



Release Lanyard Project

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Team 5

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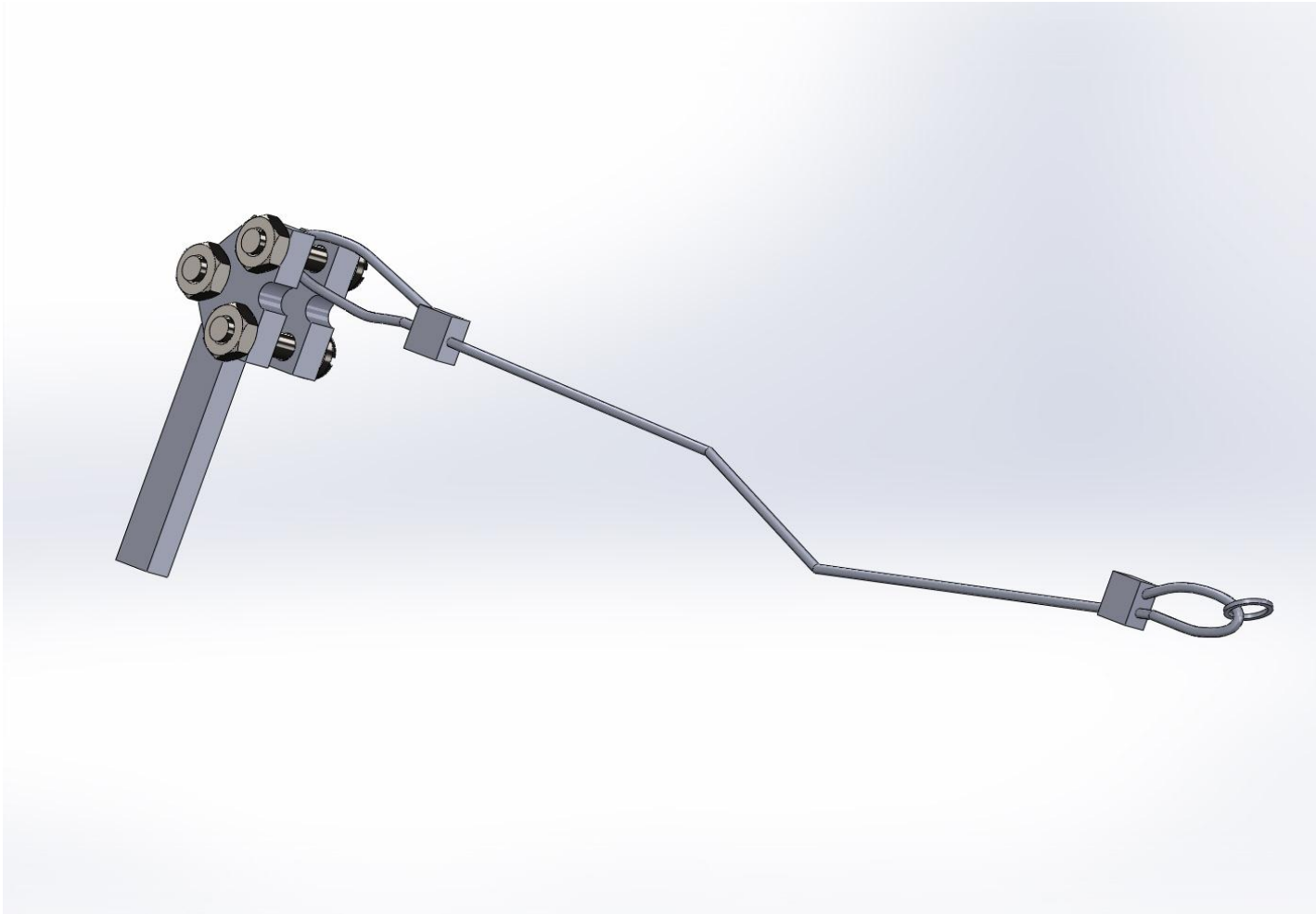
Overview

- ▶ Problem Statement
- ▶ Current Design
- ▶ Design Concepts
- ▶ Design Selection
- ▶ Gantt Chart
- ▶ Conclusion
- ▶ References

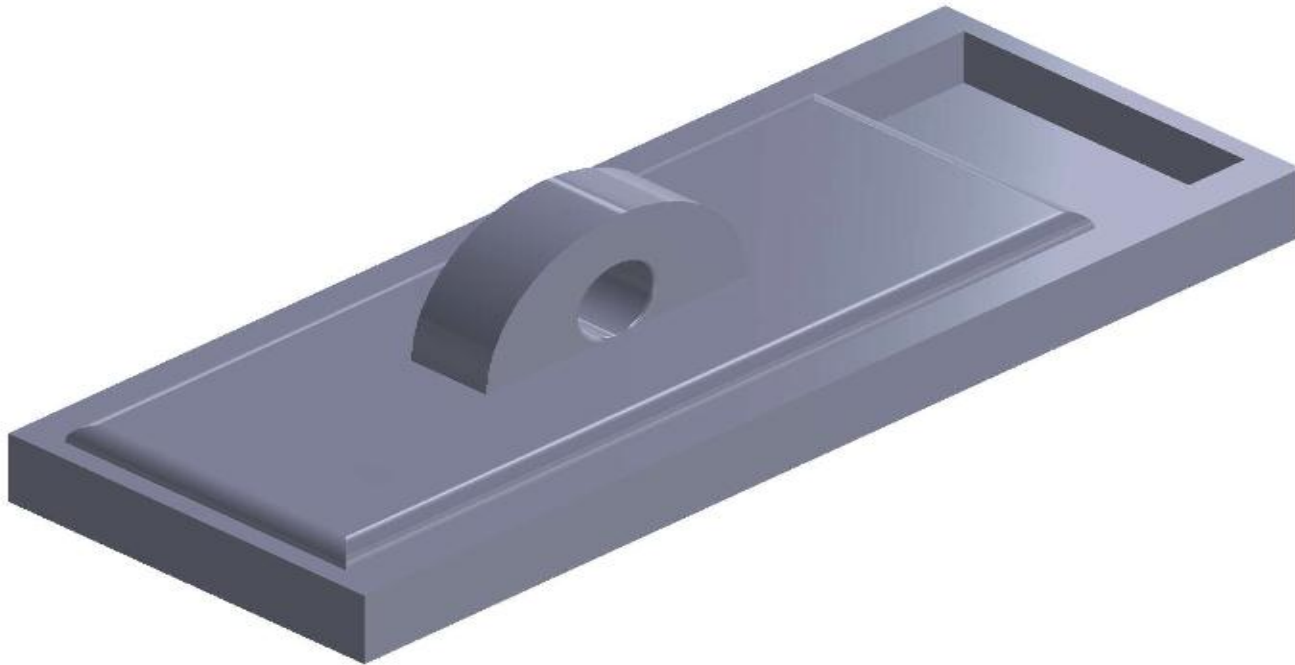
Problem Statement

- ▶ Issues with freezing temperatures and debris
- ▶ Issues not activating weapons system
- ▶ Issues with poor installation

Current Lanyard Design



Slider Assembly Design

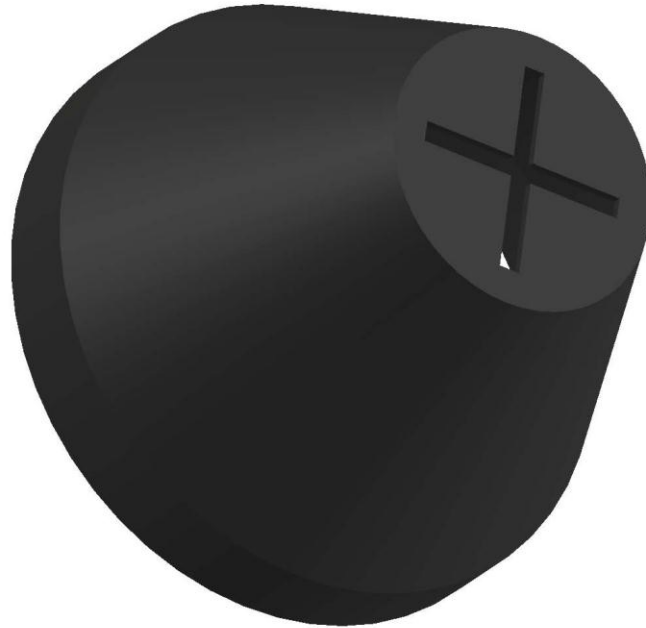


Design Matrix

Scale	
1	Terrible
2	
3	
4	
5	Moderate
6	
7	
8	
9	
10	Excellent

Activation Arms				
Criteria	Weight	Switch Slider	Extended Arm	Spring Loaded Arm
Cost	0.1	2	3	2
Contamination	0.4	6	5	3
Temperature Range	0.2	5	5	4
Installation Time	0.1	5	5	4
Ease of Installation	0.1	4	5	3
Dimensions	0.1	8	3	7
		5.3	4.6	3.6

Cap to Guide Pipe



Array Guide Pipe



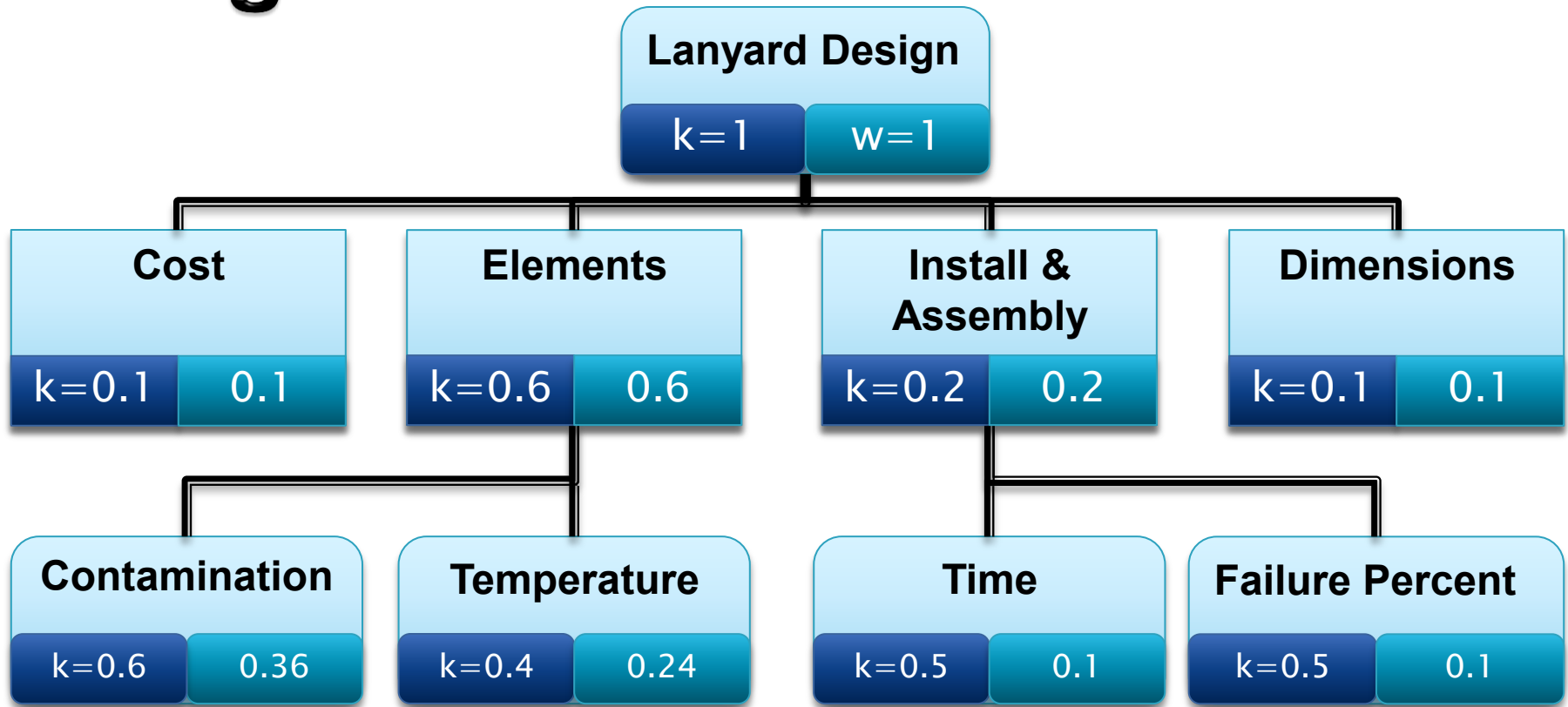
Design Matrix

Cable Guides Components					
Criteria	Weight	Array	Radius Edges	Cap	Lubrication
Cost	0.1	4	4	3	3
Contamination	0.4	7	5	8	4
Temperature Range	0.2	5	5	5	7
Installation Time	0.1	4	5	5	3
Ease of Installation	0.1	4	5	5	3
Dimensions	0.1	5	5	5	5
		5.5	4.9	6	4.4

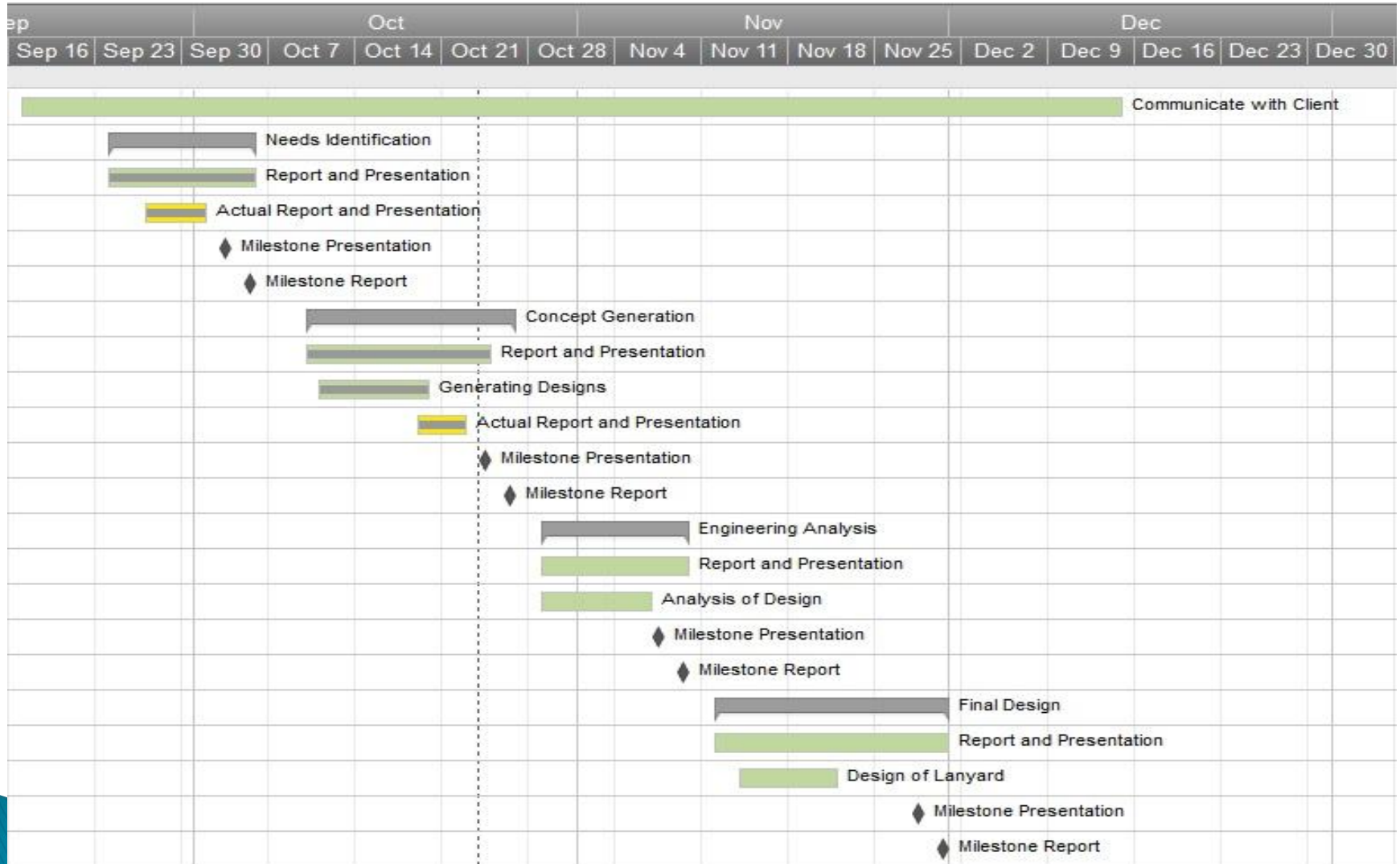
Design Matrix

Cable Options				
Criteria	Weight	Cable Coating	Electrical Wires	Ridged Rod
Cost	0.1	3	2	4
Contamination	0.4	8	6	6
Temperature Range	0.2	5	5	5
Installation Time	0.1	3	4	6
Ease of Installation	0.1	4	4	6
Dimensions	0.1	5	8	2
		5.7	5.2	5.2

Weighted Criteria Tree



Gantt Chart



Conclusion

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- ▶ Design Concepts
- ▶ Design Selection
- ▶ Gantt Chart

References

- ▶ Stephen Larimore
 - Raytheon Department Manager
- ▶ Kelly Convington
 - Raytheon Mechanical Engineer

Questions?