

Category: Business Skills

Example: Calculating Return-On-Investment on proposed new mold

Situation: A significant cost-savings opportunity was discovered to eliminate a component and its labor operation on a high-volume product. This design change required a complete new injection mold on a large plastic part.

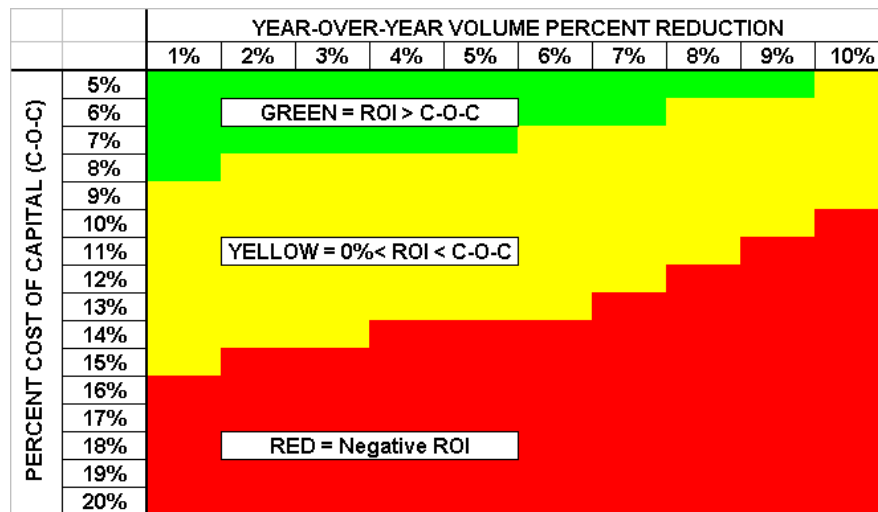


Image 1: ROI Feasibility Matrix

Problem: A very simple “payback” formula indicated that a three-year payback was viable, albeit marginally. A closer examination was required to see which side of the Go / No go line the project actually was on.

Action:

1. Reviewed coursework in Accounting to refresh memory on terms such as NPV, ROI, Cost Of Capital (COC), etc.
2. Determined reasonable ranges for COC and possible annual volume drops (“payback” cost model did not account for volume changes)
3. Constructed matrix that calculated NPV of cost savings over three-year period adjusted for annual inflation
4. Compared NPV results to new mold capital costs to determine ROI
5. Color-coded ROI compared to COC as Green/Yellow/Red

Result:

1. Green: ROI percent exceeded COC only for unrealistically-low values in both product volume reduction and COC values
2. Yellow: ROI was greater than zero but less than COC
3. Red: ROI was negative; i.e., initial investment never fully recovered in NPV dollars
4. Most realistic values for volume reduction and COC resulted in either red or yellow classification
5. Decision made to kill project and focus efforts elsewhere