A product is referred to as robust when its performance is consistent. In current product robustness paradigms, robustness is the responsibility of engineering design. Drawings and 3D models should be released to manufacturing after applying all the possible robust design principles. But there are no methods referred for manufacturing to carry and improve product robustness after the design freeze. This paper proposes a process of inducing product robustness at all stages of product development from design release to the start of mass production. A manufacturing strategy of absorbing all obvious variations and an approach of turning variations to cancel one another are defined. Verified the application feasibility and established the robustness quantification method at each stage. The theoretical and actual sensitivity of different parameters is identified as indicators. Theoretical and actual performance variation and accuracy of estimation are established as robustness metric. Manufacturing plan alignment to design, complimenting the design and process sensitivities, countering process mean shifts with tool deviations, higher adjustable assembly tools are enablers to achieve product robustness.