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# EdgeWise: A Better Stream Processing Engine for the Edge

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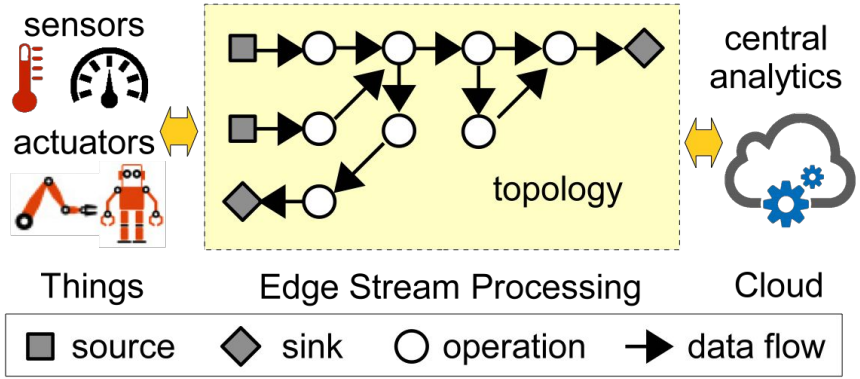
# Edge Stream Processing

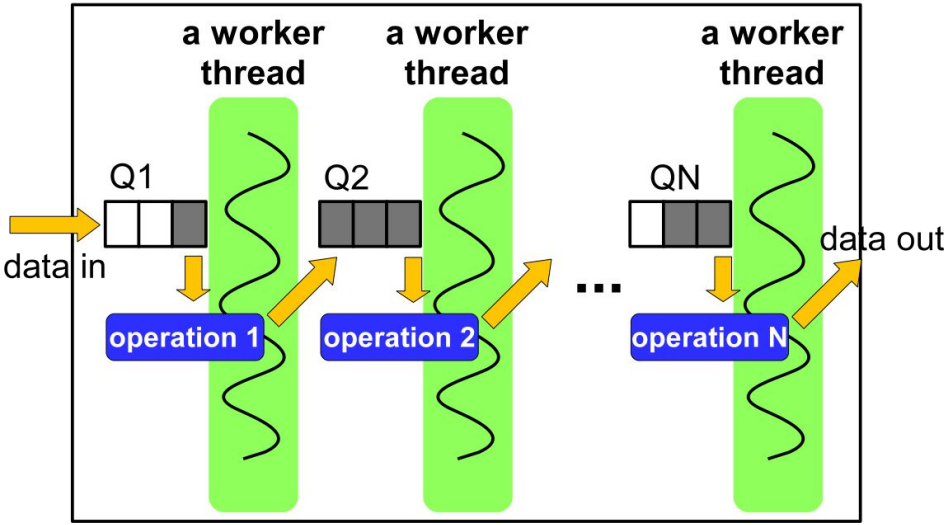
- Edge Computing and Stream Processing




- Edge Stream Processing Engine (SPE) requirements:
  - Multiplexed - limited resources
  - Low Latency - locality
  - No backpressure - latency and storage issue
  - Scalable - millions of sensors for a smart city

# Problem

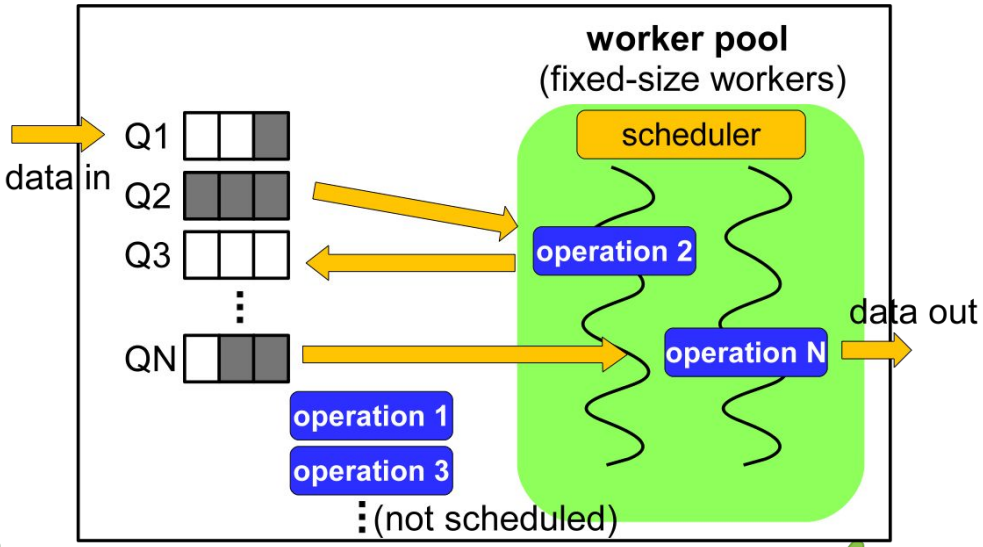
- Existing SPEs are not suitable for the Edge
  - One Worker per Operation Architecture (OWPOA)




❌ Multiplexed
❌ Backpressure
❌ Low Latency
✅ Scalable

# Proposed Solution - EdgeWise

- Existing SPEs are not suitable for the Edge
  - Fixed-size Worker Pool
  - Congestion-Aware Scheduler




✓ Multiplexed
✓ Alleviate Backpressure
✓ Low Latency
✓ Scalable

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Friday, July 12

Track II, 11:05 am – 11:45 am

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