

Qualitative Life Cycle Assessment								Seats																Cabin Linings								Bins				Cabin Floor							
Life Cycle Stage	Activity/Event	Stage Impact	Activity/Event Description	LCA Step Importance (amend as required)	Adjusted for LCA Stage contribution	Criteria Weights (threshold adjusted)	LCA Step Weights (Final)	i. Metallic Structure				ii. Composite Structure				iii. Comfort Interfaces				iv. Misc.				v. Sidewall Panel				vi. Insulation Blankets				vii. Overhead bins				viii. Carpet				ix. Floor Panel			
			Product Weight (kg/aircraft)	90%	0.083		Max	262				1033				753				268				349				438				682				140				187			
			Designations: S = Impact Score C = Confidence B = Bias	10%	0.009		Min	S	C	B	R	S	C	B	R	S	C	B	R	S	C	B	R	S	C	B	R	S	C	B	R	S	C	B	R	S	C	B	R				
1. Component Supply	Material Transport	22.7%	Delivery of the raw material from the source to component supplier	0.090	0.0204	0.0230	2.19%	1	H		1.00	2	M	H	2.25	3	M	H	3.25	1	M	L	1.25	4	M	H	4.25	1	L	M	1.50	4	M	H	4.25	2	M	L	1.75	1	M	H	1.50
	Storage Impacts		Challenges associated with pre-production storage (e.g. shelf life, temperature)	0.090	0.0204	0.0230	2.19%	1	H		1.00	2	M	H	2.25	3	M	L	2.75	2	L	M	2.25	4	M	L	3.75	5	H		5.00	4	M	L	3.75	2	M	L	1.75	2	M	H	2.25
	Production Complexity		Component production effort (duration, process chain length, technology)	0.223	0.0506	0.0482	4.59%	2	M	M	2.00	5	H		5.00	4	M	H	4.25	3	M	L	2.75	4	M	L	3.75	2	M	L	1.75	4	M	L	3.75	3	M	H	3.25	4	M	M	4.00
	Production Needs		Environmental impact of indirect component production inputs (e.g. consumables)	0.163	0.0370	0.0368	3.51%	4	M	L	3.75	5	H		5.00	2	M	H	2.25	1	M	H	1.50	3	M	H	3.25	1	M	L	1.25	3	M	H	3.25	3	M	L	2.75	4	M	H	4.25
	Production Efficiency		Proportion of material & power input directly converted into components to waste	0.183	0.0416	0.0407	3.88%	4	L	H	4.25	5	H		5.00	3	M	M	3.00	2	L	H	2.75	2	M	H	2.25	2	M	L	1.75	2	M	H	2.25	4	M	L	3.75	4	M	M	4.00
	Component Quality		The proportion of component scrap/rework cases by both supplier and integrator	0.163	0.0370	0.0368	3.51%	2	M	L	1.75	5	L	L	4.00	3	M	L	2.75	2	M	H	2.25	4	L	L	3.25	1	M	L	1.25	4	L	L	3.25	3	M	H	3.25	3	L	H	3.50
	Corporate Ethics		Non-technical aspects affecting material/component supply (e.g. fair practices)	0.087	0.0198	0.0225	2.14%	5	L	H	4.50	1	M	H	1.50	3	L	H	3.50	3	M	L	2.75	2	M	L	1.75	3	L	L	2.50	2	M	L	1.75	2	L	L	1.75	4	L	M	3.75
2. Product Integration	Component Transport	20.8%	Delivery of the individual components from the supplier to product integrator	0.090	0.0188	0.0217	2.06%	2	M	L	1.75	4	M	H	4.25	3	M	L	2.75	1	M	H	1.50	4	M	L	3.75	2	M	H	2.25	4	M	L	3.75	1	H	H	1.00	3	M	H	3.25
	Storage Impacts		Challenges associated with pre-integration storage (e.g. shelf life, temperature)	0.090	0.0188	0.0217	2.06%	1	H		1.00	3	M	H	3.25	4	L	M	3.75	2	L	M	2.25	2	M	H	2.25	5	M	H	4.75	2	M	H	2.25	2	L	H	2.75	1	L	H	2.00
	Integration Complexity		Effort involved in product integration (duration, process chain length, technology)	0.221	0.0459	0.0443	4.22%	3	M	H	3.25	4	M	H	4.25	5	M	H	4.50	3	L	H	3.50	2	L	H	2.75	3	L	L	2.50	3	M	H	3.25	2	L	L	1.75	1	M	L	1.25
	Integration Needs		Environmental impact of indirect product integration inputs (e.g. industrialisation)	0.161	0.0336	0.0340	3.24%	4	M	L	3.75	5	M	H	4.75	5	M	H	4.75	3	L	M	3.00	2	M	H	2.25	3	L	H	3.50	3	M	H	3.25	1	L	M	1.50	1	L	L	1.50
	Integration Efficiency		The extent of waste (material & energy) resulting from the integration process	0.174	0.0362	0.0362	3.45%	4	H		4.00	4	H		4.00	5	H		5.00	2	L	M	2.25	1	M	H	1.50	2	L	L	1.75	1	M	H	1.50	2	M	L	1.75	1	M	L	1.25
	Product Quality		The proportion of final product scrap/rework cases by both integrator and installer	0.153	0.0319	0.0326	3.11%	1	L	M	1.50	3	M	H	3.25	5	M	H	4.75	3	L	L	2.50	2	M	L	1.75	3	L	H	3.50	2	M	H	2.25	2	M	L	1.75	1	M	L	1.25
	Corporate Ethics		Non-technical aspects affecting product integration (e.g. working shifts)	0.110	0.0229	0.0250	2.39%	1	H		1.00	1	H		1.00	1	H		1.00	1	H		1.00	1	H		1.00	1	H		1.00	1	H		1.00	1	H		1.00	1	H		1.00
3. Product Installation	Product Transport	7.4%	Delivery of the complete product from product integrator to the installer (MRO)	0.090	0.0067	0.0116	1.10%	5	M	L	4.50	5	H		5.00	5	M	H	4.75	2	L	L	1.75	5	M	H	4.75	2	M	L	1.75	5	L	H	4.50	2	L	L	1.75	1	M	L	1.25
	Storage Impacts		Challenges associated with pre-installation storage (e.g. humidity, cleanliness)	0.090	0.0067	0.0116	1.10%	1	H		1.00	1	H		1.00	5	L	L	4.00	3	L	L	2.50	2	L	L	1.75	5	M	L	4.50	2	L	L	1.75	3	M	L	2.75	2	M	L	1.75
	Installation Complexity		Effort involved in product installation (duration, process chain length, technology)	0.223	0.0166	0.0198	1.89%	2	M	H	2.25	2	M	L	1.75	2	M	L	1.75	3	M	L	2.75	4	M	H	4.25	5	M	L	4.50	4	M	H	4.25	3	M	L	2.75	2	M	H	2.25
	Installation Needs		Environmental impact of indirect product installation inputs (e.g. test equipment)	0.163	0.0121	0.0161	1.53%	2	M	H	2.25	1	M	L	1.25	1	L	H	2.00	2	L	L	1.75	3	M	L	2.75	3	L	H	3.50	3	M	L	2.75	2	M	H	2.25	2	M	L	1.75
	Installation Efficiency		The extent of waste (material & energy) resulting from the installaation process	0.183	0.0137	0.0174	1.65%	1	H		1.00	1	H		1.00	1	L	M	1.50	2	L	L	1.75	3	L	H	3.50	4	L	H	4.25	3	L	H	3.50	5	L	L	4.00	1	M	H	1.50
	Installation Quality		The extent of certification & usability tests failed requiring rework	0.163	0.0121	0.0161	1.53%	1	H		1.00	1	H		1.00	5	L	L	4.00	4	L	L	3.25	4	L	H	4.25	2	L	H	2.75	4	L	H	4.25	4	L	L	3.25	1	M	L	1.25
	Corporate Ethics		Non-technical aspects affecting product installation (e.g. working conditions)	0.087	0.0065	0.0114	1.09%	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00
4. Product Operation	Operational Needs	31.8%	The environmental impact of suplies for product operation (e.g. consumables)	0.290	0.0920	0.0828	7.89%	1	H		1.00	1	H		1.00	5	H		5.00	2	L	H	2.75	3	M	H	3.25	1	M	L	1.25	3	M	H	3.25	4	M	L	3.75	1	H		1.00
	Maintenance Complexity		Maintenance/servicing effort (duration, process chain length, technology)	0.196	0.0623	0.0580	5.53%	2	M	H	2.25	4	L	H	4.25	3	L	L	2.50	5	M	H	4.75	2	M	L	1.75	3	M	H	3.25	2	M	L	1.75	2	L	L	1.75	4	L	L	3.25
	Maintenance Needs		Environmental impact of indirect product maintenance inputs (e.g. equipment)	0.196	0.0623	0.0580	5.53%	5	M	L	4.50	5	M	H	4.75	3	L	H	3.50	2	M	H	2.25	3	M	H	3.25	2	M	L	1.75	3	M	H	3.25	3	M	L	2.75	4	M	H	4.25
	Maintenance Efficiency		The extent of waste (material & energy) resulting from the servicing process	0.196	0.0623	0.0580	5.53%	3	L	L	2.50	4	L	H	4.25	4	L	L	3.25	2	L	H	2.75	3	L	H	3.50	5	L	L	4.00	3	L	H	3.50	2	L	H	2.75	3	L	H	3.50
	Corporate Ethics		Non-technical aspects affecting product servicing and maintenance	0.122	0.0387	0.0383	3.65%	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00
5. Product Dismantling	Removal Complexity	5.6%	Effort involved in product removal (duration, process chain length, technology)	0.260	0.0145	0.0181	1.72%	1	H		1.00	4	M	L	3.75	2	M	H	2.25	3	L	H	3.50	2	M	L	1.75	2	M	L	1.75	2	M	L	1.75	1	M	H	1.50	1	H		1.00
	Removal Needs		Environmental impact of indirect product removal inputs (e.g. tooling)	0.209	0.0117	0.0157	1.50%	1	H		1.00	2	M	H	2.25	2	M	H	2.25	3	L	H	3.50	2	M	L	1.75	2	L	H	2.75	2	M	L	1.75	1	M	H	1.50	1	H		1.00
	Storage Impacts		Challenges associated with storage of the dismantled product (e.g. humidity)	0.070	0.0039	0.0092	0.88%	1	H		1.00	2	L	H	2.75	4	L	H	4.25	2	L	L	1.75	1	M	H	1.50	5	L	L	4.00	1	M	H	1.50	3	L	L	2.50	1	L	H	2.00
	Post-Removal Impacts		Cabin servicing needs due to product removal consequences (e.g. damage)	0.329	0.0184	0.0213	2.03%	1	M	H	1.50	1	H		1.00	1	H		1.00	1	M	L	1.25	4	M	L	3.75	5	M	L	4.50	4	M	L	3.75	5	L	L	4.00	4	L	L	3.25
	Corporate Ethics		Non-technical aspects affectingsn product dismantling (e.g. safety)	0.133	0.0074	0.0122	1.16%	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00	3	M	M	3.00
6. Product End-of-Life	Phasing-Out Transport																																										