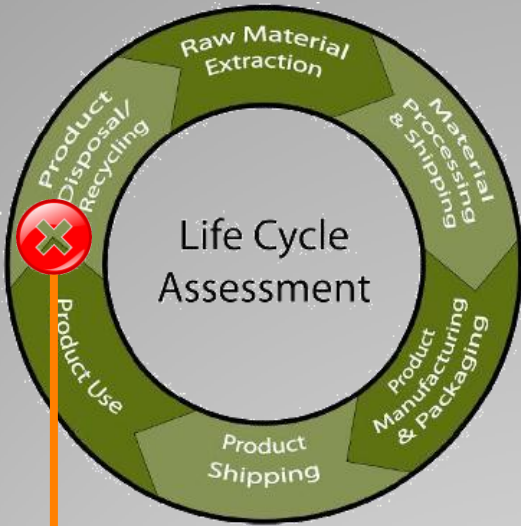


CARBON FIBER LIFE CYCLE ASSESSMENT

All materials have a similar life cycle:



	Carbon fiber	Steel
Fatigue:	+	+
Corrosion Resistance:	+	-
Durability:	+	+
Energy cost	--- X14	+
Recyclable:	-	+

Carbon fiber use has strongly developed in the past few years: 80% for aeronautics parts and car parts for example.



The recycling of carbon fiber is a problem:

Recycling process developments:

- **Pyrolysis:** Carbon fiber is heated to extremely hot temperatures in an oxygen-less environment
- **Milling or shredding:** is just as effective, but leaves you with a shorter fiber
- **Vapor-thermolysis:** process of separating carbon fibers from the polymer matrix (resin) using superheated steam.
- **Solvolysis:** treating a polymer matrix composite with a reactive solvent capable of depolymerizing the resin.



Numerous advantages



LOW WEIGHT



HIGH STRENGTH

MORE FUEL EFFICIENCY