



Business and Consumer Electronics

From Inspiration to Implementation

**ENERGY STAR Meeting
Denver, CO
October, 2010**

Overview

- Market Transformation
 - Strategies
 - Energy Savings
- Implementation of the Business and Consumer Electronics Program
 - Building utility market share
 - Developing a channel strategy
 - Creating an Attribution Methodology
 - Developing a robust product portfolio

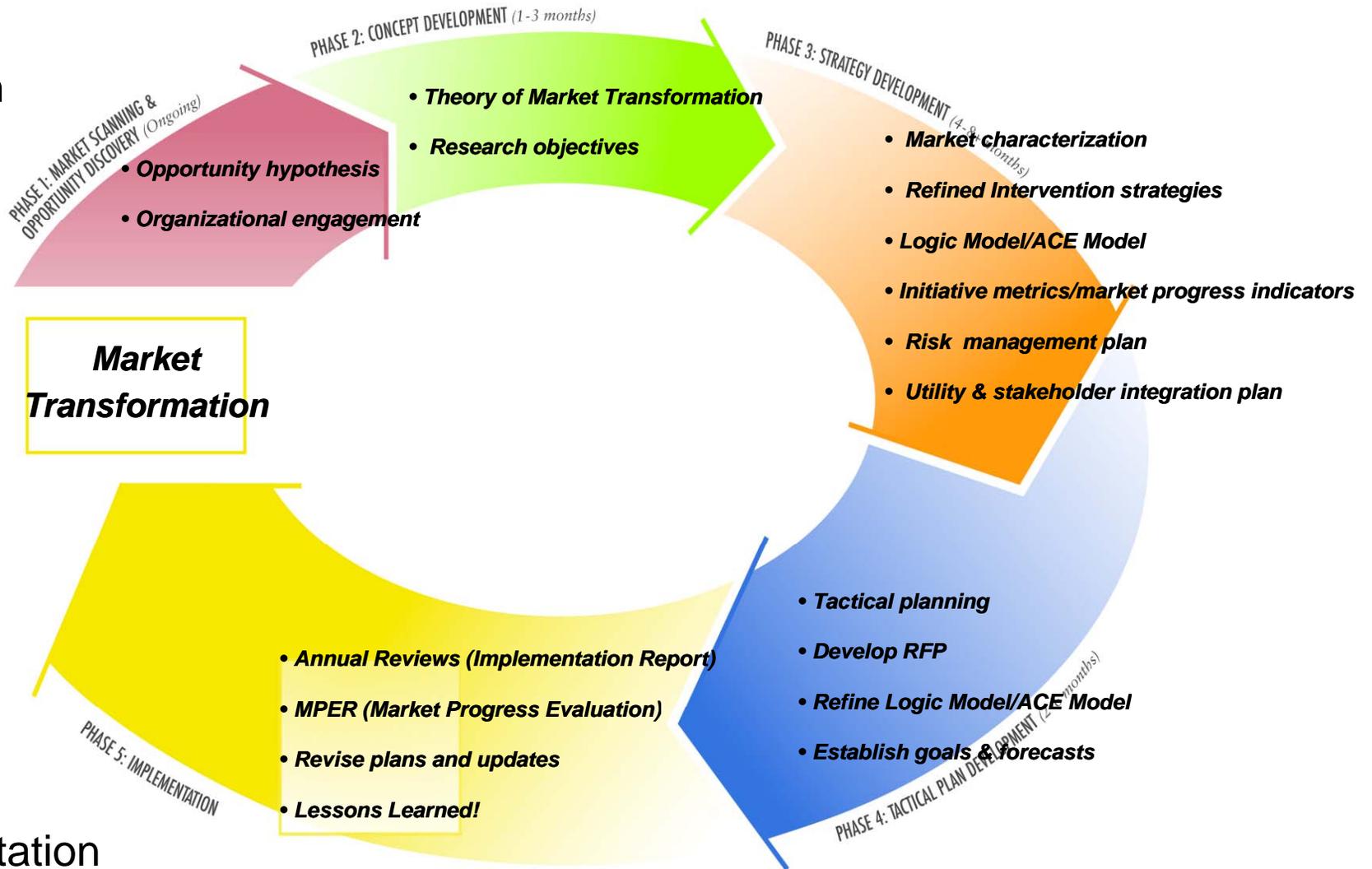
Inspiration = Market Transformation

“the strategic process of intervening in a market to create lasting change in market behavior...to accelerate the adoption of all cost-effective energy efficiency as a matter of standard practice”



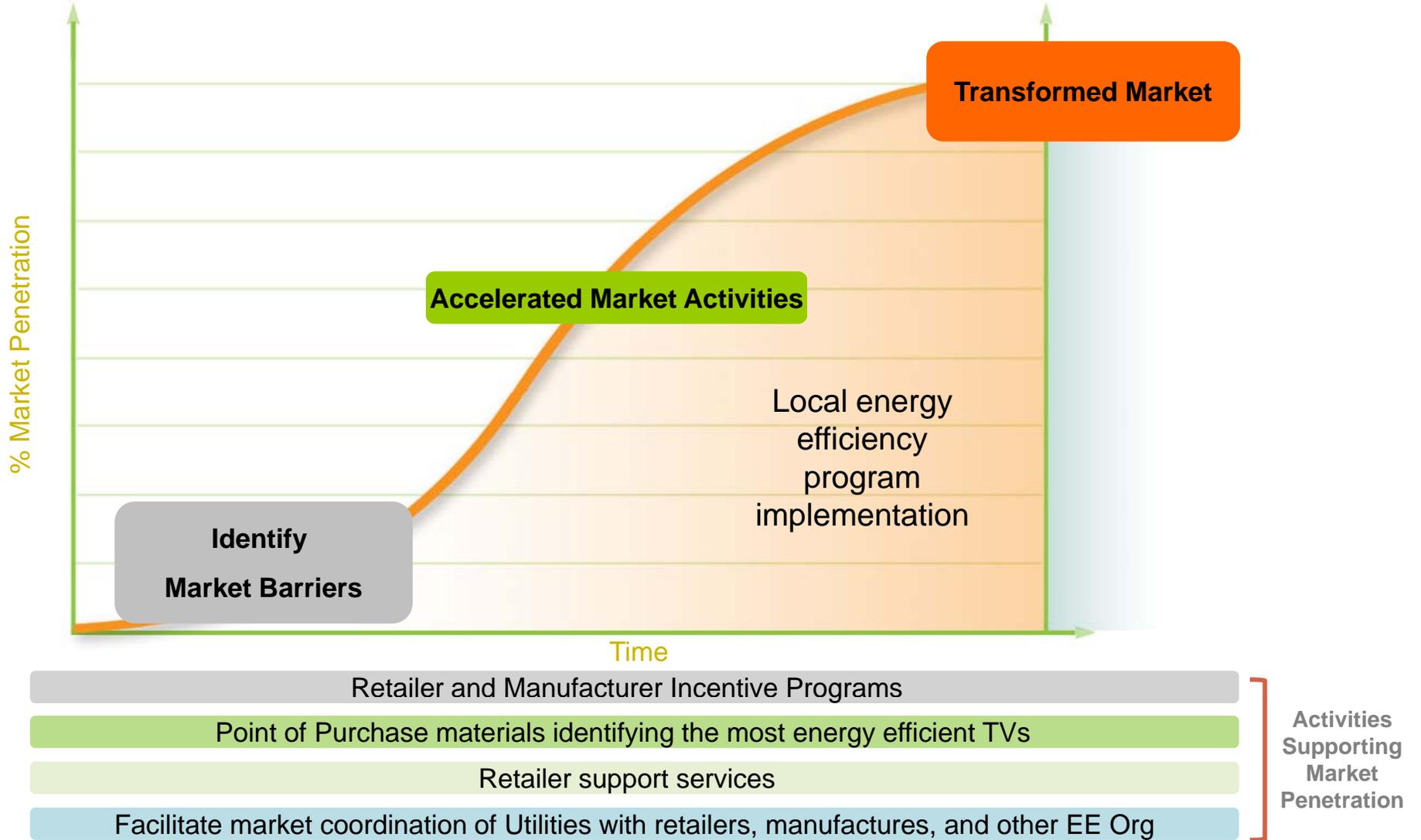
Inspiration to Implementation

Inspiration

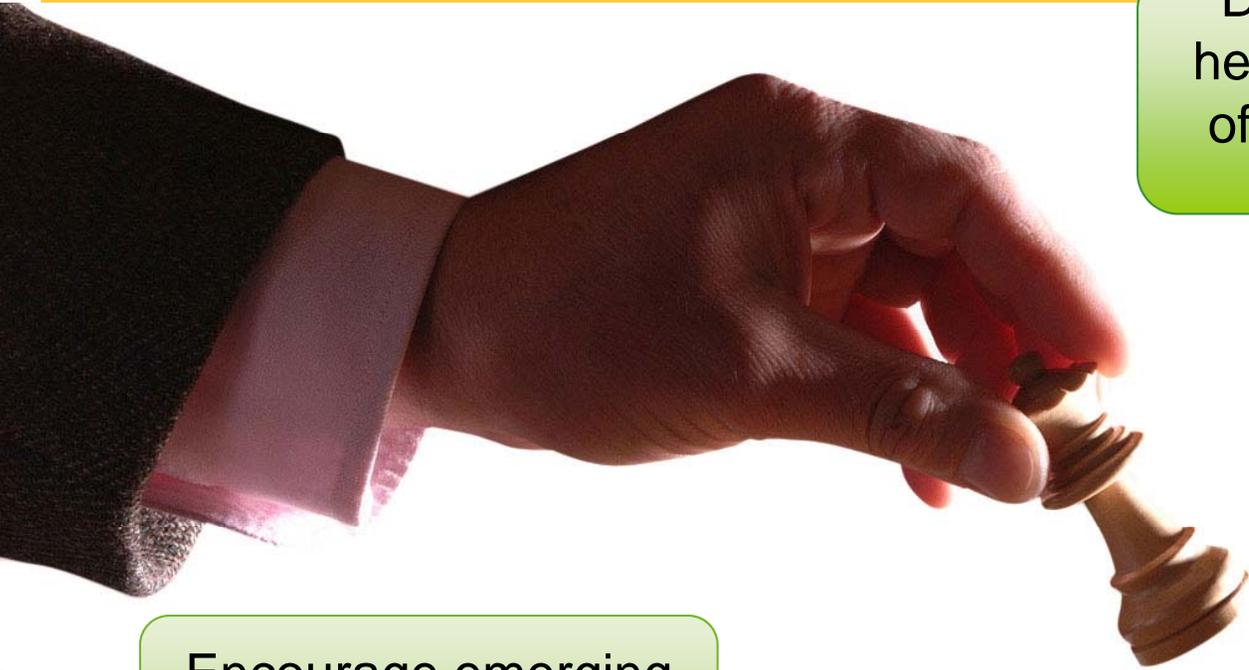


Implementation

Consumer Products



Innovative Strategies



Develop relationships that help accelerate the adoption of the most energy efficient consumer products

Build market knowledge and capability

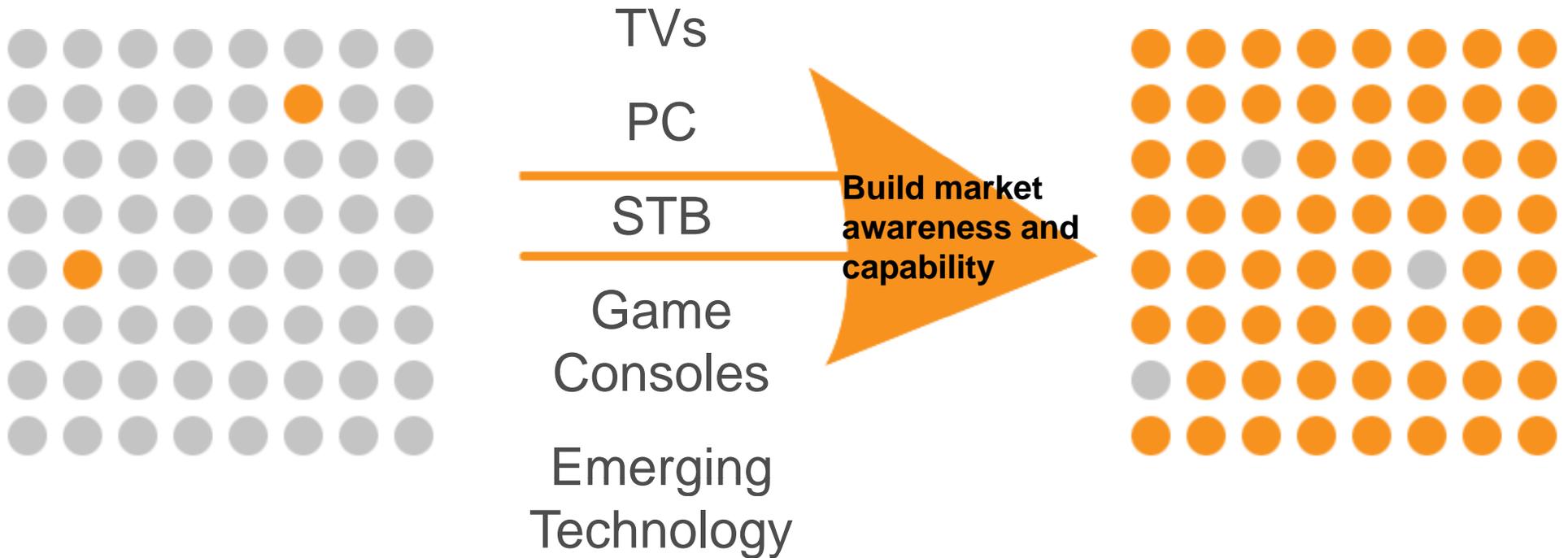
Create strategic partnerships

Encourage emerging technologies

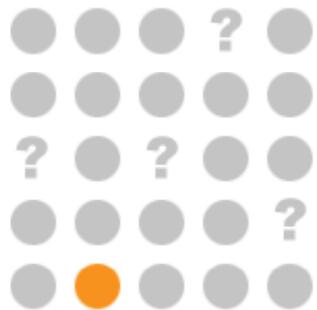
Strategically intervene in markets to remove barriers and increase adoption

What We Do

Accelerating Market Transformation



How We Work



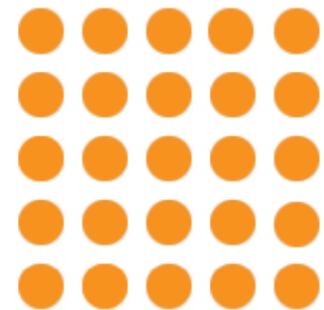
Assess
Market



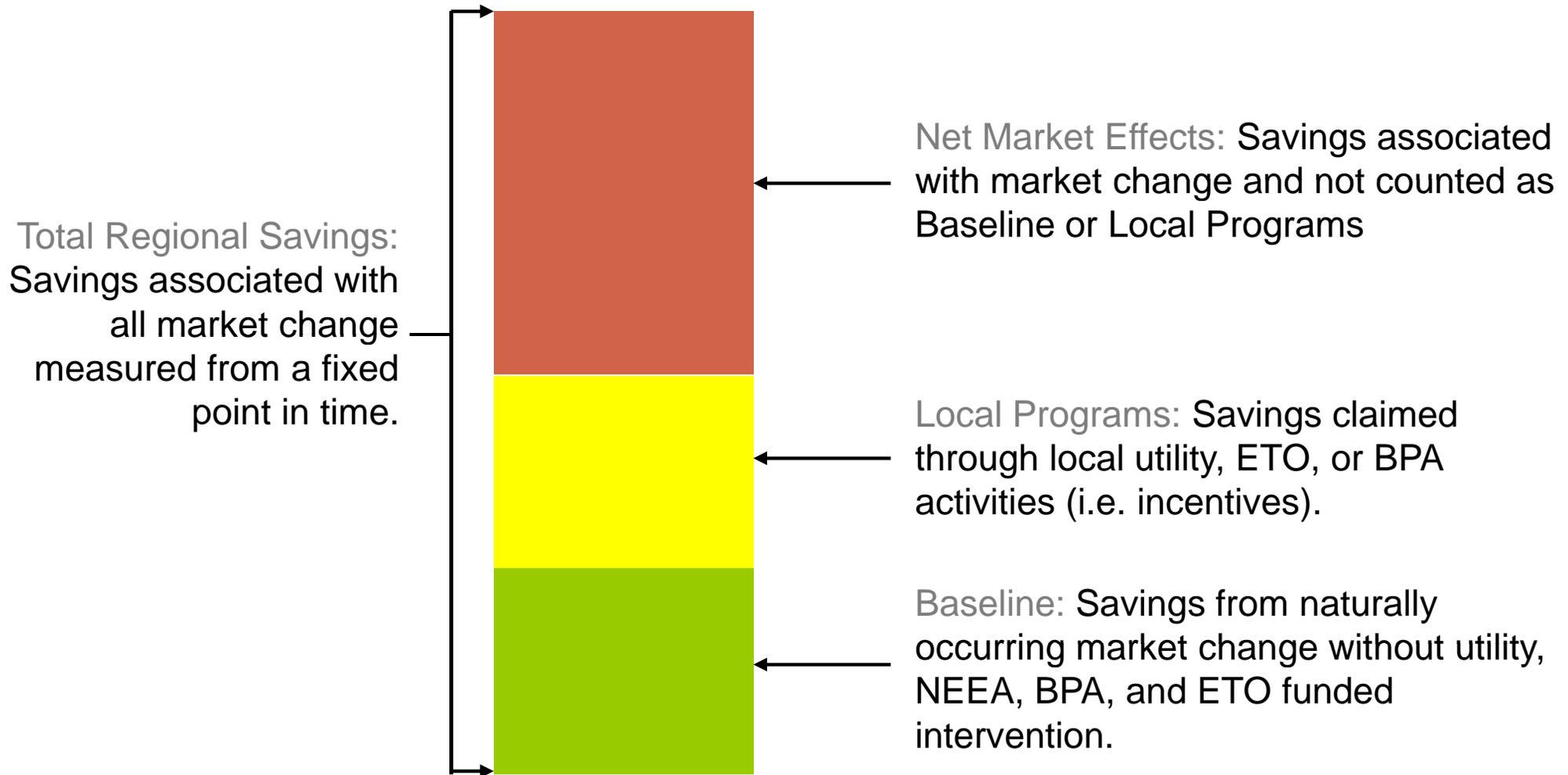
Identify
Barriers



Market
Intervention



Market Transformation = Energy Savings



Northwest Accomplishments



1997: Efficient washers.
50% market share today
- highest in the nation.



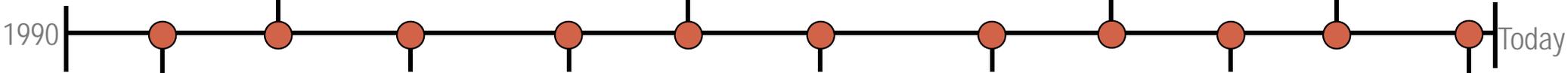
2001: Market share
for ENERGY STAR
windows hits 75%.



BETTERBRICKS
Bottom line thinking on energy.

2005: BetterBricks
healthcare focus –
today 30% of
region's beds
have adopted a
SEMP.

2008:
NW Food
processing
industry
commits to
50%
reduction
goal



1991: Design labs
concept launched

1998: BacGen
reduces
wastewater
treatment
energy use by
up to 50%.

2000: VFD
cold storage
fans reduce
energy use
by 61-86%.

2002: 80 PLUS.
computer power
supplies could
save NW 8.5
million kWh
annually.



2004:
Northwest
ENERGY
STAR new
homes
spec –
15% more
efficient
than code.

2007:
CFL sales
top 18 million



2009:
Ductless
heat pump
pilot begins

SUCCESS STORY: 80 Plus



Barriers

- No energy-efficient power supplies available
- Inefficient power supplies use 8.5 mill kWh per year
- ENERGY STAR spec didn't include power supplies
- Efficient power supplies not a manufacturer priority

Intervention

- Worked with powersupply manufactures to bring products to market
- Provided funding to manufacturers to offset initial costs/ convince them of the benefits to the 80 PLUS program, and creating market pull
- Worked with ENERGY STAR on national level to incorporate supplies into its spec
- Partnered with manufacturers to provide commercial rebate

Results

- First in the nation to sponsor 80 PLUS
- More than 2000 compliant power supplies available
- Potential to save region 8.5 million kWh per year (enough to power 700 homes)
- 80 PLUS added to ENERGY STAR desktop PC spec in '07

Business and Consumer Electronics (BCE) Implementation Strategy



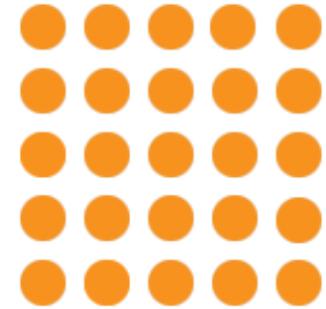
Assess Electronics Market



Key Barriers



Market intervention



End goal

- Diverse products and channels
- Increasing load from electronics

- No consumer push
- Additional costs to produce efficient products

- Provide financial and marketing incentives to market actors

- Transform the electronics market

Consumer Electronics: The next BIG opportunity!

Electronics account for more than 11% of consumer and almost 8% of non-residential U.S. electricity use

Electronics load is growing at 6% per year vs. 1.8%



If left unabated U.S. consumer load may reach 18% by 2015

Sources: CEA, CEE, Energy Solutions

International Energy Agency - Paris, France

Consumer electronics is "the fastest growing area and it's the area with the least amount of policies in place"

Existing technologies could slash consumption by 30% - 50% at a small cost.

Challenges Shaped Program Design

Challenges

- Large diversity of products
- Wide range of efficiency levels (small per unit savings)
- Ever changing consumer preferences
- Global manufacturing
- Multiplicity of market channels



Program Design

- Directed at channel players (Retailers, Manufacturers, Distributors)
- Impact stocking, promotion and sales behaviors for products that meet or exceed **ENERGY STAR** specifications
- Yield significant savings
- Launched 12/08
Televisions, Desktop Computers, Monitors

BCE Program launched with the strategy of: (1) building utility market share, (2) developing channel presence, (3) creating attribution methodology, and (4) growing product portfolio

Building Utility Market Share



(1) Efficiency Aggregator of 130 utilities (11.5M customers)

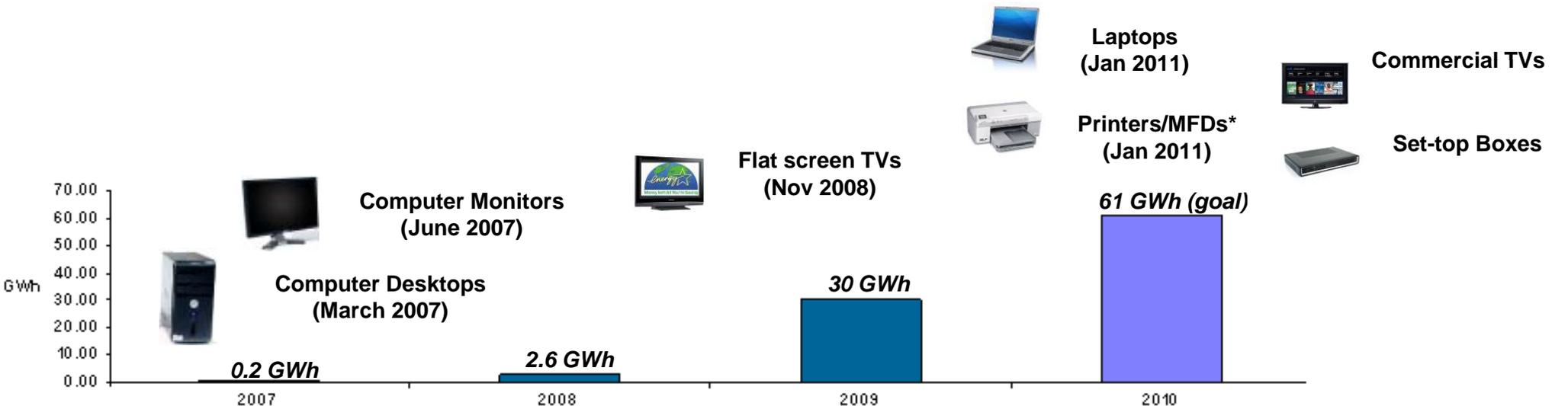
Developing a Channel Strategy



Creating an Attribution Methodology

- Program design necessitated new attribution methodology
- Developed multi-pronged approach to facilitate movement on the regulatory front

Developing Robust Product Portfolio



* MFD = Multifunction Device (printer, scanner, copier, etc.)

Expansion through utility coordination and increased channel presence

COLLABORATION OF UTILITIES TO TRANSFORM THE ELECTRONICS MARKET



WORKING WITH MAJOR ELECTRONICS CHANNELS BY PROVIDING:

- Financial and Marketing Incentives
- Tools to identify most efficient products
- Point of Purchase materials
- Consumer education talking points
- Opportunities for collaboration around other initiatives

Business-to-Consumer (Residential and SMB Customers)



Business-to-Business (Commercial Customers)



Note: Retailer participation may vary from state to state

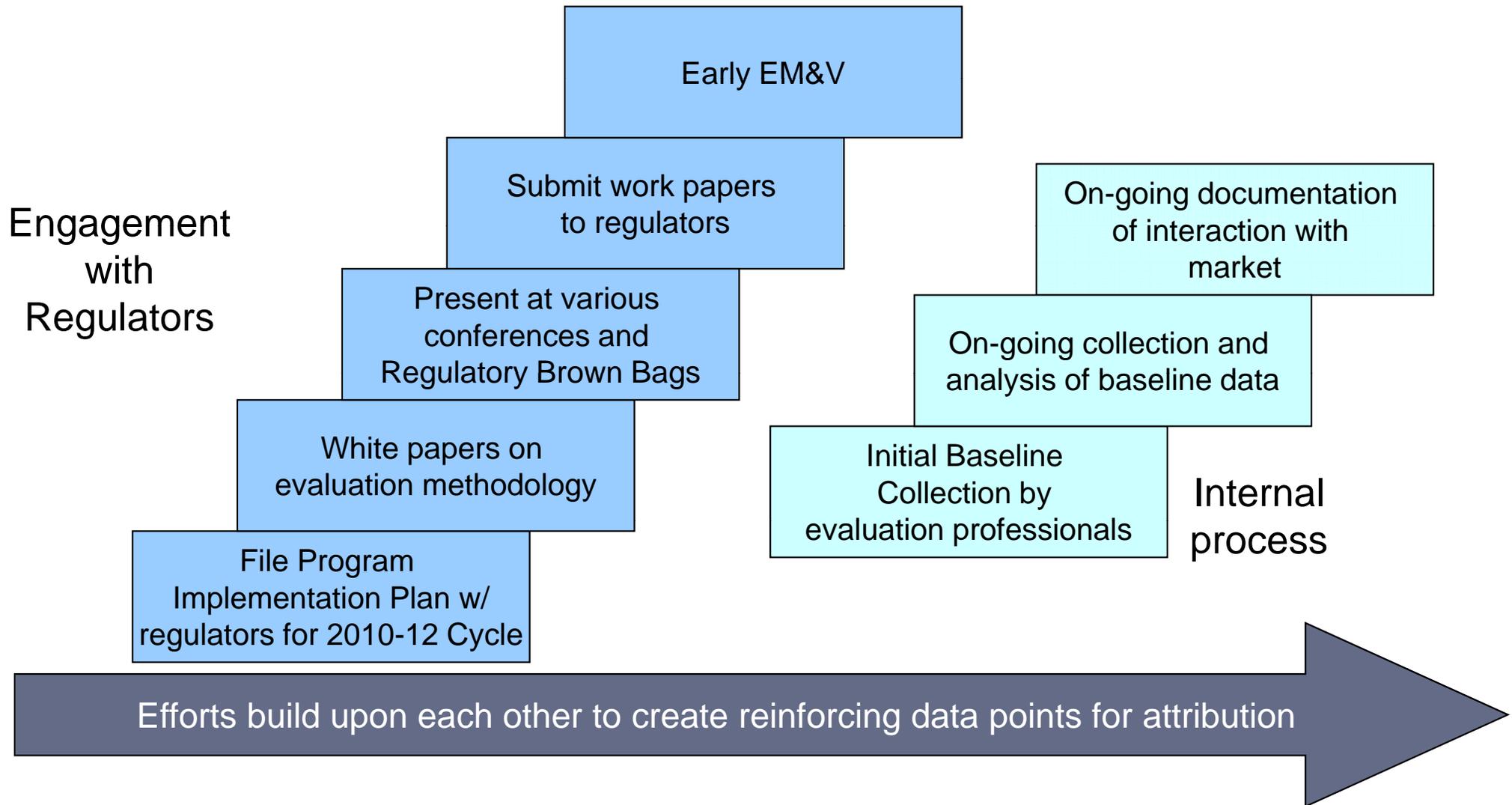
Creating an Attribution Methodology

Electronics model: Measure attribution based on measuring changes in **annual** retail buyer and OEM market behavior **NATIONALLY**



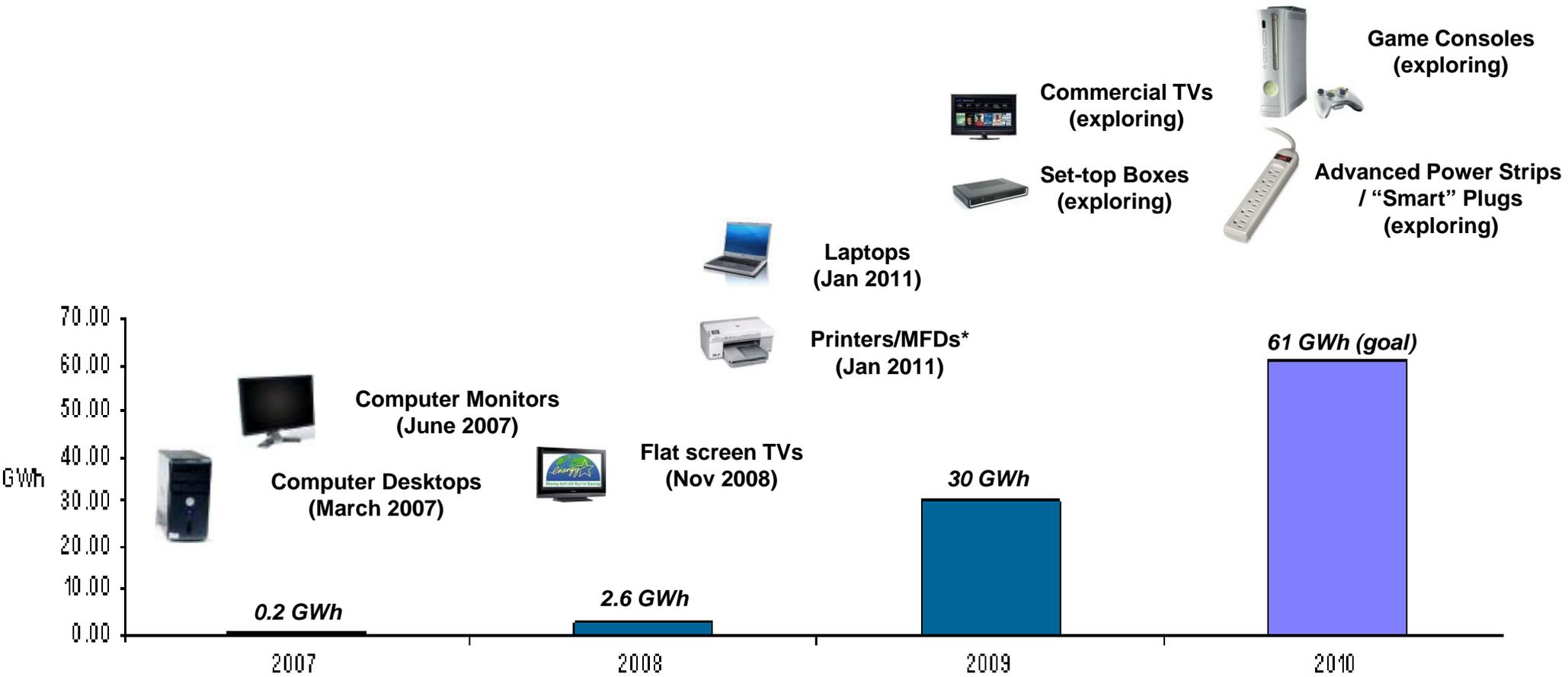
- Changes when to measure and what to measure:
- Traditional model measures transaction behavior throughout the year, a consumer decision impacts one sale at a specific point in time
- The BCE model measures market impact based on decisions made by the buyer one or two times per year – a single decision can impact sales of products for 12 months **LOCALLY AND NATIONALLY**

Methodology requires multi-pronged activities to support attribution



Building a robust portfolio

PG&E Energy Saving Goals



* MFD – Multifunction Device (printer, scanner, copier, etc.)

Product Development Process

- Continually evaluate effectiveness of existing products
 - Increase specifications when sales are ~ >25% before new program year
- Work with EPA and Consortium for Energy Efficiency to impact market effects beyond incented units through specifications and standards
- Internal process to determine business case for adding new products to efficiency portfolio, considers the following:
 - Market Potential
 - Energy Savings
 - Customer benefit/need
 - Cost-effectiveness
- New products can be added to portfolio during the year (if budget is available)
- Careful consideration is given to how much lead time to give the industry prior to launching new products
- Budgets are locked in on a yearly basis

Key issue is cost-effectiveness of measures

2010 Specification				
Product Category	Specification	Net to Gross	Incremental Measure Cost	Effective Useful Life
Televisions	ENERGY STAR 4.1	0.70	\$10-\$100	10 years
Televisions	ENERGY STAR 5.1	0.70	\$100	10 years
Desktop Computers	ENERGY STAR 5.0	0.70	\$25	5 years
Computer Monitors	ENERGY STAR 5.0 +10%	0.70	\$6.50	5 years

Note: Incentives and products may vary by utilities or efficiency aggregators

2011 Specifications

Product Category	Specification	Channels	Incentive
Televisions	ENERGY STAR 5.1	Consumer Business	\$6-\$20
Televisions	ENERGY STAR 5.1 + 20%	Consumer Business	\$10-\$30
Computers	ENERGY STAR 5.0	Consumer Business	\$7
Monitors	ENERGY STAR 5.0 + 10%	Consumer Business	\$5.00 (consumer) \$6.50 (business)
Notebook Computers (tentative)	ENERGY STAR 5.0 + 20%	Consumer Business	\$3 (consumer) \$4 (business)
Imaging Equipment (tentative)	ENERGY STAR 1.1 + 50%	Business	\$5

Note: Incentives and products may vary by utilities or efficiency aggregators

2011 and Beyond

- Continue growing product portfolio through measure development / technology roadmap:
 - Set-top boxes and/or set-top box alternatives
 - Game consoles
 - Advanced Power Strips / “smart” plugs
 - Servers
- Continue channel presence expansion:
 - Online sales
 - Distributors (selling direct to end-customers or through value-added resellers)
- On-going optimization around marketing and communications strategies
- Continue coordination with utilities and energy efficiency organizations

SUCCESS STORY: ELECTRONICS



Barriers

- Efficiency of products not a manufacturer priority
- Unengaged customers
- Multitude of products

Intervention

- Provide funding to market actors to stock & promote more efficient products
- Partner with utilities
- Increase consumer awareness
- Coordinate with EPA and others on specifications

Results to Date

- Increased efficiency of TVs by 40-60% over 2 years
- Incented ~850,000 units in 2 years
- Increased channel presence to 70%

Your Interest

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***Your interest in
participating is welcome!***

