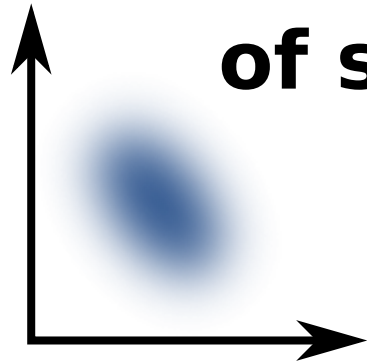


**Prior knowledge  
of state**



$$\mathbf{P}_{k-1|k-1}$$
$$\hat{\mathbf{x}}_{k-1|k-1}$$



**Prediction step**

Based on e.g.  
physical model



$$\mathbf{P}_{k|k-1}$$
$$\hat{\mathbf{x}}_{k|k-1}$$