

# **Better Management of Agricultural Production Systems through Big Data: The Dairy Farm Example**

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# The Food Production Chain

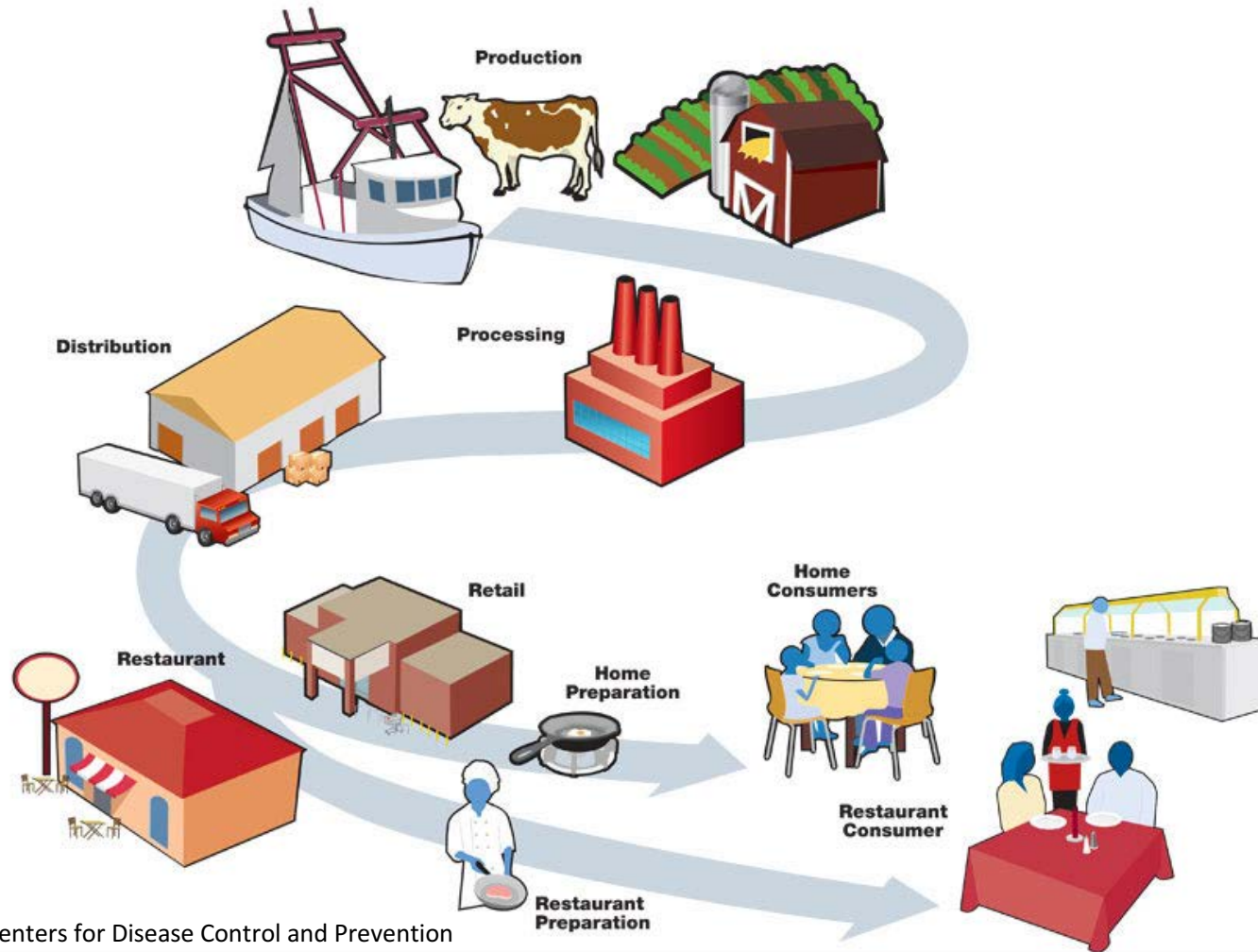


Image: Centers for Disease Control and Prevention

## Constraints

- Limited resources
- Large capital commitments
- Does not control many factors
- Works long hours



## Goals

- High quality
- High production
- High efficiency
- Support family



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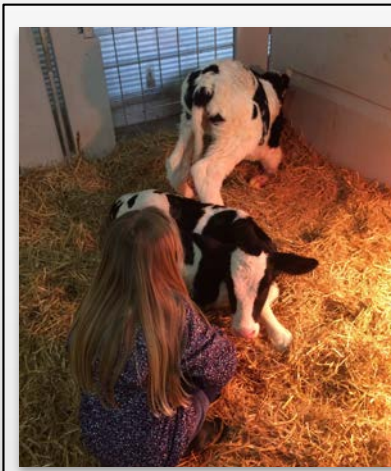
## (Partially) Controllable Factors



**Feed**



**Equipment**



**Animal Health**



**Frequency**



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# Human scale: Herd-level decision making

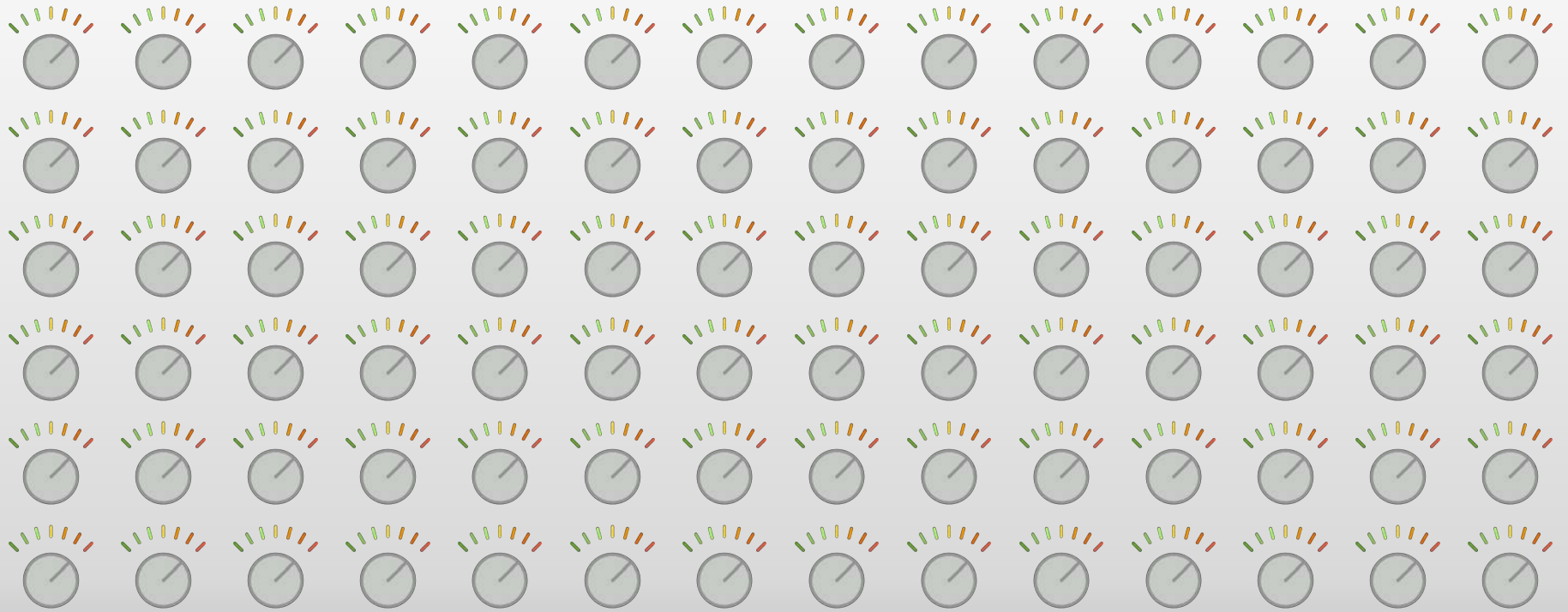


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# Big Data: Cow-level decision making



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**Decision Making**



**Sensor**

**Actuator**



**Managed System**



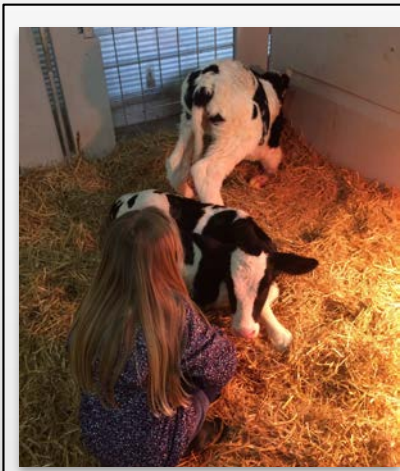
## So we need sensors and actuators for:



**Feed**



**Equipment**



**Animal Health**



**Frequency**



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**Equipment**

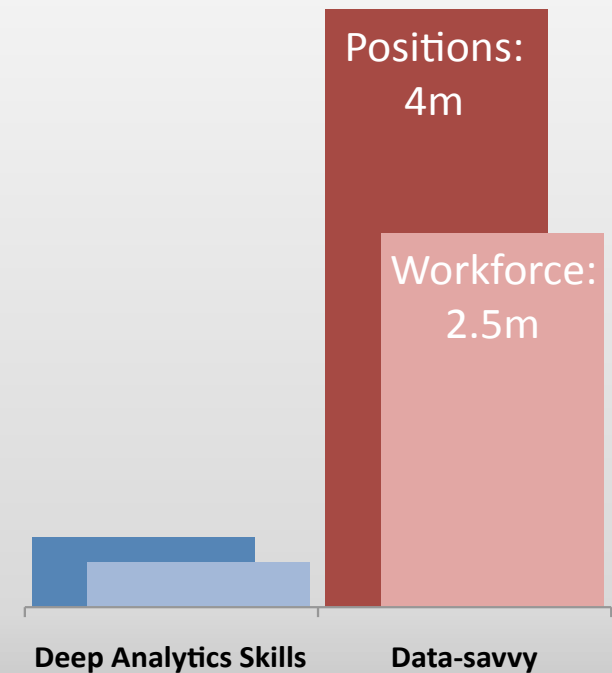
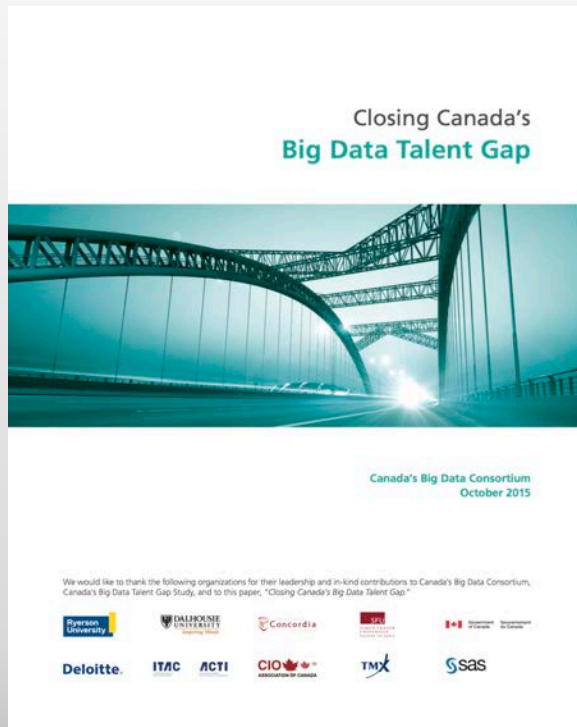


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# But we also need data literacy in decision-makers!



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# Questions Welcome!

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