

CADMUS



Evaluation of Market Transformation Programs

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April 2, 2017

Agenda

Learning Objectives

Evaluation Concepts

Planning & Conducting a Market Progress Evaluation

MT Indicators Exercise

Wrap-up

Learning Objectives

Understand the **role** and **importance** of evaluation in market transformation

Learn how to **plan** for evaluation, **develop** market progress indicators

Understand foundational evaluation **concepts** and distinguishing features of MT evaluation

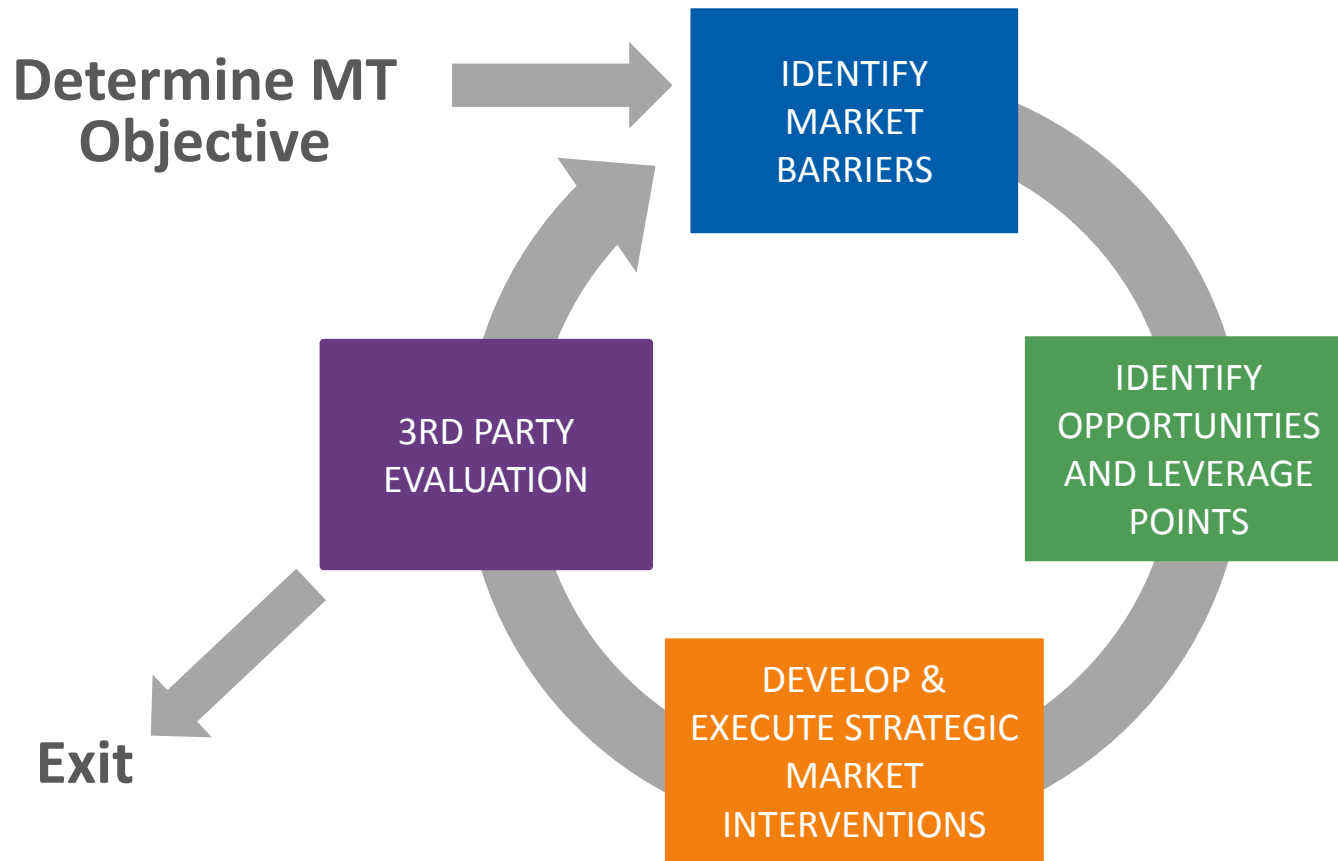
Become familiar with typical MT evaluation **methods**



Evaluation Concepts



Market Transformation Process



Evaluation

What?

“The **systematic** acquisition and assessment of **information** to provide useful **feedback** about something.”

William Trochim, Ph.D.
Cornell University

Why?

Provide unbiased, independent, empirically-based information to decision-makers

(to help them make better decisions!)

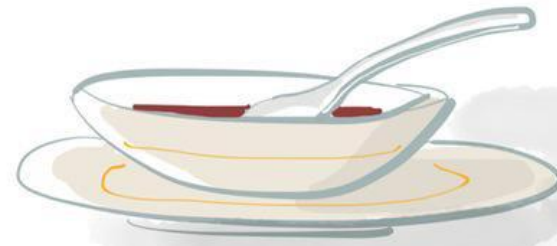
Program Evaluation Uses

- ✓ Document stated program activities, accomplishments, and outcomes
- ✓ Determine if program is being implemented as planned
- ✓ Track program/market progress
- ✓ Understand changing market conditions
- ✓ Assess program impacts, market effects, cost-effectiveness
- ✓ Identify opportunities for program enhancement or improvement
- ✓ Meet a statutory or regulatory requirements

FORMATIVE SUMMATIVE



WHEN THE **CHEF**
TASTES THE SOUP



WHEN THE **GUESTS**
TASTE THE SOUP

@bryanMlathers

FROM STEVE WHEELER'S BLOG "THE AFL TRUTH ABOUT ASSESSMENT"





Types of Evaluations



Types of Evaluation



Market Research/Characterization

PURPOSE	TIMING	TYPICAL METHODS	
<p>Inform program design to maximize success</p>	<p>Before launch, ongoing</p>	<ul style="list-style-type: none"> • Secondary research • Interviews • Surveys 	<ul style="list-style-type: none"> • Social Network Analysis • Segmentation Analysis • Conjoint Analysis
KEY OUTCOMES			
<ul style="list-style-type: none"> • Market size estimates • Market structure (e.g., supply chain/channels, influencers, actors) • Identify market barriers, opportunities, points of leverage • Understand target audiences, segments • Understand customer awareness, preferences, motivations 			

Baseline Assessment

PURPOSE	TIMING	TYPICAL METHODS
Identify pre-intervention conditions: existing and forecast market adoption, to enable impact evaluation	Before program intervention	<ul style="list-style-type: none">• Secondary data/ Industry forecasts• Interviews• Delphi panel• Quantitative modeling
KEY OUTCOMES		
<ul style="list-style-type: none">• Estimate of naturally occurring market adoption- pre-program, and over time-absent program intervention (“counterfactual”)• Pre-program market conditions, behaviors, practices		

Market Progress Evaluation

PURPOSE	TIMING	TYPICAL METHODS
Assess progress toward market transformation	Ongoing	<ul style="list-style-type: none">• Interviews• Surveys• Market data analysis• Direct observation (e.g., behavior, marketing practices, shelf/floor surveys, site assessments/saturation studies)

KEY OUTCOMES

- Similar to process evaluation
- Assessment of market progress vs. hypothesized
- Assessment of market barriers, opportunities
- Recommendations to improve program

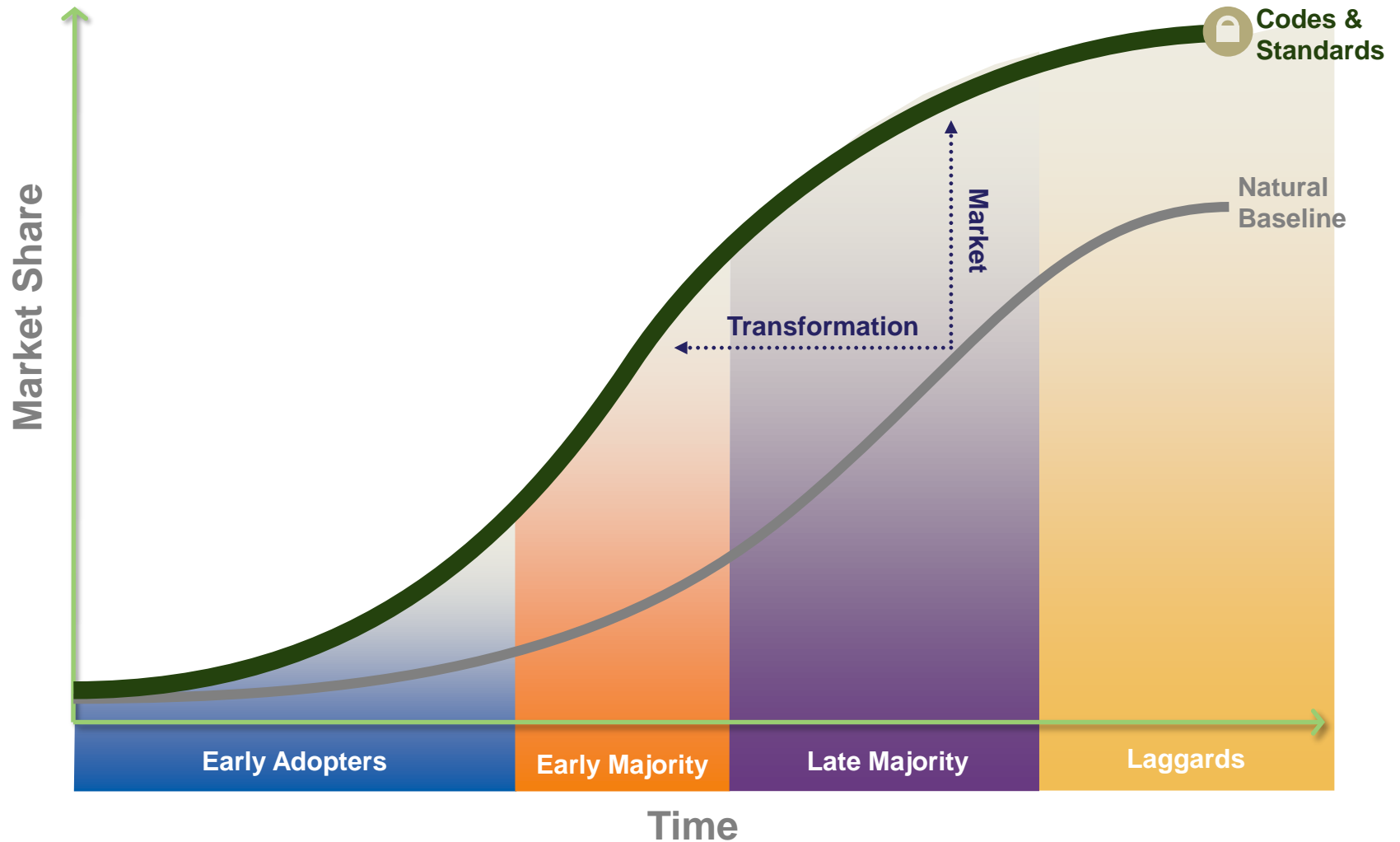
Process Evaluation

PURPOSE	TIMING	TYPICAL METHODS
Identify opportunities to improve program design, implementation, operation, and delivery	During the program	<ul style="list-style-type: none">• Interviews• Surveys• Materials Review• Tracking system/Data Review
KEY OUTCOMES		
<ul style="list-style-type: none">• Documentation of program logic and operations• Assessment of effectiveness against expected or planned performance (e.g., program activities, administration, satisfaction)• Recommendations to improve program		

Impact/Energy Savings Evaluation

PURPOSE	TIMING	TYPICAL METHODS
Quantify energy and demand savings, other benefits, and cost-effectiveness	During pilot; periodic	<ul style="list-style-type: none">• Data collection - program files, surveys, billing information, M&V, deemed savings• Engineering algorithms• Statistical/econometric analysis• Economic analysis
KEY OUTCOMES		
<ul style="list-style-type: none">• Net energy and demand savings attributable to program• Non-energy benefits• Cost-effectiveness		

MT Evaluation in Context



Source: Adapted from 2015-19 NEEA Business and Strategic Plans, <http://nea.org/about-nea/nea-strategic-planning>.



Planning & Conducting a Market Progress Evaluation



Market Progress Evaluation

Develop Program
Theory/ Logic
Model

Develop Market
Progress
Indicators

Identify Data
Sources

Collect & Analyze
Data

P L A N

E V A L U A T E

Logic Models

“A **systematic** and **visual** way to present and share your understanding of the **relationships** among the resources you have to operate your program, the activities you plan, and the changes or results you hope to achieve.”

W.K. Kellogg Foundation Logic Model Development Guide

Your Program Road Map

Where are you going?

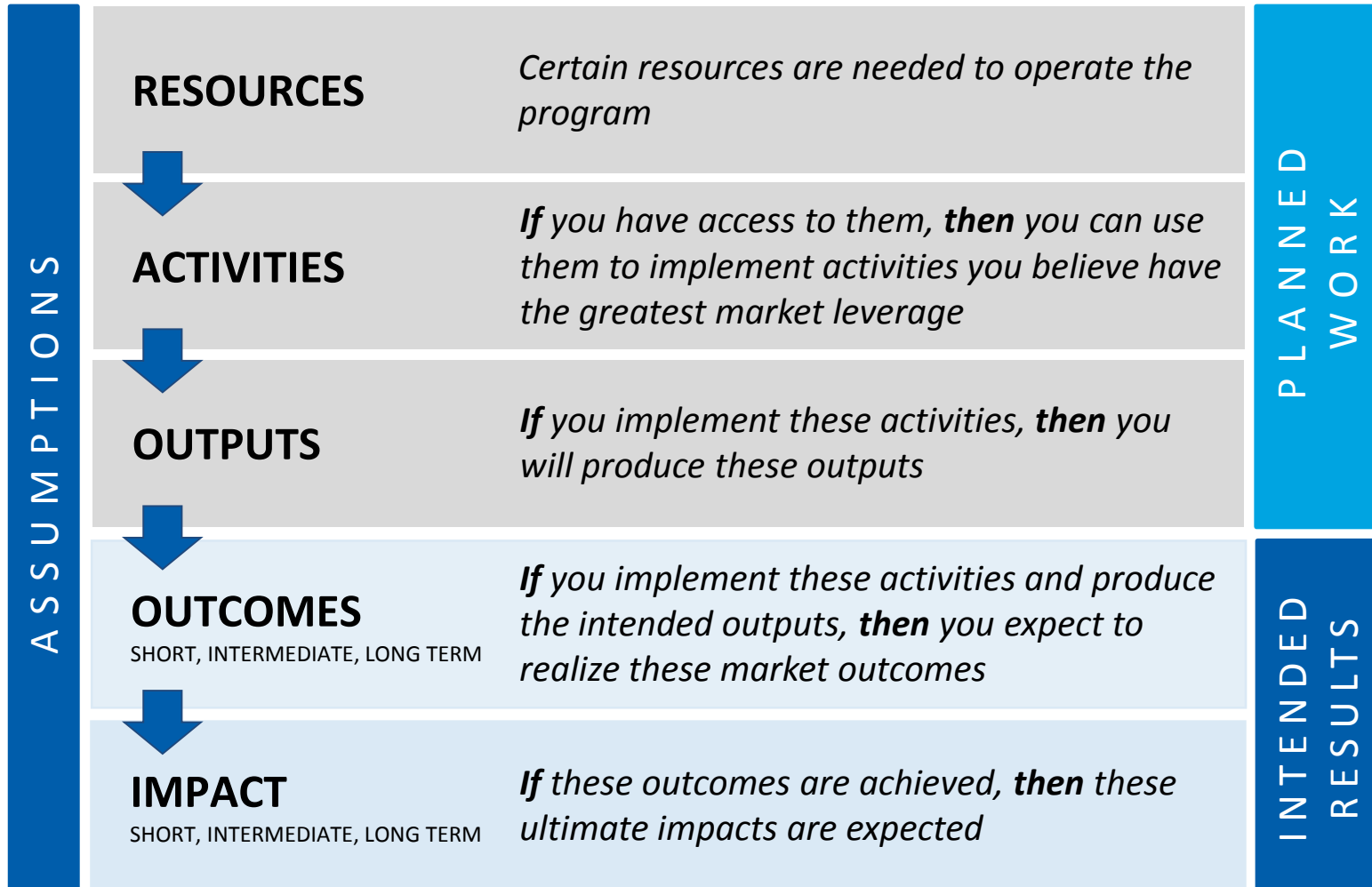


How will you get there?

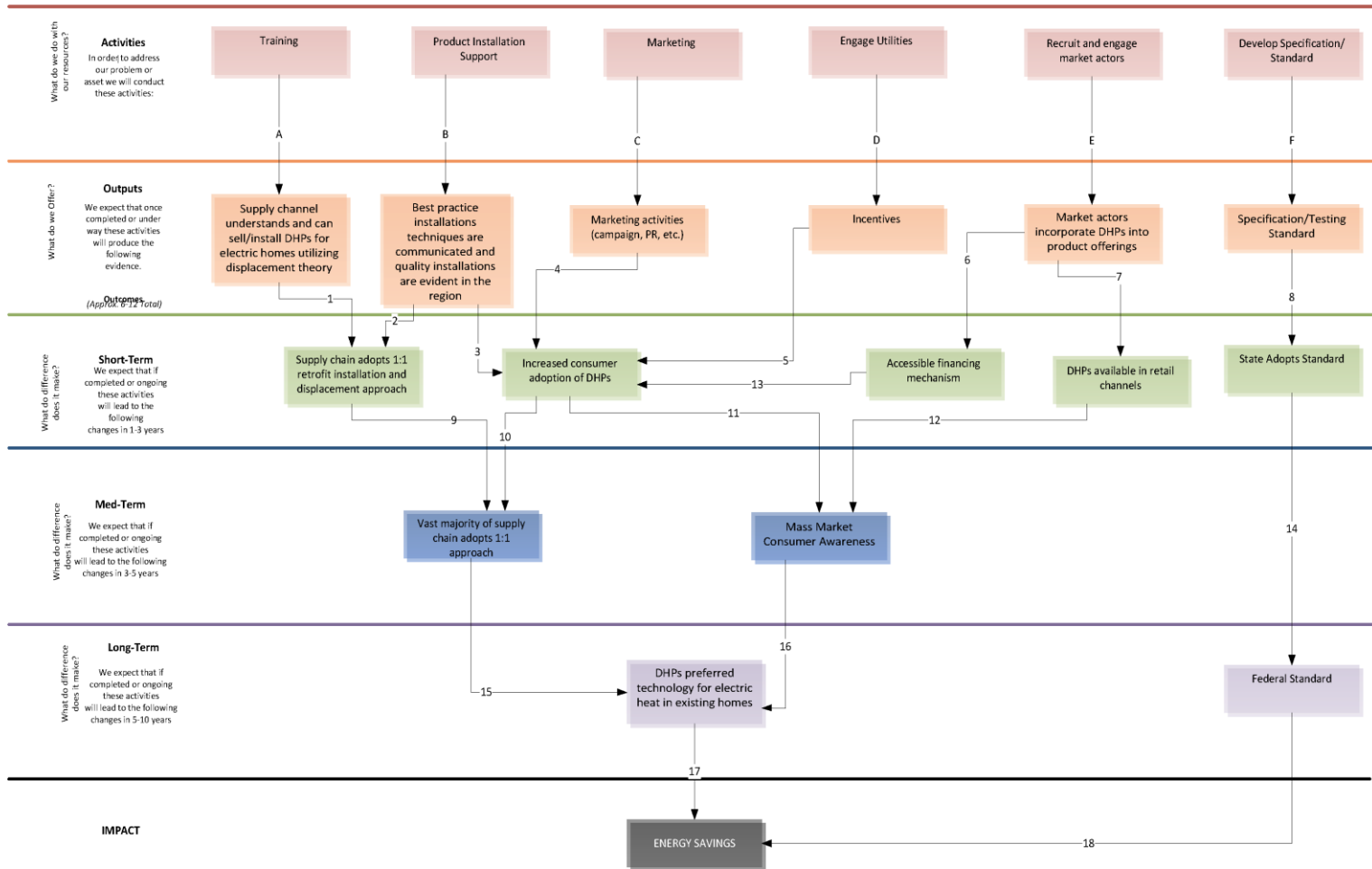
How will you know that you've arrived?



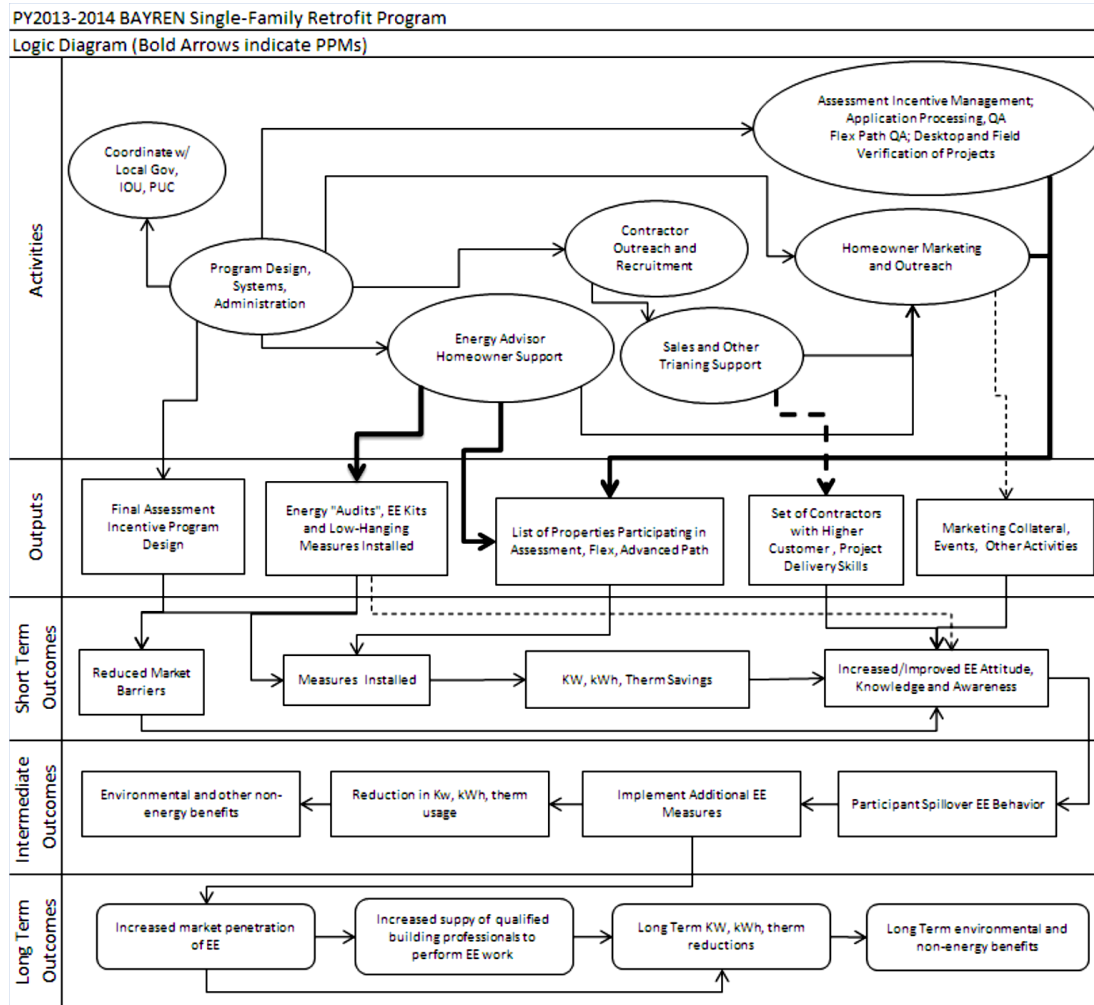
Program Theory: If/Then



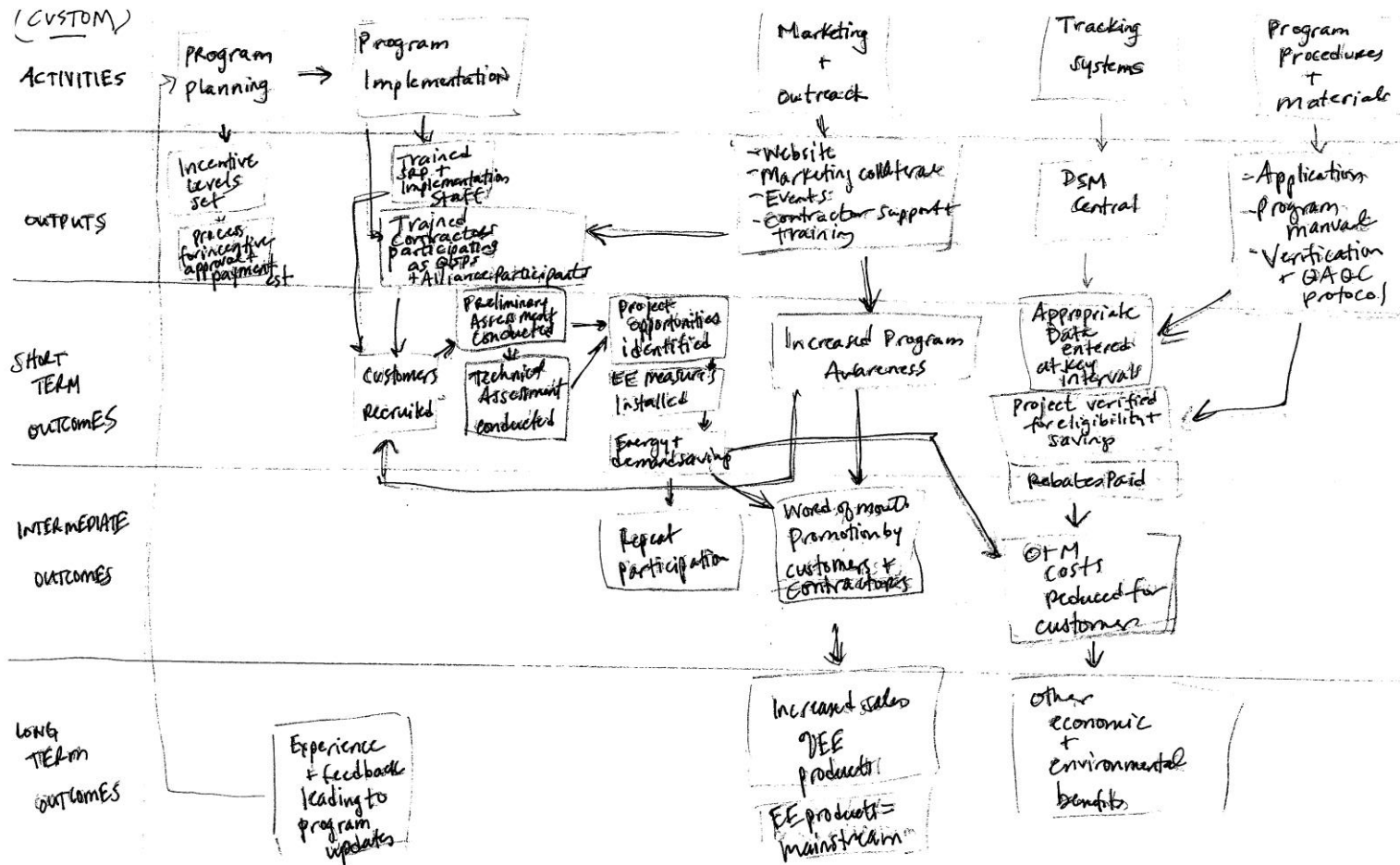
Logic Model Example 1



Logic Model Example 2



Where do we start?



Why Logic Models Matter

DOCUMENTED PLAN

- What problem are we trying to solve?
- What precisely will be done?
- What are the desired/expected outcomes?

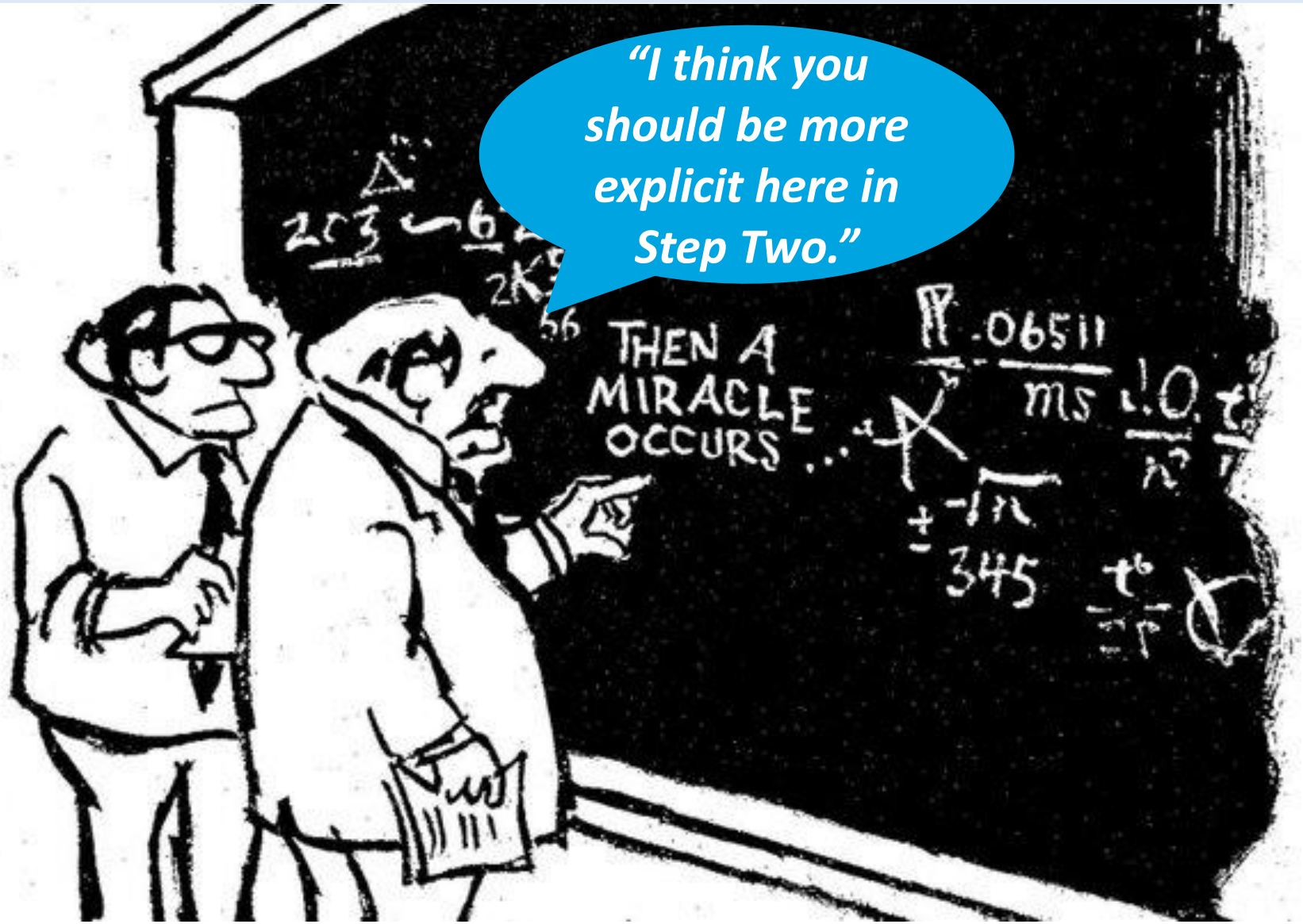
COMMUNICATION

- A common road map for all stakeholders and evaluators
- Everyone on the same page

EVALUATION

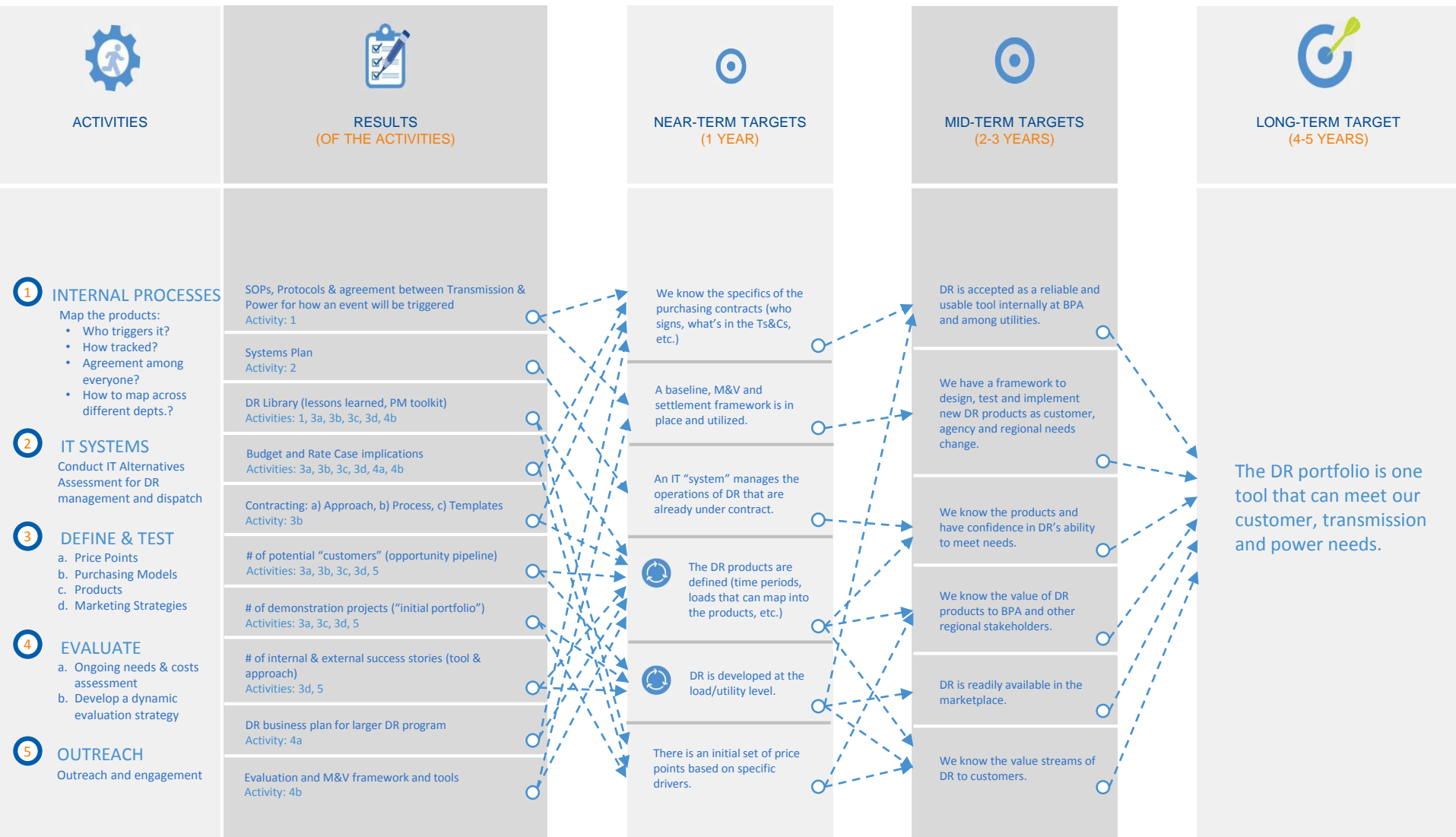
- Clarifies what and when to measure
- Enables prioritization of evaluation efforts

Why It Matters for Evaluation



SOURCE: Sidney Harris

Logic Model Example 3



Market Progress Evaluation

Develop Program
Theory/ Logic
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Develop Market
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Market Progress Indicators

How will we know we are making progress in transforming the market?



Market Progress Indicators: DHP Examples

OUTCOME	PROGRESS INDICATOR
Supply chain promotes DHPs	Coop marketing dollars provided by manufacturers & distributors
Installers see DHPs as viable solution for customers	Installer attitudes: product viability, price
Installers utilize installation best practices	% of sales volume from Master Installers Master Installer QA pass rate
Utilities promote DHPs	Number of participating utilities
Consumers aware of DHP technology and benefits	Consumer awareness
Equipment accessible to end-users	Retail store availability (volume-weighted) % stores

Example Market Progress Indicators

CHANGES IN...	
SUPPLY SIDE	<ul style="list-style-type: none"> Availability of products/services Stocking and distribution patterns/practices Expansion/change/retooling of manufacturing facilities Production levels/schedules Number/types of products offered Changes in products/product attributes, quality Trade ally (market actor) knowledge/knowhow Increased trade ally advertising/promotion New market entrants Reduction in incremental costs of energy efficient products/services Changes in business strategy Product/service pricing Creation/widening in scope of market support structures (e.g., associates or training programs) Development of new financial instruments/intermediaries
DEMAND SIDE	<ul style="list-style-type: none"> Awareness Attitudes Increased recognition and acceptance Changes in decision-making/business practices Changes to customer procurement practices Who is purchasing (e.g., only early adopters?) Consumer/purchaser satisfaction Market share/sales
CODES/STANDARDS	<ul style="list-style-type: none"> Progress toward codes or standards (e.g., distinct action) Availability of a test standard Adoption of national specification

Market Progress Evaluation

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P L A N

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Secondary Data Sources

PROGRAM-SPECIFIC	RELATED PROGRAMS	MARKET DATA
Documents/records	Evaluations	Trade press
Collateral	Conference papers	Sales data
Databases	Best practice studies	Industry forecasts
Web	Internet information	Government Data

Primary Data Sources



**SUPPLY CHAIN
MARKET ACTORS**



CUSTOMERS



**PROGRAM
STAKEHOLDERS**

Market Progress Evaluation

Develop Program
Theory/ Logic
Model

Develop Market
Progress
Indicators

Identify Data
Sources

**Collect & Analyze
Data**

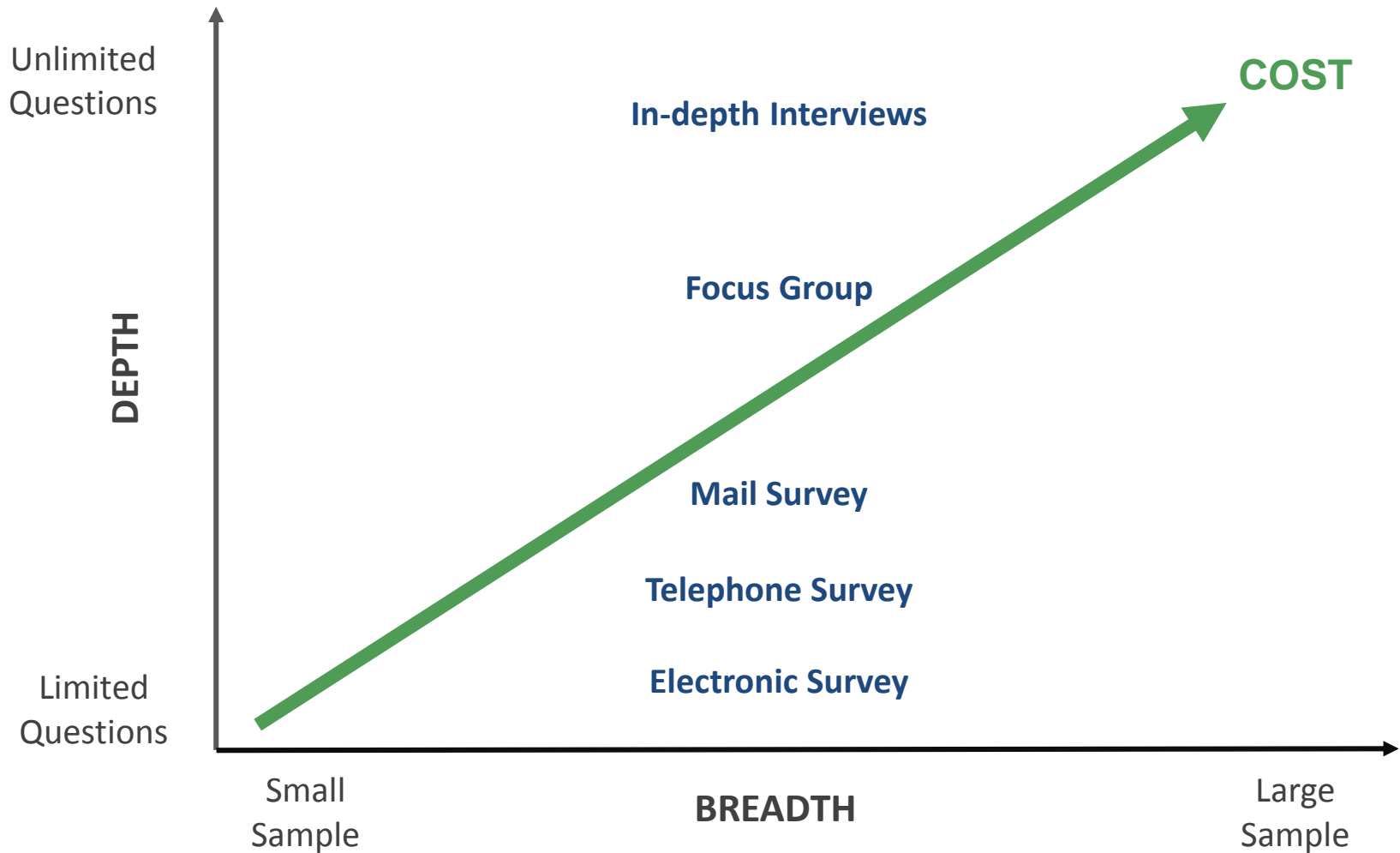
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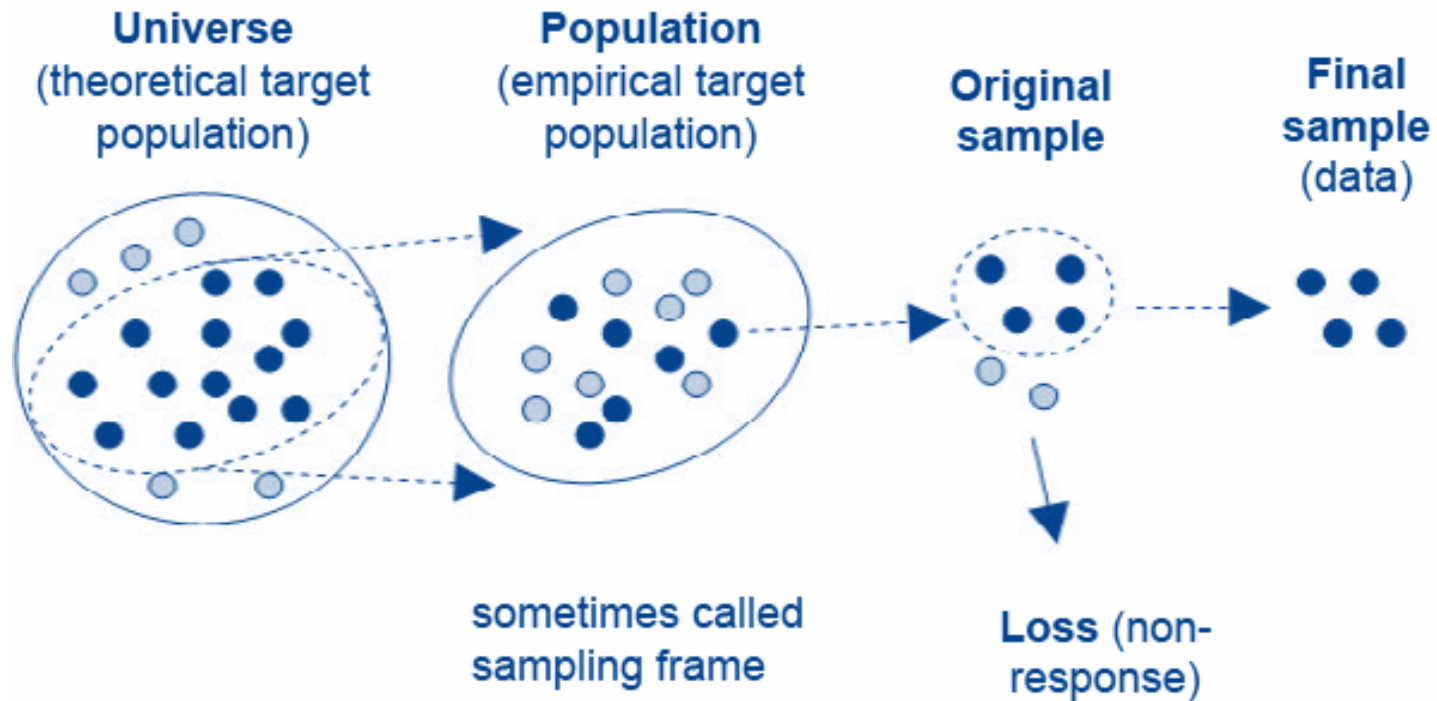
Primary Data Collection Methods

DISCUSSIONS	SURVEYS	ON-SITE
Individual interviews	Mail	Site visits
Group interviews	Telephone	Store visits
	Electronic	Field observations
		Ride-alongs

Cost and Quality Dimensions



Sampling



THE SELECTION OF A SUBSET OF INDIVIDUALS FROM WITHIN A STATISTICAL POPULATION TO ESTIMATE CHARACTERISTICS OF THE WHOLE POPULATION

SOURCE: https://www.bcps.org/offices/lis/researchcourse/images/sampling_illus.gif

Mapping Data Collection to MPIs

DATA COLLECTION ACTIVITIES							
PROGRESS INDICATORS	Database Tracking	Phone Interviews with Planning & Program Staff	Consumer Survey	Market Actor & Utility Interviews	Shelf Surveys & Mystery Shopping	Sales Data	Field & Lab Metering Study
Consumer Awareness & Adoption	✗		✗	✗		✗	
Supply Chain Adoption		✗		✗			
Retail Channel Availability					✗	✗	
Access & Use of Financing Mechanisms		✗	✗	✗			
Energy Savings						✗	✗

Adaptive Management

NO MECHANISM TO CAPTURE MARKET EFFECTS DATA

- Partner w/ manufacturers & distributors to obtain sales data; sign NDA
- Evaluation plan to review sales data & calculation methodology

HIGH COST THROUGHOUT SUPPLY CHAIN

Implement retail strategy with big box retailers

CONTINUED NEED FOR INCENTIVE DOLLARS TO OVERCOME FIRST COST BARRIER

- Continue utility program partnership/coordination
- Explore upstream incentives to decrease utility program costs

NEED INCREASED VISIBILITY & UNDERSTANDING OF DHPS IN RURAL AREAS

- Continue utility program partnership/coordination
- Explore upstream incentives to decrease utility program costs



Market Progress Indicators Exercise



Progress Indicator Exercise

Expected Outcome	Progress Indicator	Evidence/Data Needed to Confirm



Wrap-Up



MT Evaluation Challenges

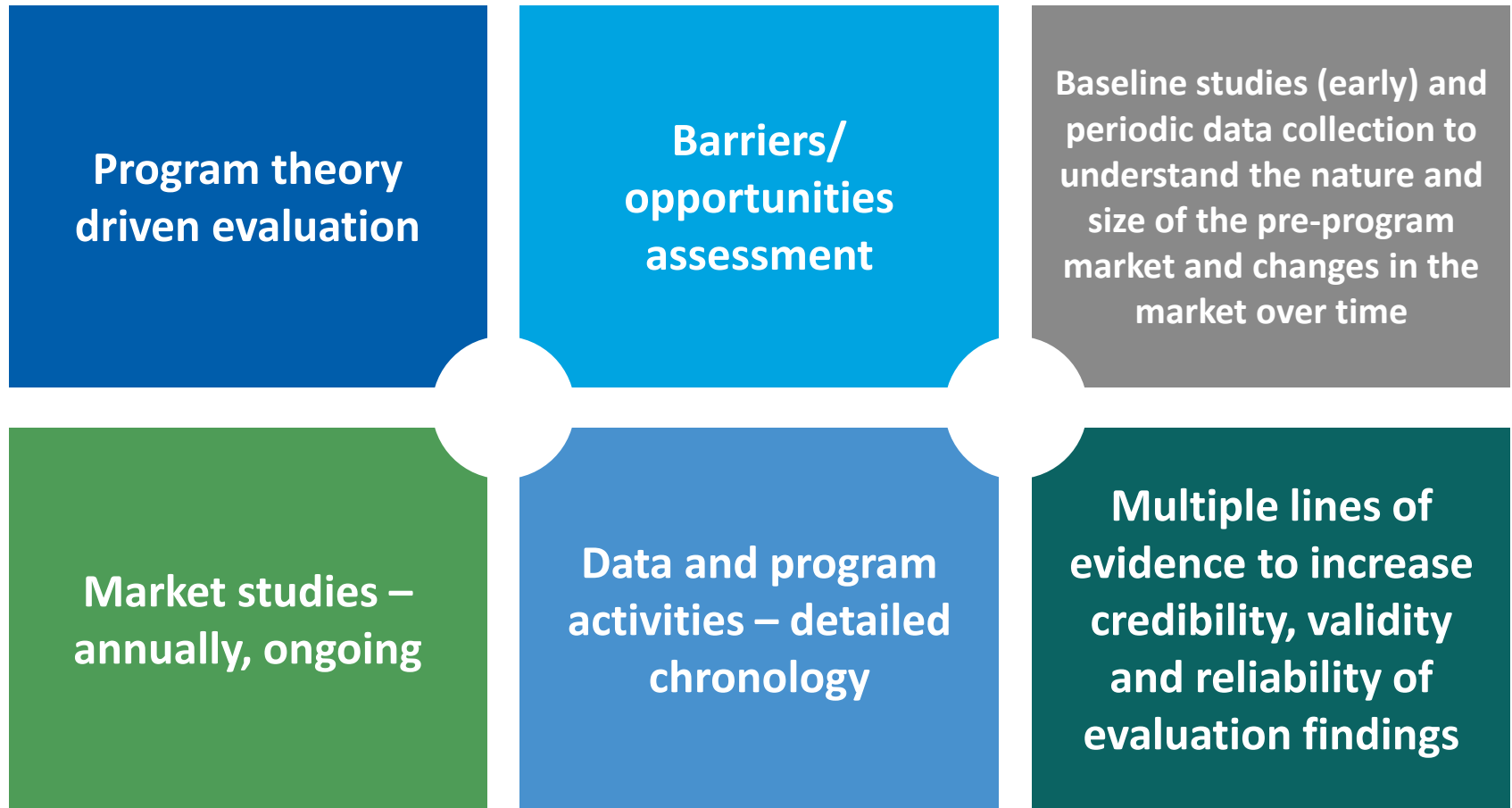
**Establishing
causality**

**Estimating
“naturally-
occurring
baseline”**

**Data
acquisition
& planning**

- *Multiple entities intervening in the market*
- *Program design often involves national market actors*

Distinguishing Features of MT Evaluation



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.....
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.....
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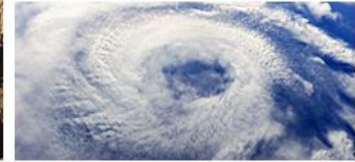
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Key Takeaways

Define what the transformed market looks like and how you plan to get there

Design/plan for evaluation (make sure you know what you need to measure)

Plan for adaptive management

MT programs are designed to ultimately make the program unnecessary (because it results in sustained market adoption and changes)

Market transformation takes time



Extra Slides





More About Energy Savings and “Market Effects”

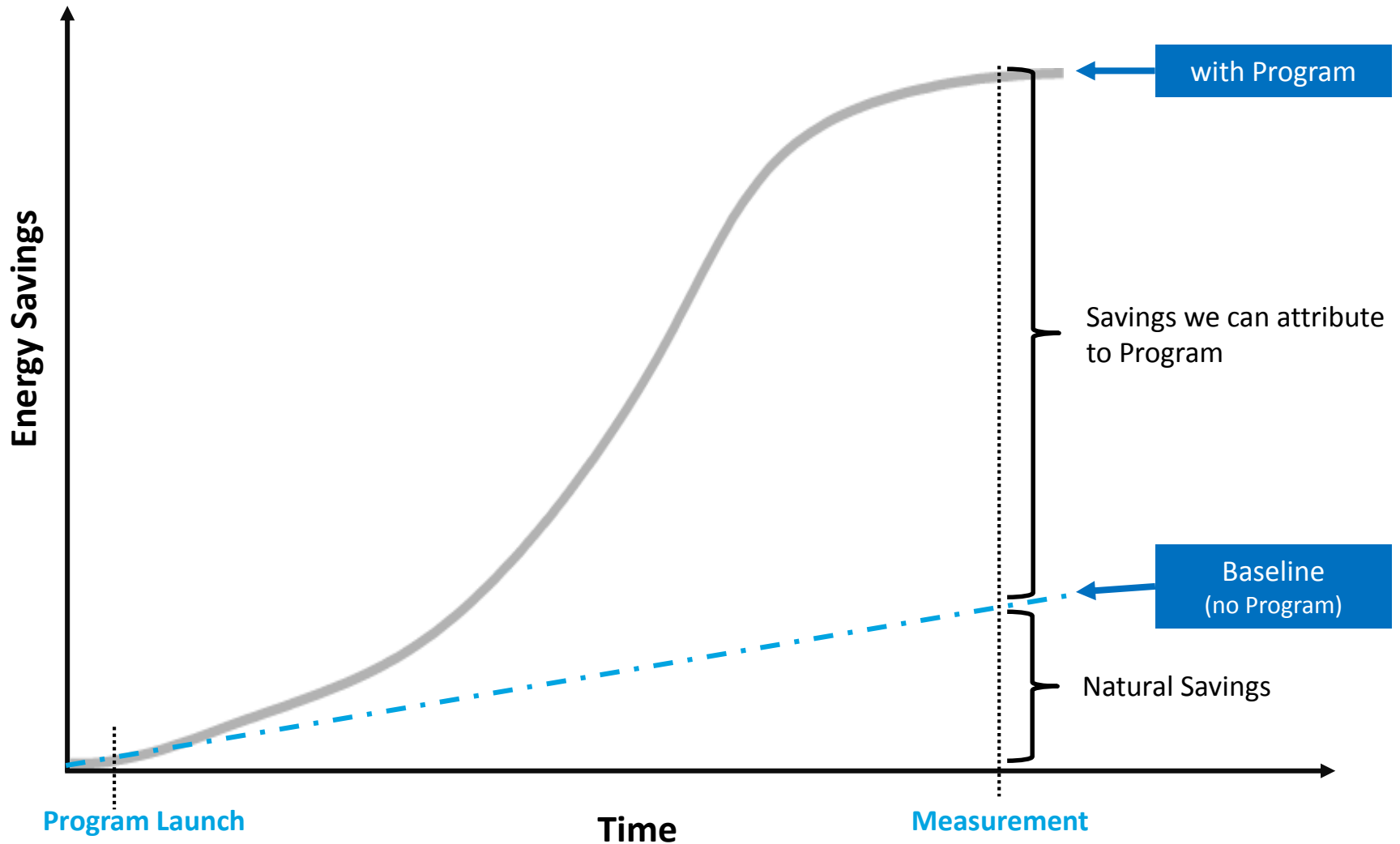


Resource Acquisition vs. Market Transformation Programs

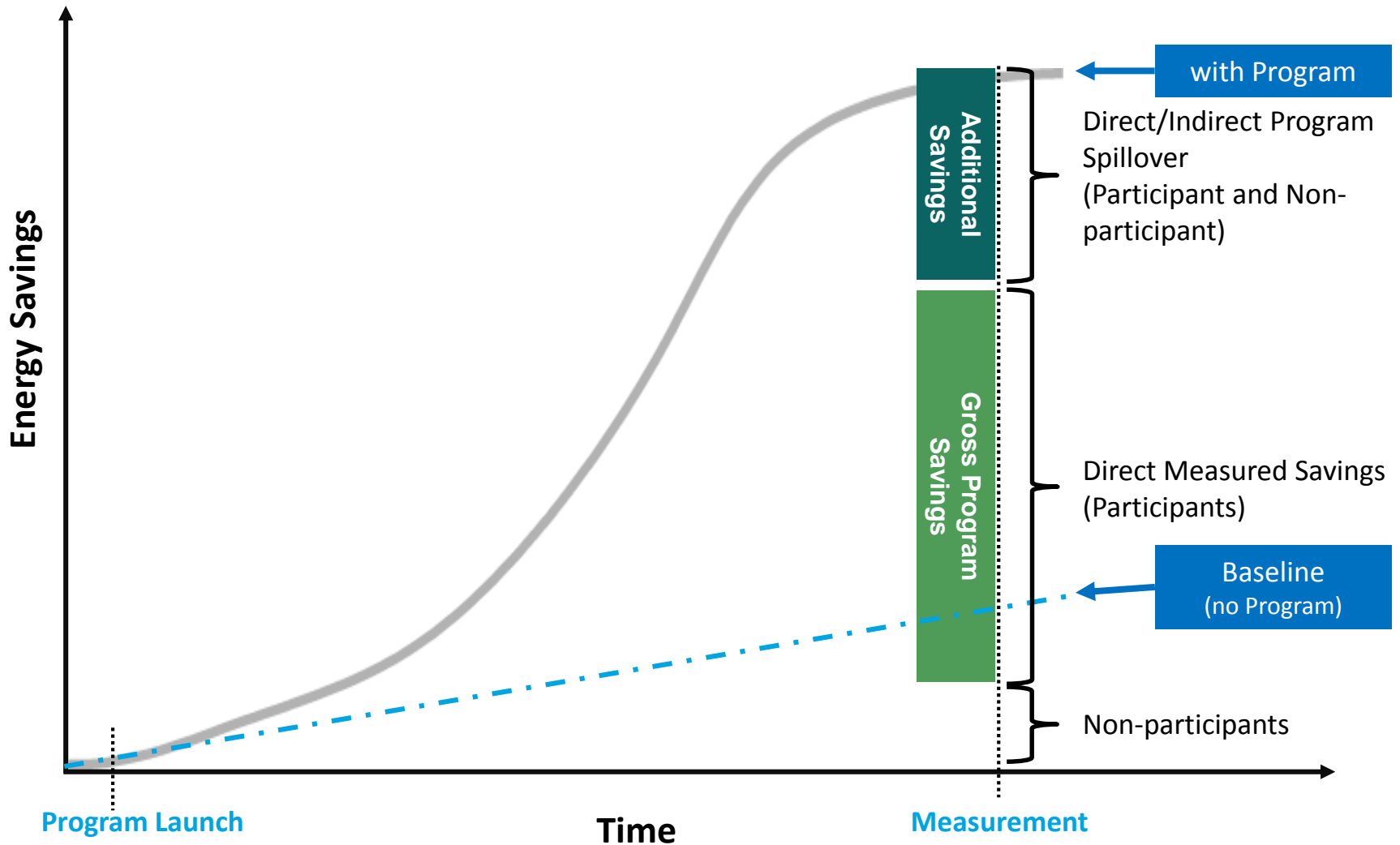
(*caveat: a slight oversimplification)

	Resource Acquisition	Market Transformation
Approach	Save energy via customer participation/uptake	Save energy by mobilizing widespread market adoption via interventions designed to deliver lasting market change
End-User Characteristics	Participants/ enrollees are known & recruited directly*	Adopters are not known (aside from early partners/ demonstrations)
Savings Estimation	Unit energy savings estimated based on sample and extrapolated to participating customers; NTG applied	Unit energy savings estimated based on sample and extrapolated to market; market baseline estimate subtracted from market savings
Implications	<ul style="list-style-type: none"> • Savings based on program participation • Success of program judged on short-term results, and easily determined. • No logic model needed 	<ul style="list-style-type: none"> • Savings based on modeled market projections using accepted & replicable techniques • Success of initiative based on long-term outcomes. • Theory of change with specific market progress indicators required to validate progress and impact

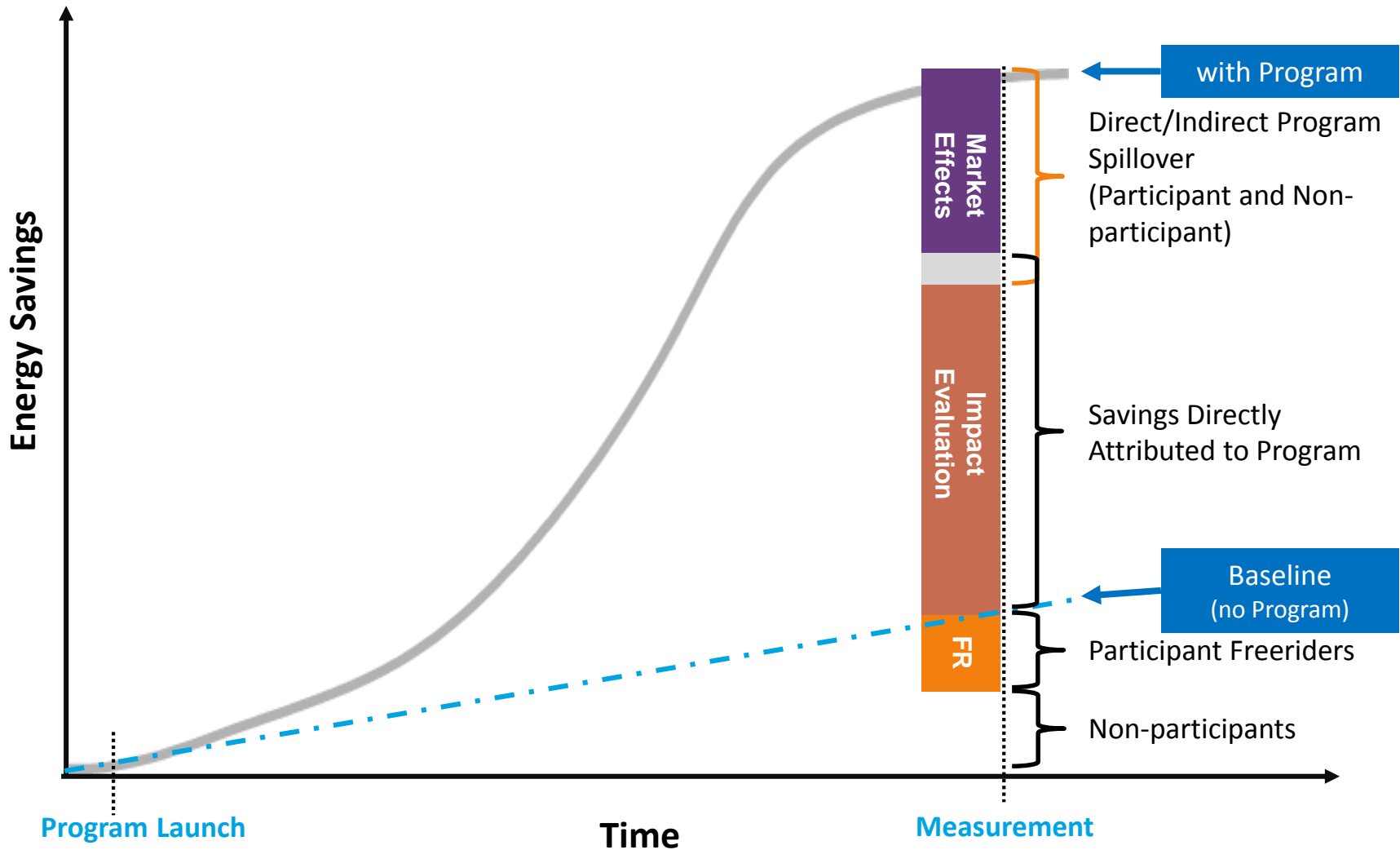
Savings Estimates



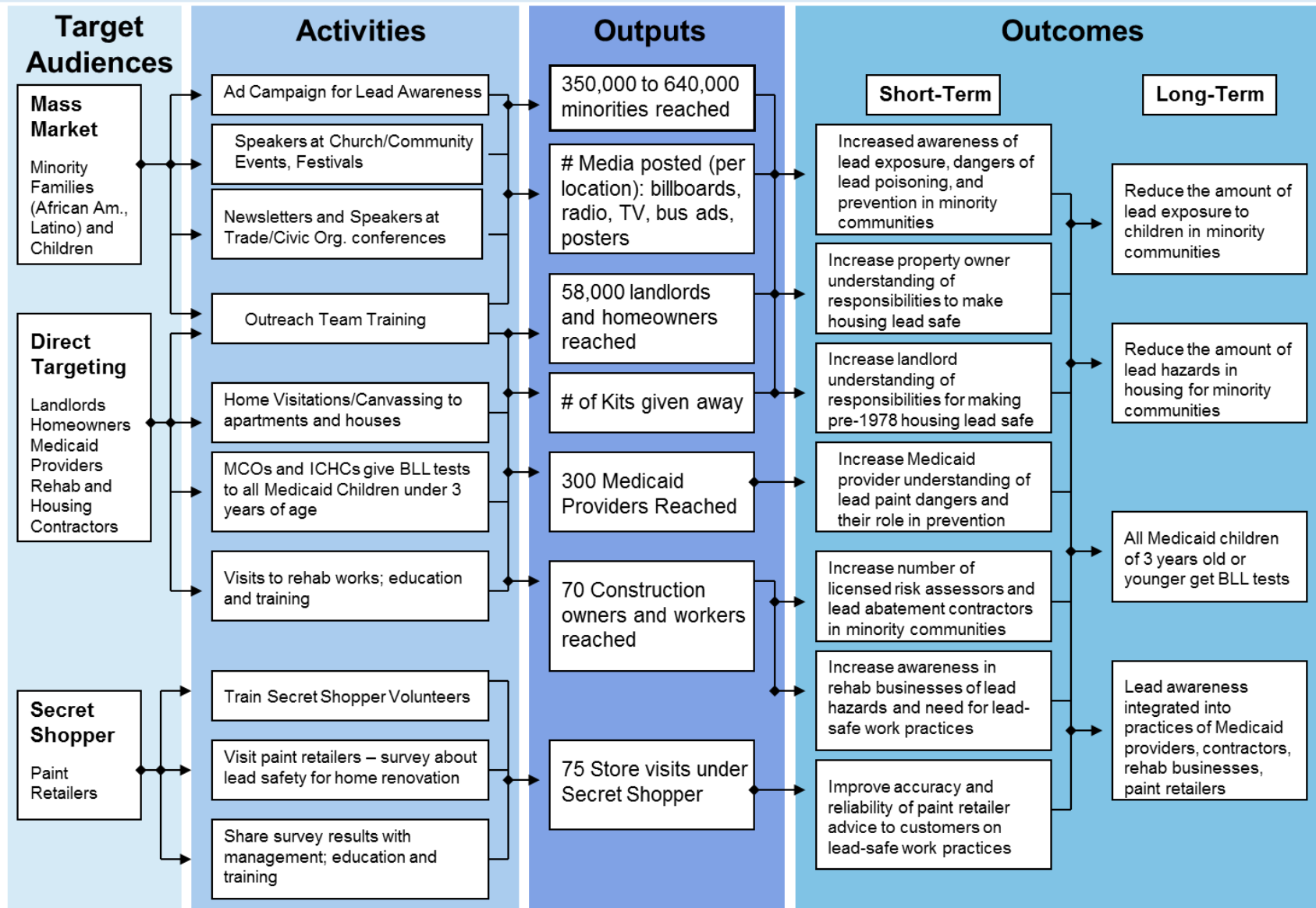
Savings Estimates



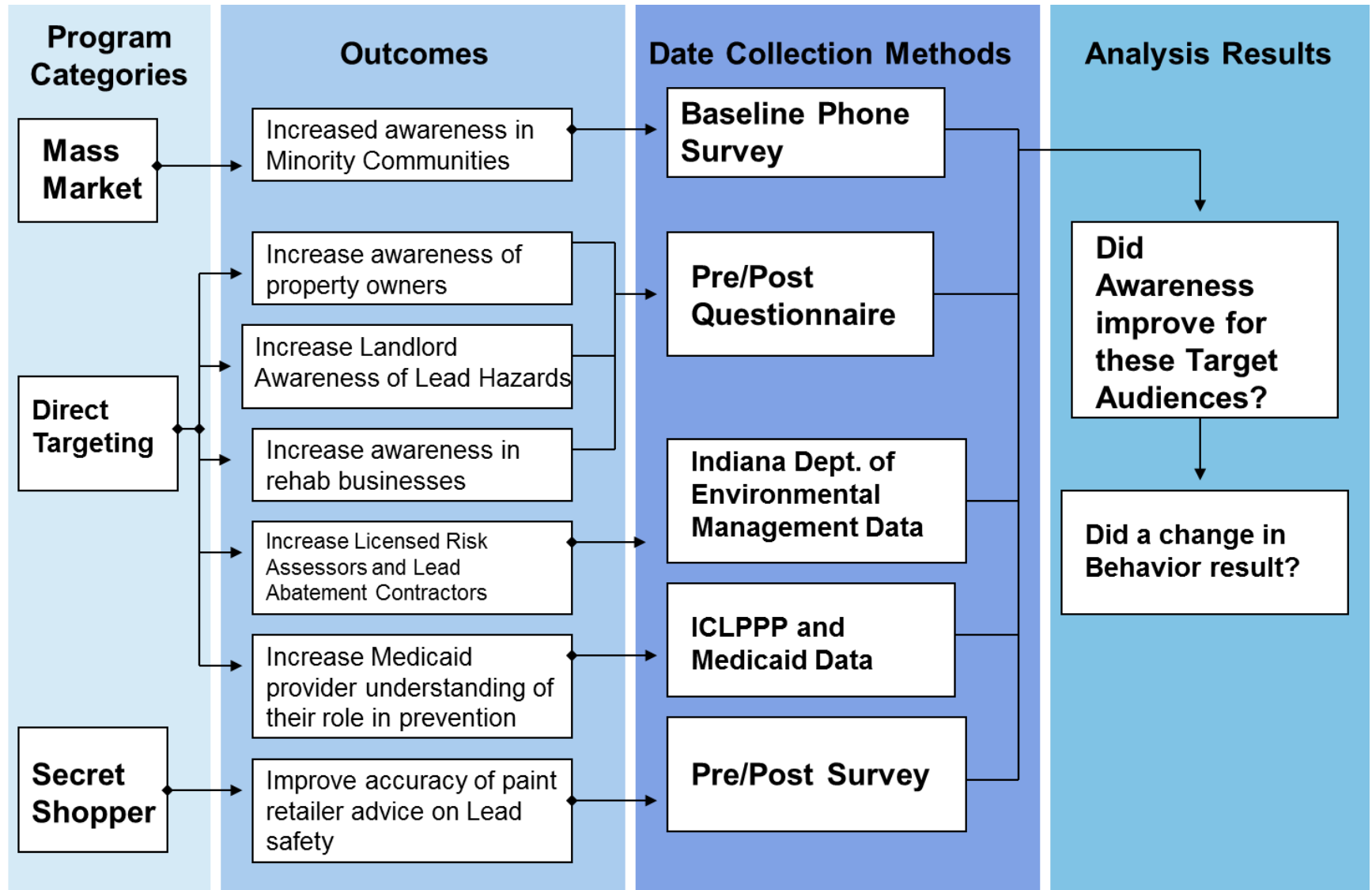
Savings Estimates



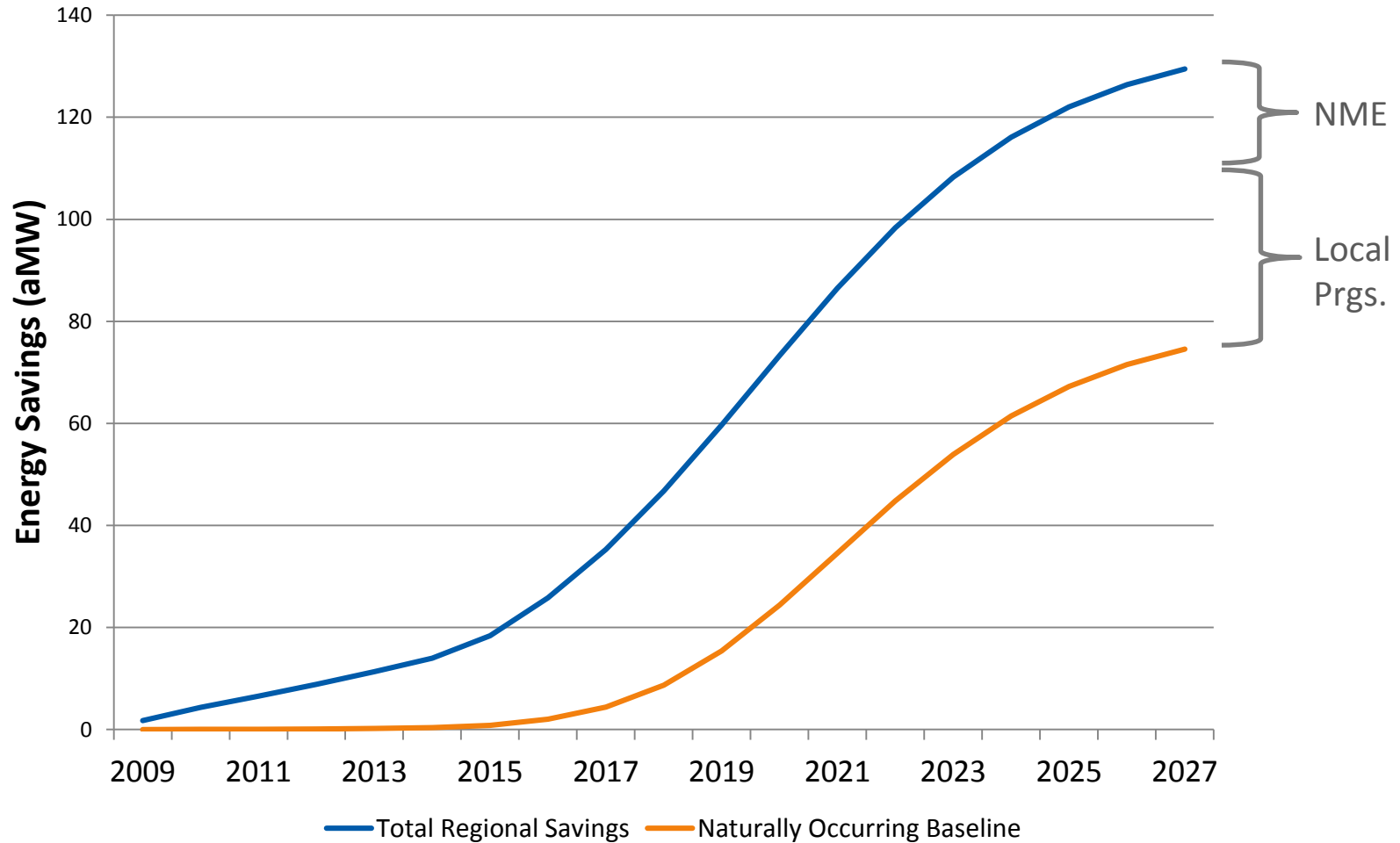
Logic Model



Measurement Approach



Bringing It All Together



Typical Market Barriers & Intervention Strategies

	Market Barrier	Intervention Strategy
Supply Side	Product Availability	<ul style="list-style-type: none"> • Develop relationships with regional and national market actors • Use targeted mid- and upstream incentives to influence stocking and promotion practices of EE products • Run design competitions based on desired performance
	Product Quality	<ul style="list-style-type: none"> • Conduct lab/field testing and share results • Establish 3rd part quality testing system • Establish or influence specification, code or standard
	Knowledge/ Capability	<ul style="list-style-type: none"> • Partner with manufacturers, trades, retailers to influence technical and sales training • Provide technical assistance and information to trades and professionals who influence EE choices
Demand Side	Product Price/ 1 st Cost	<ul style="list-style-type: none"> • Utilize/coordinate incentives • Coordinate bulk purchase/buyer aggregation to create production scale economies (emerging technologies) • Partner with market actors to offer financing options
	Product Awareness	<ul style="list-style-type: none"> • Develop and deploy research-based marketing materials/tools • Collaborate/coordinate and use collective leverage to negotiate marketing investments by market actors • Coordinate marketing efforts
	Value Proposition/ Business Case	<ul style="list-style-type: none"> • Conduct research to identify compelling selling value proposition • Conduct demonstration projects; disseminate case study results • Develop and disseminate business case tools

Source: Adapted from 2015-19 NEEA Business and Strategic Plans, <http://neea.org/about-neea/neea-strategic-planning>.