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# **The Earlier, the Better – An Upstream Program Evaluation Method**

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# The times, they are a-changin'

Come gather 'round people  
Wherever you roam  
And admit that the waters  
Around you have grown  
And accept it that soon  
You'll be drenched to the bone.  
If your time to you  
Is worth savin'  
Then you better start swimmin'  
Or you'll sink like a stone  
For the times they are a-changin'.



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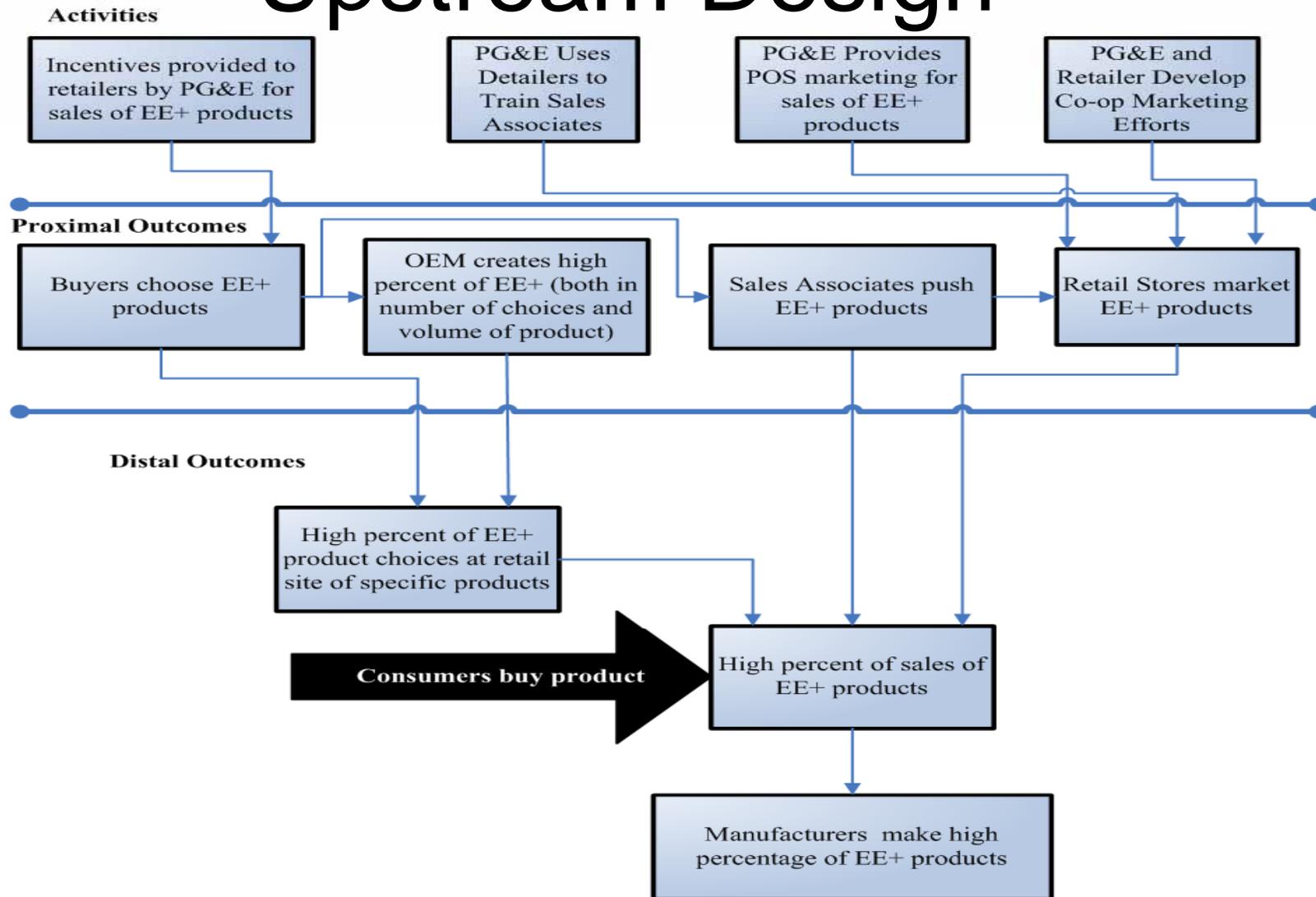
# EM&V in an Upstream World

- Increasingly “green” context
    - Helps sell efficiency
    - Difficults attribution
  - Program interventions moving upstream
    - Reduced costs
    - Potential effect broader and deeper
    - Increased savings & uptake by customers
  - Can we evaluate accurately and precisely?
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# This presentation

- Upstream program designs
- Looking at causality
- Evaluation issues for this type of design
- One possible methodological solution

# Upstream Design



# How do you ascribe “cause”?



## **Factual Causal Reasoning**

**Fact 1: The roof is a man made structure that can fall down**

**Fact 2: A tornado had high winds**

**Fact 3: High winds of a tornado can cause a roof to fall**

**Quantitative Data Only**



## **Physical Causal Reasoning**

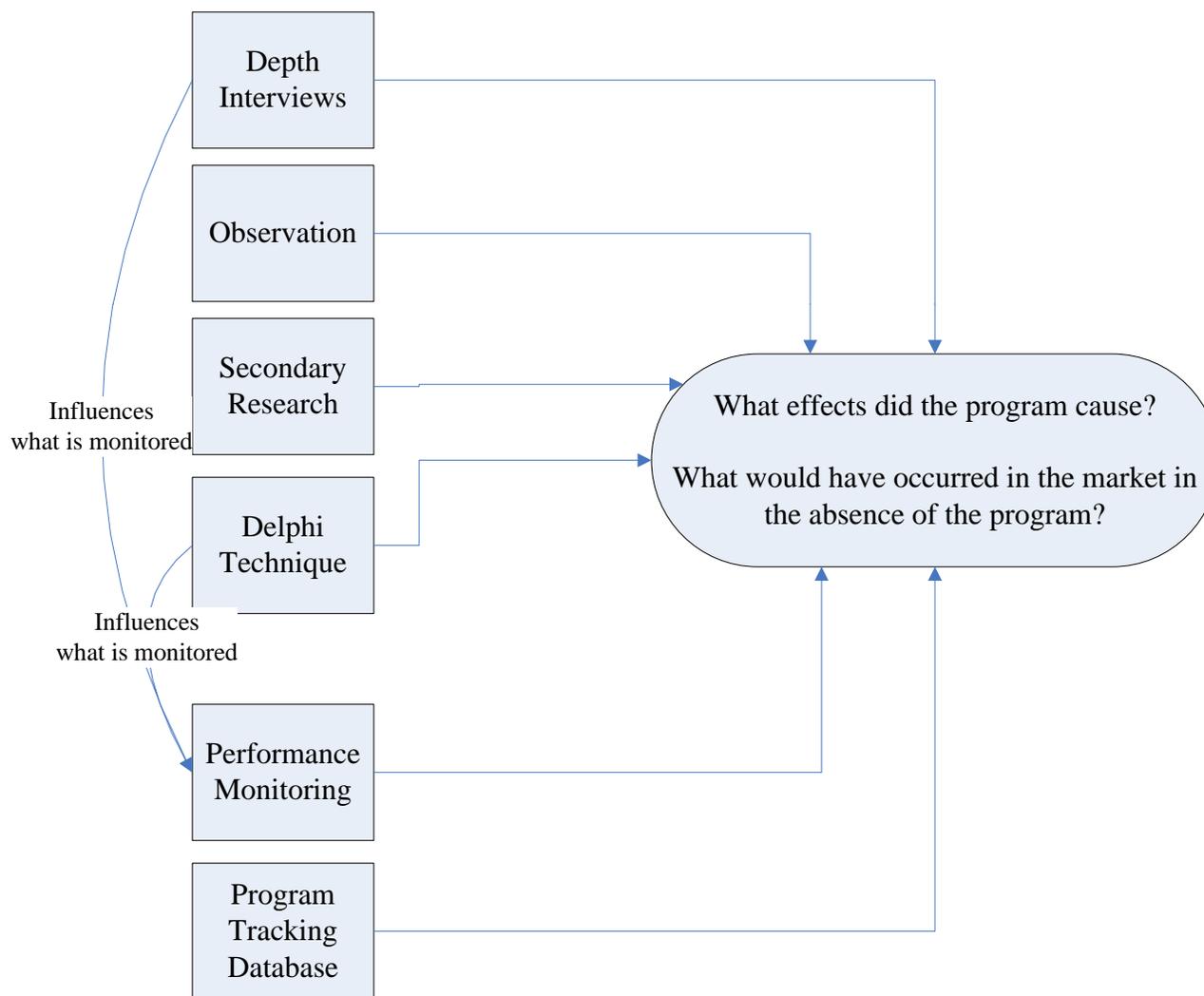
- John saw the tornado tear off the roof
- The roof was on before the tornado and now it is not
- There was no work done at this site since the tornado

**Quantitative and Qualitative Data**

# Evaluation Issues

- Resource acquisition programs often intervene directly with the consumer.
- Upstream program require attribution of an intervention that is virtually unknown by consumers.
- There are often few market actors and their influence can be great. These people are difficult to reach.
- Corporate-speak can muddy the waters.
- Resulting market effects can also muddy the waters.
- Key decisions are made before official documents are signed. People move jobs.

# Evaluation Solution



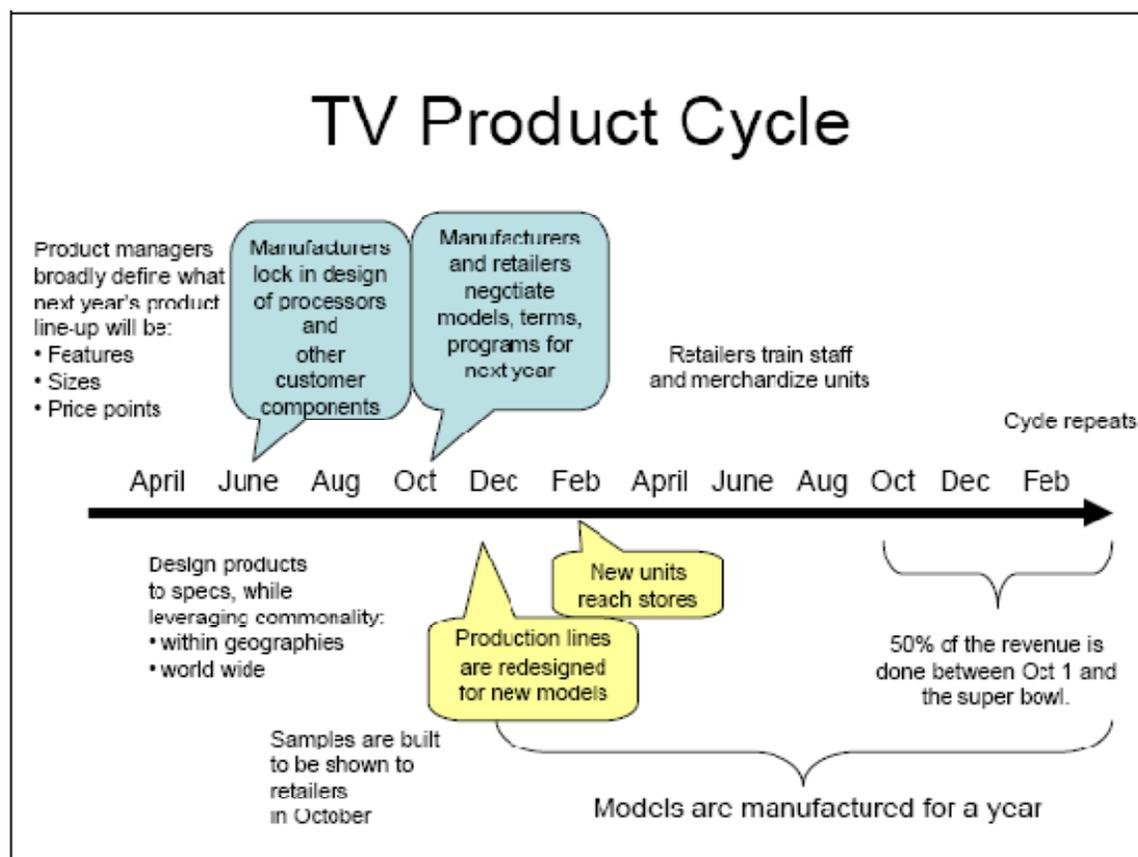
# Addressing Evaluation Issues

- Knew that retailer sales data was difficult to obtain
  - Implications: Drafted language into contracts for retailer
- Knew that memory is tricky
  - Implications: Used Salesforce documentation as unstructured data to demonstrate actions and timelines

# Findings and Implications

- Found that changes were being made by retailers before signing contracts
  - Implications: When impact evaluators only look at the time of when became a participant, information can be missed.
- Found evidence of global effects
  - Implications: How can comparison groups be determined?

# Example of Timing



Source: Bassill, Steve, QDI Strategies, "Strategic Options for Energy-Efficient Electronics in Pacifica Gas and Electric Service Territory: Marketing Delivery Systems for Electronic Measures," Emerging Technologies Program, Application Assessment Report #0702, (submitted on behalf of Pacific Gas and Electric Company Emerging Technologies Program), April 10, 2008.

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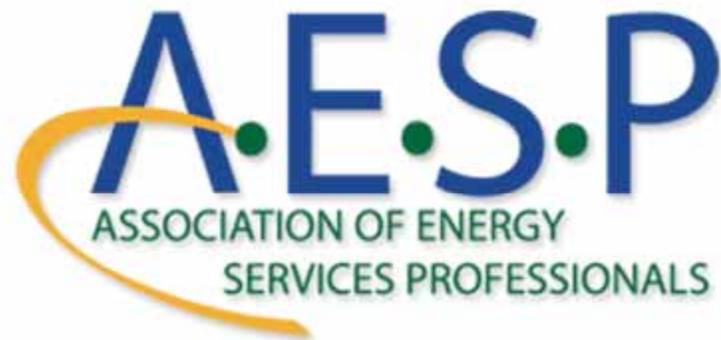
## Upstream Programs Can Be Evaluated

- Focus on where the program intervenes
  - Use a variety of qualitative and quantitative methods
  - Capture data early and thoroughly and make analysis transparent
  - Include market effects in analysis
  - Realize that programs seek to continuously push the market to higher efficiencies
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