Abstract: In the last decades considerations about equipments' availability became an important issue, as well as its dependence on components characteristics such as reliability and maintainability. This is particularly of outstanding importance if one is dealing with high risk industrial equipments, where these factors play an important and fundamental role in risk management when safety or huge economic values are in discussion. As availability is a function of reliability, maintainability, and maintenance support activities, the main goal is to improve one or more of these factors. This paper intends to show how maintainability can influence availability and present a methodology to select the most important attributes for maintainability using a partial Multi Criteria Decision Making (pMCDM). Improvements in maintainability can be analyzed assuming it as a probability related with a restore probability density function [g(t)].