$$p(z_t|x_{1:t}) \propto p(x_t|z_t) \underbrace{\int p(z_t|z_{t-1})\, p(z_{t-1}|x_{1:t-1})\, dz_{t-1}}_{\text{state update, gives } p(z_t|x_{1:t-1})}$$

$$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{\text{measurement update, gives } p(x_t, z_t|x_{1:t-1})}$$