

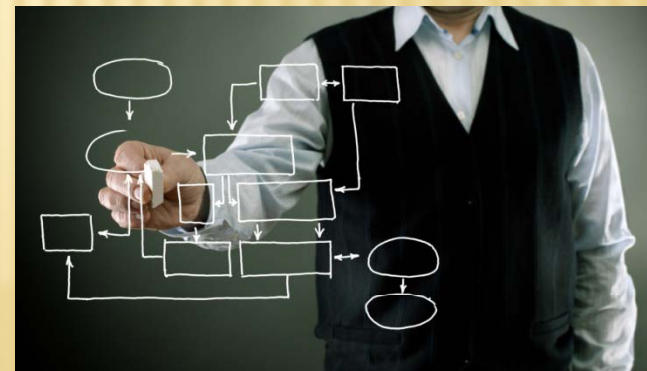
# DEVELOPMENT OF FOOD SAFETY HAZARD MAP IN CORN AND SOYBEAN SUPPLY CHAINS

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# VISUAL DEPICTION OF GRAIN SUPPLY CHAIN

- ✘ Corn and soybean supply chains
  - + Interactive
  - + Visual of entire system allows system interactions to be seen
- ✘ Specific information on processing scenarios
  - + Where is it going?
  - + What is the final use?



# GOALS

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- ✘ Visually depict grain supply chain from elevator receipt to identifiable unit
- ✘ Estimate of percentages of product in each processing path
- ✘ Identify internal and external hazards within supply chains
- ✘ Establish probable control points for educational intervention and/or management

# IDENTIFYING GRAIN-BASED FOOD SAFETY HAZARDS

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- ✘ Focus on factors in three areas:

- + Receipt
- + Storage
- + Shipping

- ✘ Defining risk areas:

- + Exposure – entry points
- + Consequence – how do hazards impact humans and animals



## **EDUCATIONAL INTERVENTION / MANAGEMENT**

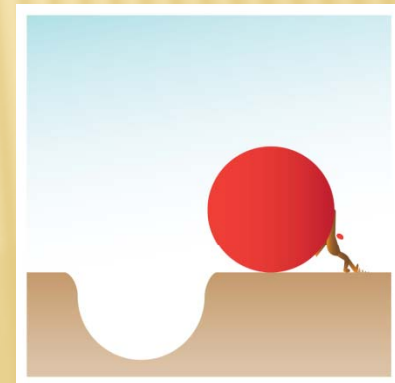
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- ✘ Use probabilistic simulation (i.e. Monte Carlo or equivalent) to determine risk level
- ✘ Identify potential control mechanisms
- ✘ Three mechanisms of control in risk-based process (Anderson, 2009)
  - + Controlling initial levels of hazard
  - + Reducing existing levels of hazard
  - + Preventing an increase in level of hazard

# CHALLENGES

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- ✘ Factors both known and unknown can contribute to risk (Anderson, 2009)
- ✘ Accounting for uncertainty
- ✘ Development of assumptions will be important
- ✘ Practices for risk management must consider audience, goals, and costs



# QUESTIONS OR COMMENTS?



Thank you for your attention.