

Project: 15043

Rqmt. #	Importance	Source	Function	Engr. Requirement (metric)	Unit of Measure	Ideal Value	Comments/Status
S1	9	CR1	System Operation	Provide 90 degree detection range in front of user	Degrees	90	Will be achieved by a combination of the user's sweeping motion and 2, 25 degree range sensors
S2	9	CR1	System Operation	Signal detection of obstacles via haptic feedback (motion in handle)	Binary	Pass	
S3	3	CR2	System Portability	Adds no more than 1 lb to standard white cane	Lbs	1	Less small parts would improve the manufacturability of the product
S4	3	CR3	System Assembly	Decrease amount of visible hardware by 50% compared to P14043	Pieces	10	
S5	3	CR4, CR5	System Operation	8 hour rechargeable battery (minimum battery life)	Hours	8	
S6	3	CR6	System Portability	Collapsible into 8-10" sections	Inches	8	
S7	3	CR7	System Cost	Manufacturing cost \$125 or less	USD	125	
S9	3	CR9	System Useability	Keep cane collapse/re-open time less than 1 minute	Minutes	1	
S10	9	CR10	System Operation	Horizontal detection range	Feet	10	
S11	3	CR12	System Operation	Maximum pressure	psi	5	didn't want to stall motor
S12	3	CR12	System Structure	Handle contents fit within handle mock up envelope	Binary	Pass	
S13	9	CR12	System Structure	Maximum handle grip diameter	in	1.3	Research on typical cane diameters

Importance: Sample scale (9=must have, 3=nice to have, 1=preference only), or see Ulrich exhibit 4-8.