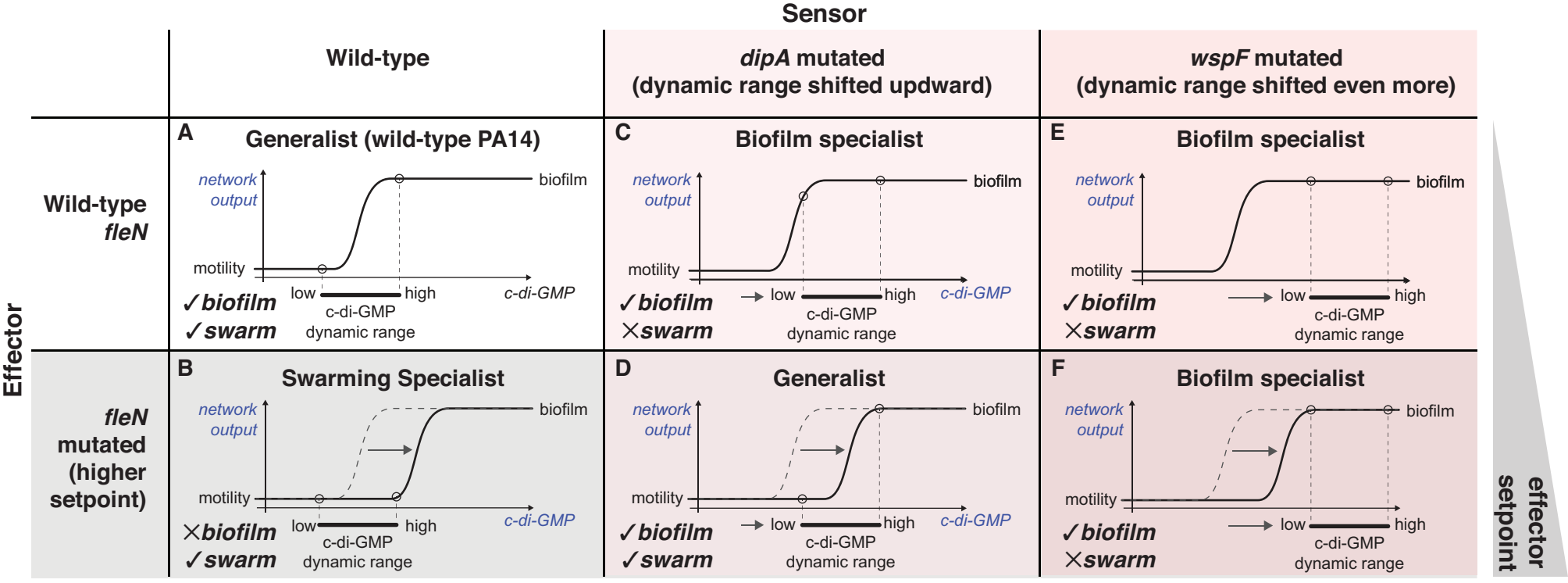
Sensor
Wild-type
dipA mutated
(dynamic range shifted updward)
wspF mutated
(dynamic range shifted even more)
Effector
Wild-type
fleN
fleN
mutated
(higher
setpoint)
A
Generalist (wild-type PA14)
network
output
biofilm
motility
low
high
c-di-GMP
c-di-GMP
dynamic range
✓biofilm
✓swarm
B
Swarming Specialist
✕biofilm
✓swarm
C
Biofilm specialist
✓biofilm
✕swarm
D
Generalist
✓biofilm
✓swarm
E
Biofilm specialist
✓biofilm
✕swarm
F
Biofilm specialist
✓biofilm
✕swarm
effector
setpoint
c-di-GMP