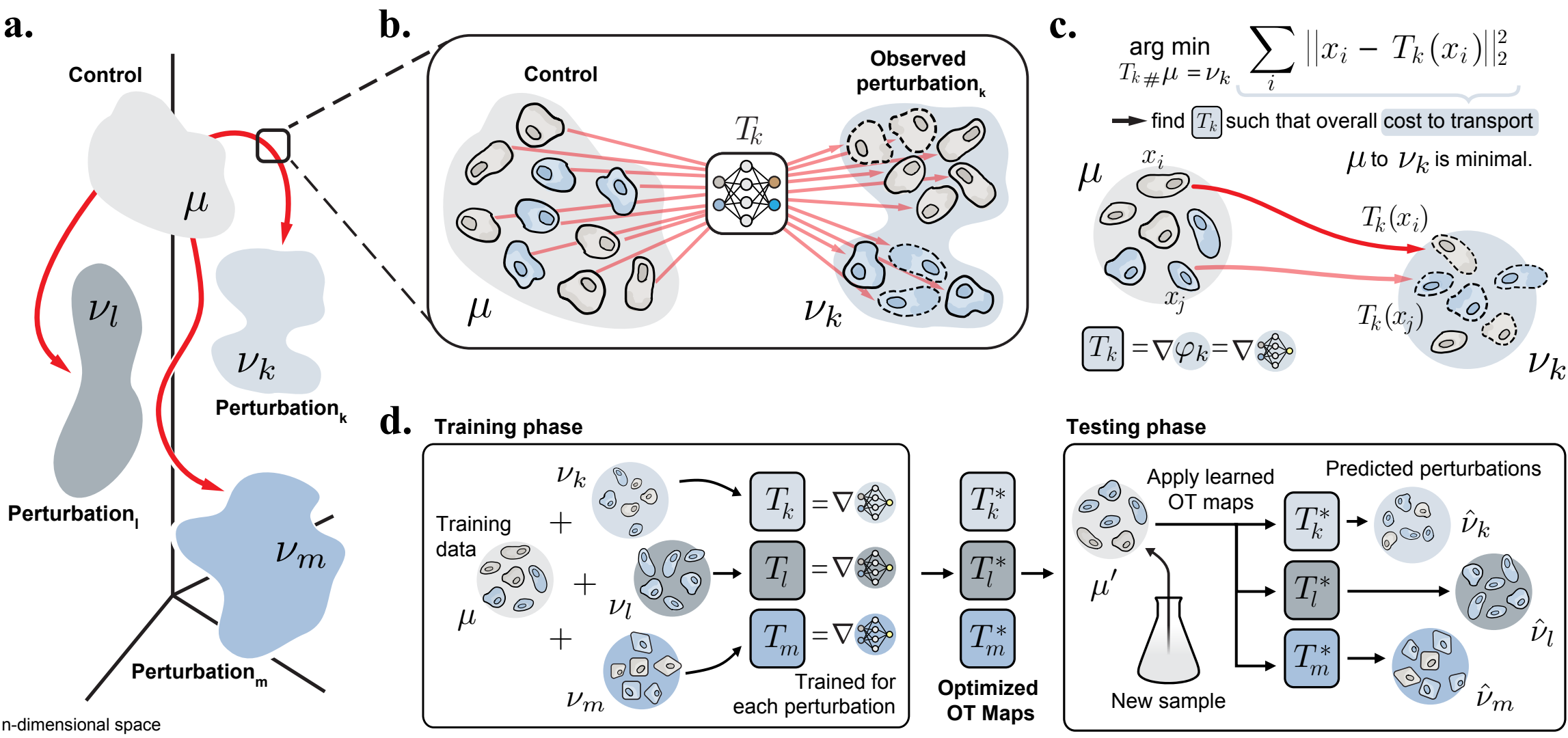
a.
Control
μ
ν_l
ν_k
Perturbation$_k$
Perturbation$_l$
ν_m
Perturbation$_m$
n-dimensional space
b.
Control
Observed perturbation$_k$
T_k
μ
ν_k
c.
$\arg\min_{T_k\#\mu=\nu_k} \sum_i ||x_i - T_k(x_i)||_2^2$
find T_k such that overall cost to transport μ to ν_k is minimal.
μ
x_i
x_j
$T_k(x_i)$
$T_k(x_j)$
ν_k
$T_k = \nabla\varphi_k = \nabla$
d.
Training phase
Training data
μ
ν_k
ν_l
ν_m
$T_k = \nabla$
$T_l = \nabla$
$T_m = \nabla$
Trained for each perturbation
T_k^*
T_l^*
T_m^*
Optimized OT Maps
Testing phase
μ'
Apply learned OT maps
New sample
Predicted perturbations
$\hat{\nu}_k$
$\hat{\nu}_l$
$\hat{\nu}_m$