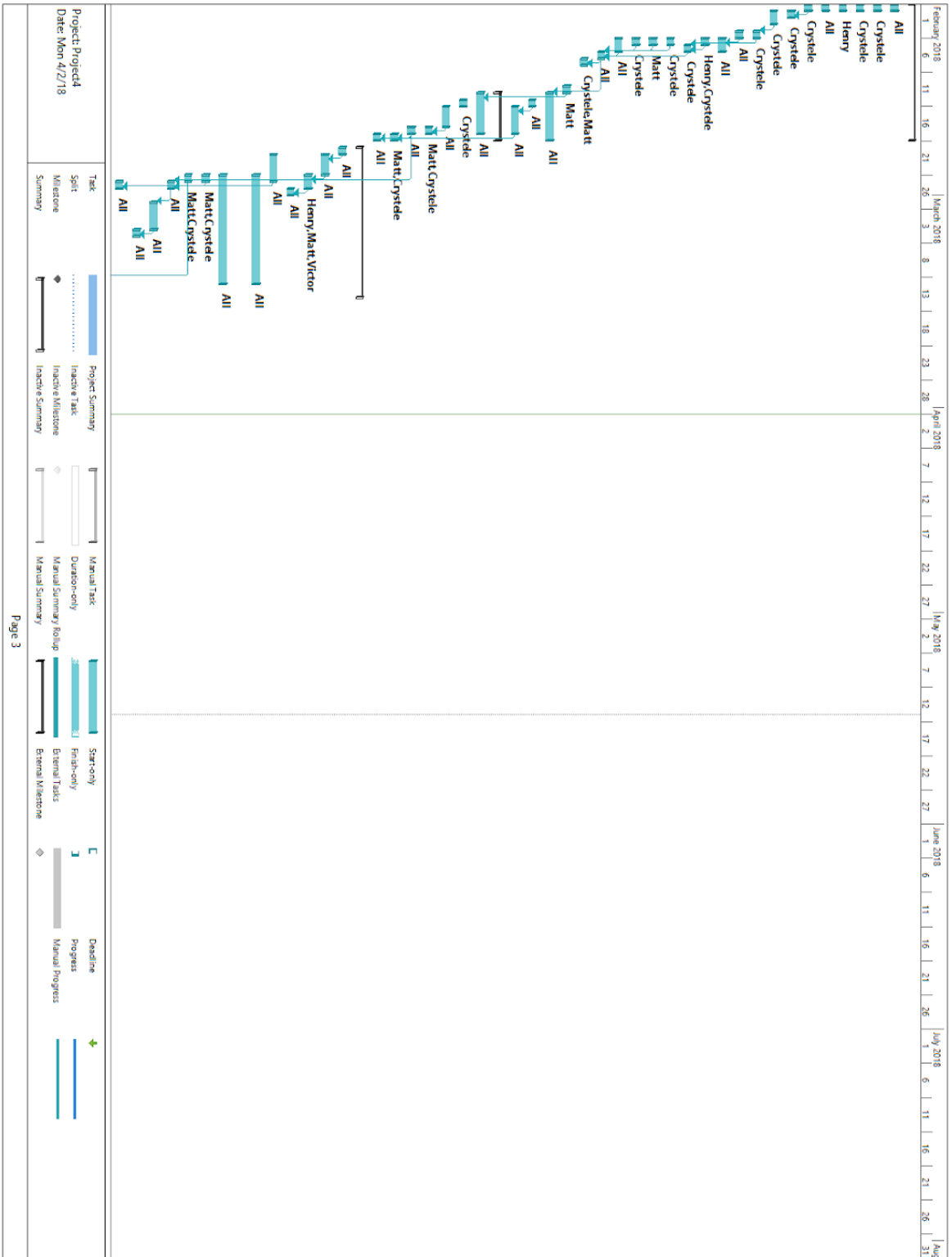
- The instructor needs to give us access to a group server for database, development, and testing.
- Timely response on questions regarding project and guidance.

What resources will TSP: The Solid Project supply:

- Open source software that is needed for development and research purposes
- Github Repository
- Testing environment to show the widget in production
- All research and developed material will be given to Northrop Grumman

Gantt Chart of Major Phases

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Work
1	Phase 1	14 days	Thu 2/1/18	Tue 2/20/18			136 hrs
2	Define and appoint team roles to each team member	1 day	Thu 2/1/18	Thu 2/1/18	All		2 hrs
3	Set-up Slack for Communication & Give Team Members Access	1 day	Thu 2/1/18	Thu 2/1/18	Cristele		1 hr
4	Set-up Google Drive for Documentation & Give Team Members Access	1 day	Thu 2/1/18	Thu 2/1/18	Cristele		1 hr
5	Set-up GitHub for Development Platform & Give Team Members Access	1 day	Thu 2/1/18	Thu 2/1/18	Henry		1 hr
6	Download MS Project from CSUSM apps	1 day	Thu 2/1/18	Thu 2/1/18	All		4 hrs
7	Obtain Project Management Software & create Trello Board	1 day	Thu 2/1/18	Thu 2/1/18	Cristele		8 hrs
8	Set-up & Each Team member has access to the Trello Board to Manage Project	1 day	Fri 2/2/18	Fri 2/2/18	Cristele		8 hrs
9	Design business logo & prepare business cards, name tags	2 days	Fri 2/2/18	Sat 2/3/18	Cristele		16 hrs
10	Finalize business cards	1 day	Mon 2/5/18	Mon 2/5/18	Cristele		8 hrs
11	Define mission & scope	1 day	Mon 2/5/18	Mon 2/5/18	All		4 hrs
12	Draft possible company mission statement/objective, and team norms	2 days	Tue 2/6/18	Wed 2/7/18	All		8 hrs
13	Purchase Avery Printable Template Paper for business cards, name tags, and name tag badges	1 day	Tue 2/6/18	Tue 2/6/18	Henry,Cristele		16 hrs
14	Collect photos of each team member	1 day	Wed 2/7/18	Wed 2/7/18	Cristele		8 hrs
15	Schedule initial meeting to obtain user requirements	1 day	Tue 2/6/18	Tue 2/6/18	Matt		1 hr
16	Documentation: Prepare JAD1 Meeting Agenda	1 day	Tue 2/6/18	Tue 2/6/18	Cristele		2 hrs
17	JAD1: Think of specific questions for Client	2 days	Tue 2/6/18	Wed 2/7/18	All		8 hrs
18	Meet with Client and Dr. Wu for JAD1	1 day	Thu 2/8/18	Thu 2/8/18	14,15,16,17,18	All	4 hrs
19	Finalize JAD1 Agenda Meeting Notes and Email JAD1 Agenda to Client & Dr. Wu	1 day	Fri 2/9/18	Fri 2/9/18	Cristele,Matt		2 hrs
20	Obtain Vortek Solution Source Code & GitHub Information and Upload to Team GitHub	1 day	Tue 2/13/18	Tue 2/13/18	Matt		2 hrs
21	Review & Research technologies used in previous project	5 days	Wed 2/14/18	Tue 2/20/18	All		12 hrs
22	Meeting with Dr. Wu regarding JAD1 Meeting & Report 1 Draft	1 day	Thu 2/15/18	Thu 2/15/18	All		4 hrs
23	Make Corrections to Report 1	2 days	Fri 2/16/18	Mon 2/19/18	All		35 hrs
24	Phase 2	5 days	Wed 2/14/18	Mon 2/19/18			21 hrs
25	Research and Review Vortek Solutions Documentation and Source Code	4 days	Wed 2/14/18	Mon 2/19/18	All		12 hrs
26	Organize Trello board w/ due dates, documentation requirements, assigning task cards, etc	1 day	Fri 2/16/18	Thu 2/15/18	Cristele		8 hrs
27	JAD2: Think of specific questions for Client	2 days	Fri 2/16/18	Sun 2/18/18	All		1 hr
28	Documentation : Draft JAD2 Meeting Agenda	1 day	Mon 2/19/18	Mon 2/19/18	Matt,Cristele		4 hrs
29	Meet with Client and Dr. Wu for JAD2	1 day	Mon 2/19/18	Mon 2/19/18	All		4 hrs
30	Finalize JAD2 Agenda Meeting notes and Email JAD2 Agenda to Client & Dr. Wu	1 day	Tue 2/20/18	Tue 2/20/18	Matt,Cristele		2 hrs
31	Finalize Report 1 Corrections	1 day	Tue 2/20/18	Tue 2/20/18	All		4 hrs
32	Phase 3	16 days	Thu 2/22/18	Thu 3/15/18			160 hrs
33	Meeting with Broc from Vortek Solutions to obtain a better understanding of previous project	1 day	Thu 2/22/18	Thu 2/22/18	All		4 hrs
34	Download all dependencies for source code	2 days	Fri 2/23/18	Sun 2/25/18	All		1 hr
35	Download and Run Vortek Solutions source code	2 days	Mon 2/26/18	Tue 2/27/18	Henry,Matt,Victor		3 hrs
36	Document any errors and successes in running source code	1 day	Wed 2/28/18	Wed 2/28/18	All		8 hrs
37	Documentation: Prepare & Draft Report 2	2 days	Fri 2/23/18	Mon 2/26/18	All		20 hrs
38	Angular 2 Implement Admin Interface Prototype and document any roadblocks/errors, and successes	12 days	Mon 2/26/18	Tue 3/13/18	All		36 hrs
39	Angular 2 Changes/Edit Admin Interface Prototype	12 days	Mon 2/26/18	Tue 3/13/18	All		16 hrs
40	Schedule & Confirm manufacturing tour with client	1 day	Mon 2/26/18	Mon 2/26/18	Matt,Cristele		1 hr
41	Meeting with Dr. Wu regarding JAD2 Meeting & Report 2 Draft	1 day	Tue 2/27/18	Tue 2/27/18	30,38	All	4 hrs
42	Make corrections to Report 2	2 days	Fri 3/2/18	Mon 3/5/18	All		8 hrs
43	Finalize Report 2	1 day	Tue 3/6/18	Tue 3/6/18	All		4 hrs
44	Manufacturing Tour at NGC	1 day	Tue 2/27/18	Tue 2/27/18	41	All	4 hrs





ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Work
47		Draft SRS version 1	3 days	Thu 3/8/18	Mon 3/12/18			8 hrs
48		Team Zoom Meeting	1 day	Thu 3/8/18	Thu 3/8/18		All	4 hrs
49		Documentation & Team Meeting 3/11 : Prepare & Draft prototype I Meeting Agenda	2 days	Sat 3/10/18	Mon 3/12/18		All	18 hrs
50		Meet with Client and Dr. Wu for Prototype I	1 day	Tue 3/13/18	Tue 3/13/18	49,42,47	All	4 hrs
51		Finalize Prototype I Meeting Agenda Notes and Email Meeting Agenda to Client & Dr. Wu	2 days	Wed 3/14/18	Thu 3/15/18	50	Mat,Crys,tele	1 hr
52		Phase 4	24 days	Thu 3/15/18	Tue 4/17/18			212 hrs
53		Documentation: Prepare & Draft Report 3	8 days	Thu 3/15/18	Mon 3/26/18		All	64 hrs
54		Draft Implement different themes for workflow diagram	7 days	Fri 3/16/18	Sat 3/24/18		All	36 hrs
55		Draft Implement node collapse/expansion feature	5 days	Sat 3/24/18	Thu 3/29/18		All	36 hrs
56		Draft Implement zoom feature	4 days	Thu 3/29/18	Tue 4/3/18		All	36 hrs
57		Meeting with Dr. Wu regarding Prototype I Meeting and Report 3 Draft Corrections	1 day	Tue 3/27/18	Tue 3/27/18	53	All	4 hrs
58		Make Corrections to Report 3	2 days	Fri 3/30/18	Mon 4/2/18	57	All	8 hrs
59		Finalize Report 3	1 day	Tue 4/3/18	Tue 4/3/18	58	All	4 hrs
60		Moving away from Angular 2 Implement Admin Interface Change/Edit prototype	5 days	Tue 4/3/18	Sun 4/8/18		All	16 hrs
61		Schedule & Confirm Prototype II meeting	3 days	Tue 4/3/18	Thu 4/5/18		Mat,Crys,tele	1 hr
62		Documentation: Prepare & draft Prototype II Meeting Agenda	2 days	Wed 4/4/18	Thu 4/5/18	54,55,56	Mat,Crys,tele	2 hrs
63		Meet with Client and Dr. Wu for Prototype II	3 days	Tue 4/10/18	Thu 4/12/18		All	4 hrs
64		Finalize Prototype II Meeting Agenda Notes and Email Meeting Agenda to Client & Dr. Wu	3 days	Fri 4/13/18	Tue 4/17/18	63	Mat,Crys,tele	1 hr
65		Phase 5	23 days	Fri 4/13/18	Tue 5/15/18			116 hrs
66		Implement shop floor visualization	5 days	Fri 4/13/18	Thu 4/19/18		All	40 hrs
67		Documentation: Prepare & Draft Report 4	3 days	Mon 4/16/18	Wed 4/18/18		All	16 hrs
68		Meeting with Dr. Wu regarding Prototype II Meeting Agenda & Report 4 Draft Corrections	1 day	Thu 4/19/18	Thu 4/19/18	67	All	4 hrs
69		Quality Assurance / Testing Widget	2 days	Fri 4/20/18	Mon 4/23/18	66	All	16 hrs
70		Make Corrections to Report 4	2 days	Fri 4/20/18	Sun 4/22/18		All	8 hrs
71		Finalize Report 4	1 day	Mon 4/23/18	Mon 4/23/18	70	All	4 hrs
72		Prepare / Draft Final Product Presentation	9 days	Thu 4/26/18	Tue 5/8/18		All	18 hrs
73		Change/Edit final Product Presentation	4 days	Wed 5/9/18	Mon 5/14/18		All	8 hrs
74		Present Final Product	1 day	Tue 5/15/18	Tue 5/15/18	73	All	4 hrs

Project Project4

Date: Mon 4/2/18

Task

Split

Milestone

Summary

Project Summary

Project Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

External Milestone

Deadline

Progress

Manual Progress

