$$\Pi = a \xrightarrow[\text{Start}]{} \pi_a \xrightarrow[\text{Goal}]{} \Pi = b \xrightarrow[\text{Start}]{} \frac{Z_t = 0}{\pi_b} \xrightarrow[\text{Goal}]{} \frac{Z_t = 1}{\pi_a} \xrightarrow[\text{Goal}]{}$$