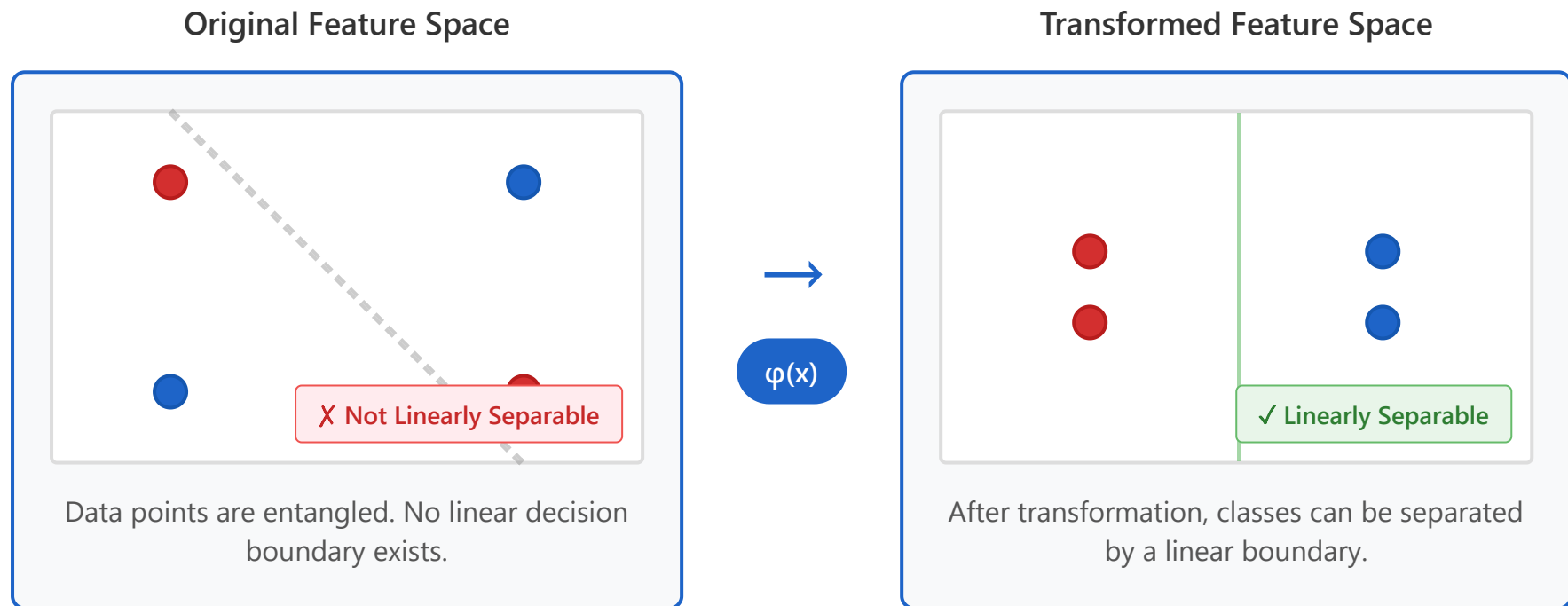


Need for Feature Space Transformation



Key Insight: Neural networks learn non-linear transformations $\varphi(x)$ automatically through hidden layers, mapping complex patterns into spaces where they become linearly separable.