Optimizer Reduced-space Component 1 y_1 $\int y_1$ y_1 $R_1(x, y) = 0$ $\min_{x} \quad \mathcal{F}(x, \mathcal{Y}(x))$ s.t. $C(x, \mathcal{Y}(x)) = 0$ Component n(3) $\int y_n$ y_n $\mathcal{R}_n(x, y) = 0$ x > 0. Objective with $\mathcal{R}(x, \mathcal{Y}(x)) = 0$, $f = \mathcal{F}(x, y)$ Constraints c = C(x, y)Optimizer x, y $\sqrt{x,y}$ x, yx, yFull-space Component 1 $R_1(x, y) = 0$ min $\mathcal{F}(x,y)$ x,ys.t. C(x,y) = 0Component n(4) $\mathcal{R}_n(x, y) = 0$ $\mathcal{R}(x,y) = 0$ Objective $f = \mathcal{F}(x, y)$ x > 0Constraints c = C(x, y)