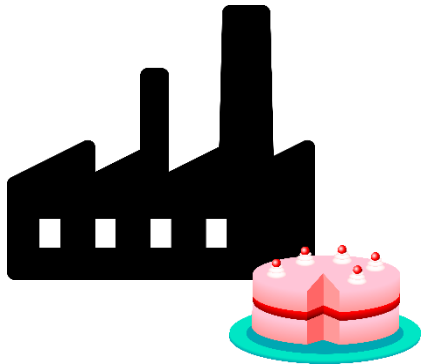


Producer - Consumer

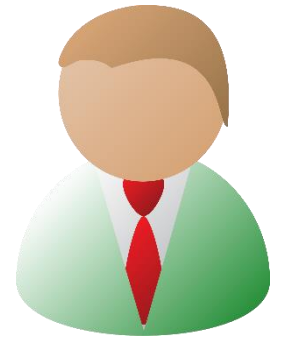
Producer



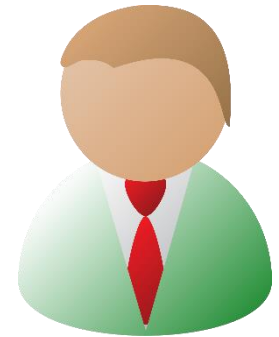
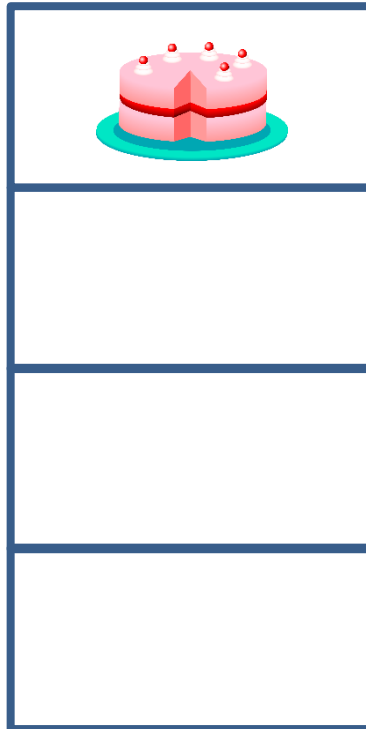
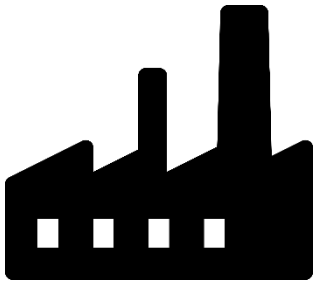
Buffer



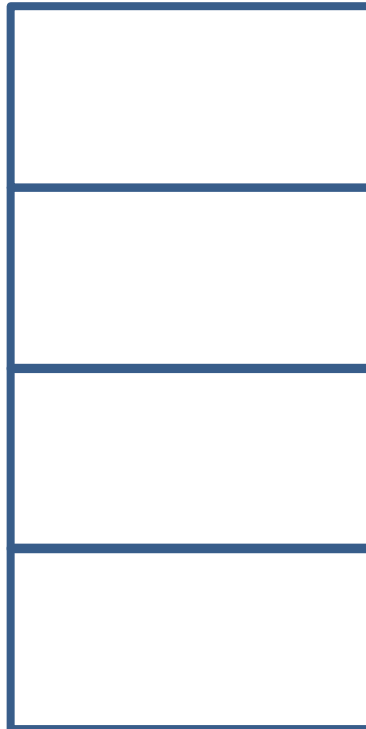
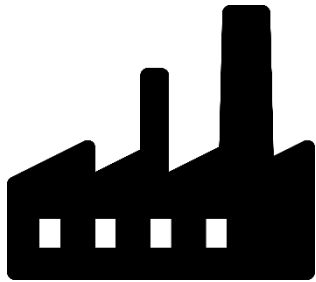
Consumer



Producer - Consumer

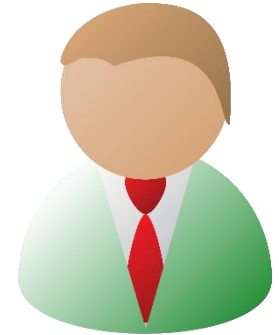
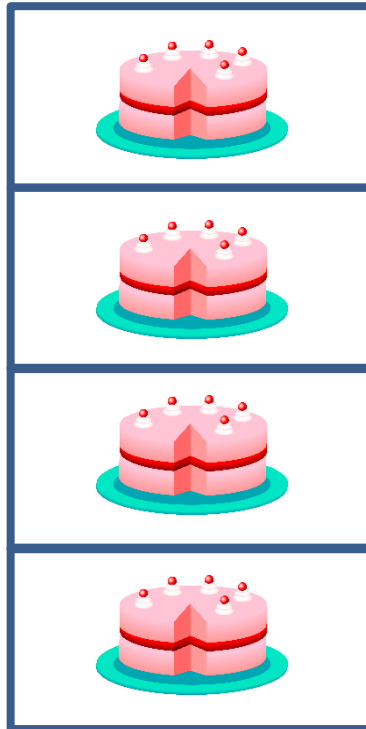
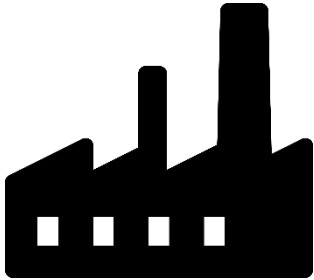


Producer - Consumer

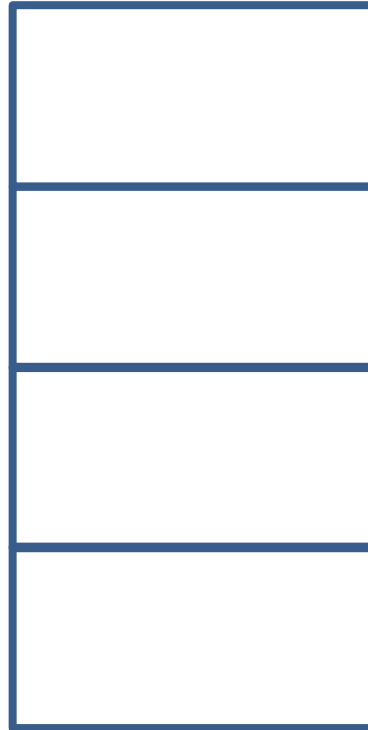
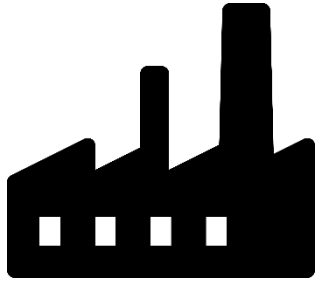


Producer - Consumer

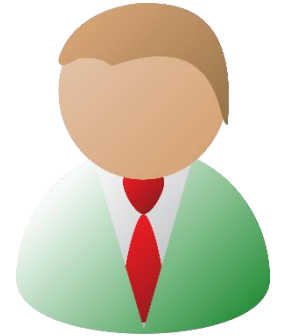
Cannot produce
while buffer **full**
(must wait)



Producer - Consumer

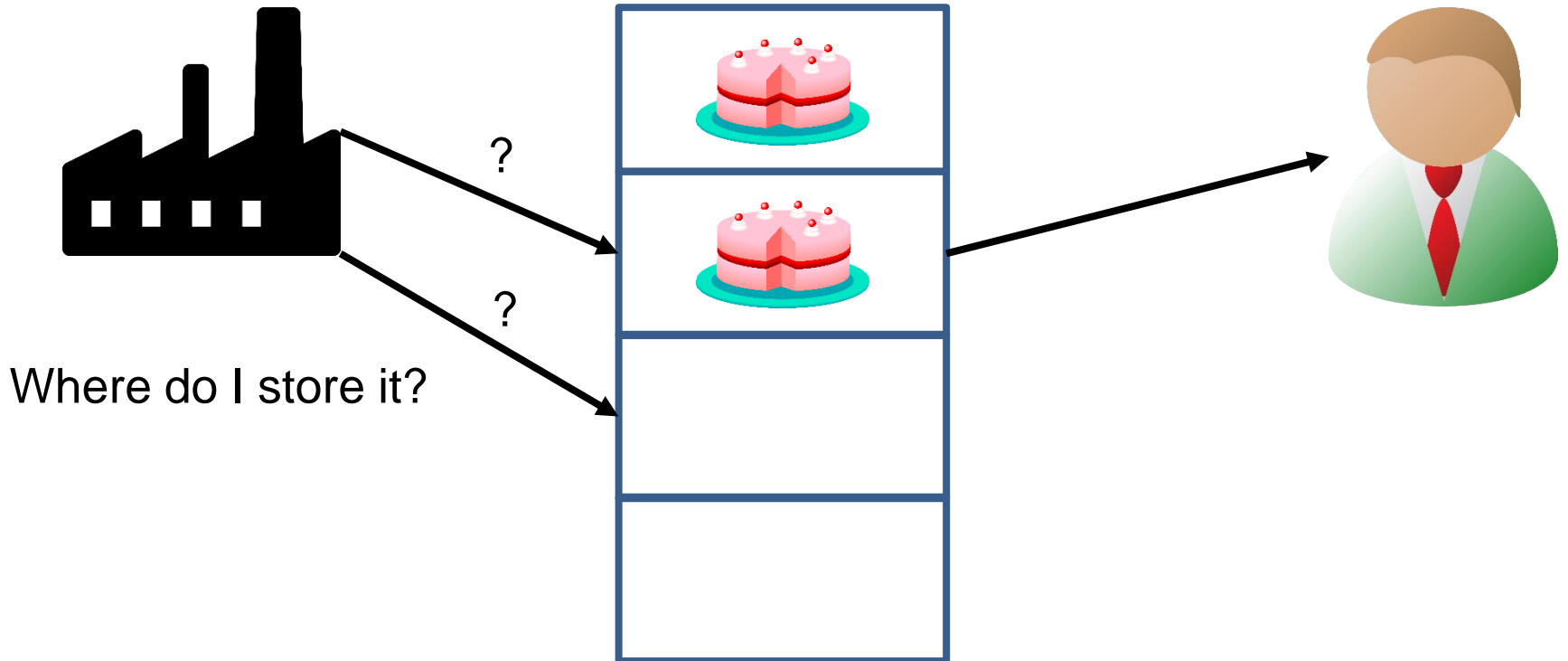


Cannot consume while buffer **empty** (must wait)



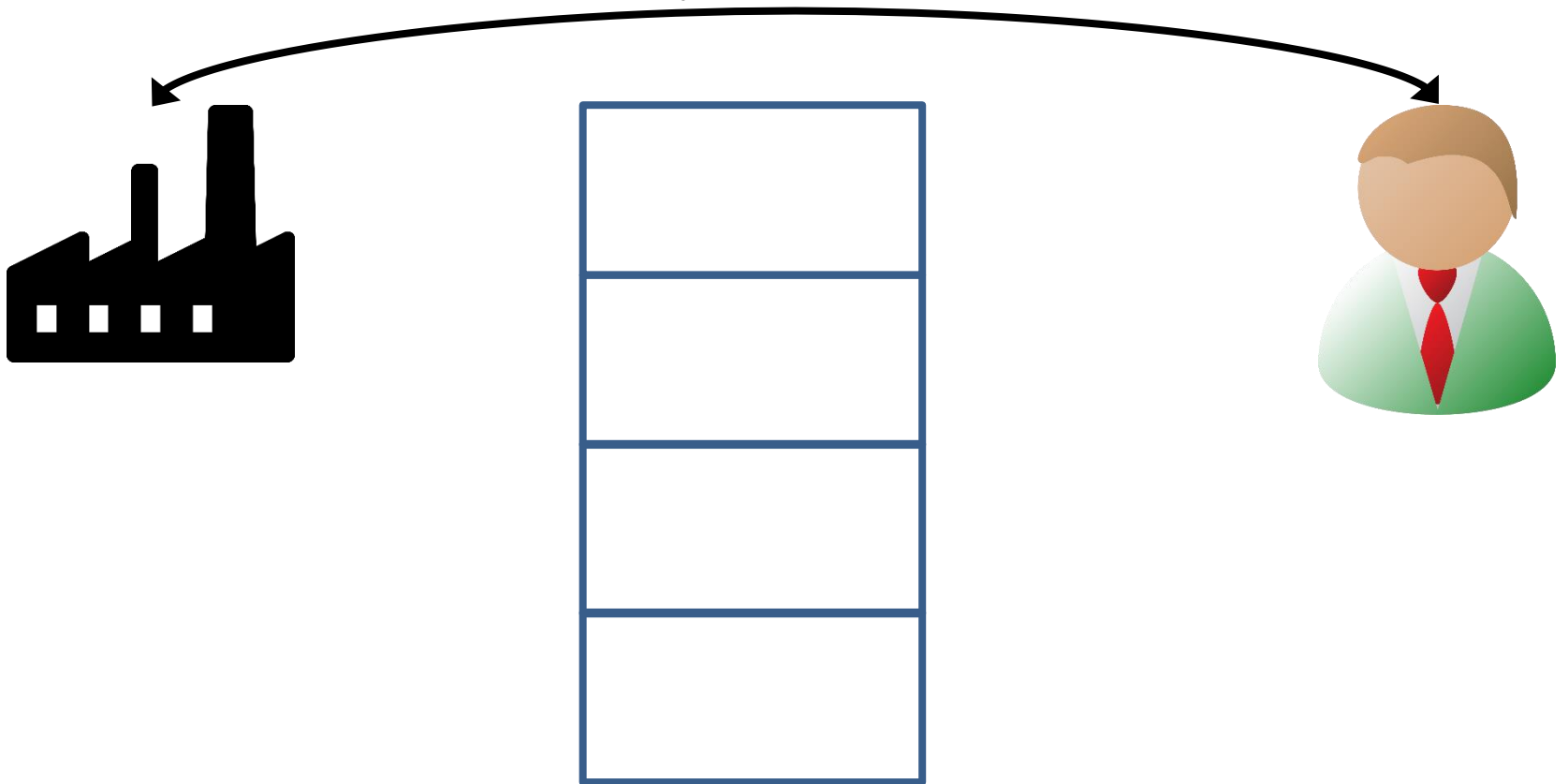
Producer - Consumer

Cannot produce while consuming

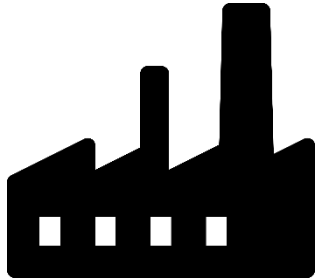


Producer - Consumer

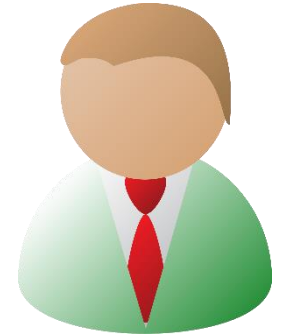
Does not know when the other works
(asynchronous)



Producer – Consumer Examples

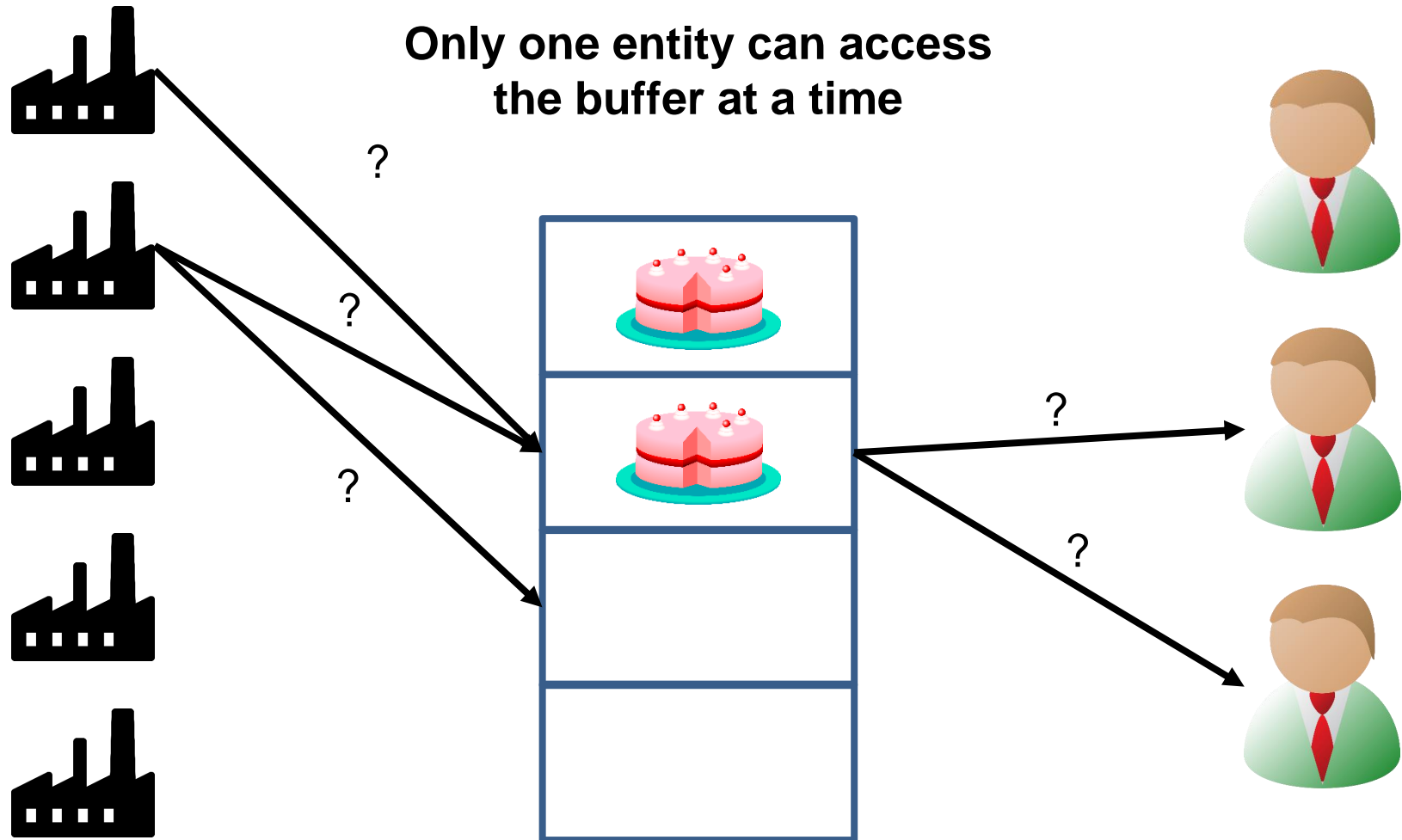


- IP layer Receiving packet sends to TCP layer
- Capture Mouse/Keyboard event
- Frame finished rendering
 - Pipeline step i

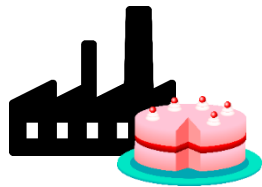


- TCP layer receiving packet from IP layer
- Process Mouse/Keyboard event
- Display frame on screen
 - Pipeline step $i+1$

Multiple Producers – Multiple Consumers



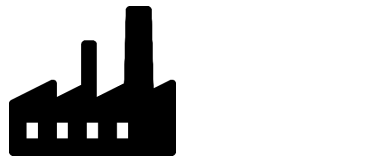
Multiple Producers – Multiple Consumers



If using a signaling system
make sure you signal the
right entity



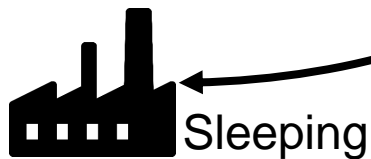
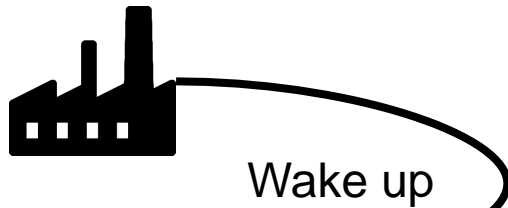
Multiple Producers – Multiple Consumers



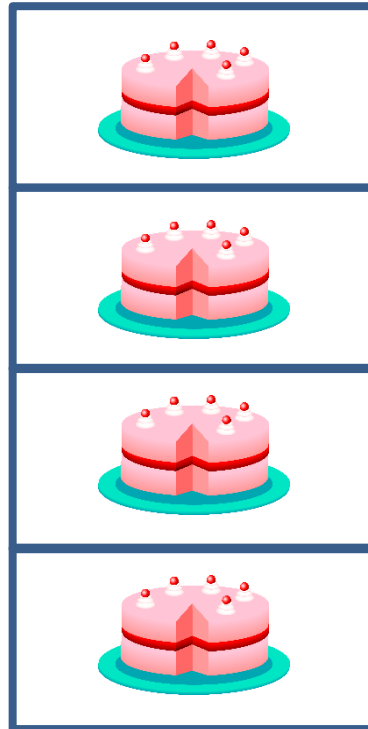
If using a signaling system
make sure you signal the
correct entity



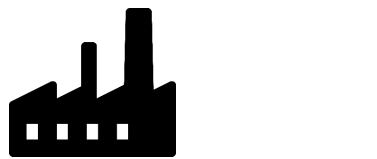
Multiple Producers – Multiple Consumers



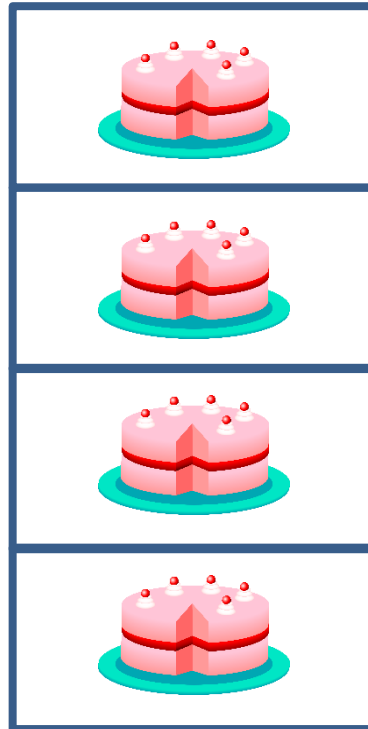
If using a signaling system
make sure you signal the
correct entity



Multiple Producers – Multiple Consumers



If using a signaling system
make sure you signal the
correct entity



Multiple Producers – Multiple Consumers



If using a signaling system
make sure you signal the
correct entity

