WELCOME!

SEEA & AESP SE Conference
October 16th - 18th | Atlanta, GA

MORE THAN JUST A PRETTY FACE: EFFICIENCY GETS INTELLIGENT

Speakers:

- Will Baker, Midwest Energy Efficiency Alliance (MEEA)
- Mark Milby, Midwest Energy Efficiency Alliance (MEEA)
- Jeff Smith, Georgia Power Company
- Vince Faherty, Nest Labs
- Olivia Patterson, Opinion Dynamics

Full bios are available at www.SEEAConference.com

TRANSFORM 2017

LEARNING OBJECTIVES

At the completion of this session, participants will understand the broad definition of “intelligent efficiency”, how efficiency programs are responding to new technology and services, and the opportunities we have to deliver and evaluate intelligent devices and their functions.

The Definition of Intelligent Efficiency

Intelligent Efficiency
Definitions

Elliot, N., Molina, M., & Trombley, D. (2012). A Defining Framework for Intelligent Efficiency, ACEEE.

IE is a "systems-based, holistic approach to energy savings, enabled by information and communication technology (ICT) and **user access** to real-time information. Intelligent efficiency differs from component efficiency in that it is **adaptive, anticipatory, and networked**." "Intelligent efficiency relies on a range of technologies [such as] semiconductors, sensors, information and communication technologies, software, and computer simulations" (pg 23).

Rogers, E. (2013). Intelligent Efficiency: Opportunitites, Barriers, and Solutions, ACEEE.

"The defining feature of an intelligent efficiency technology is its **ability to communicate** and receive communications, and to respond to the external stimuli. More than being programmable or having variable responses, Intelligent efficiency technologies **respond, adapt, and predict**" (pg. v).

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Intelligent Efficiency
Definitions

Lacey, S. (2013). Intelligent Efficiency: Innovations Reshaping the Energy Efficiency Market. Greentech Media.

"At its core, energy efficiency is still about the nuts and bolts of changing equipment and improving the physical components of a facility. Information is not a panacea and is not a substitute for the physical integration of new systems. But it is **becoming the glue** binding the holistic, system-wide approach that is starting to define the intelligent efficiency business." (pg. 6)

Laitner, J., McDonnell, M., Keller, R. (2015). ICT-Enabled Intelligent Efficiency: Shifting from Device-Specific Approaches to System Optima.

"The IE concept has evolved [since Elliott et al. 2012 originally characterized it]. Intelligent efficiency continues to include people-centered efficiency, but it now moves to **Digital Energy Management** and Materials substitution with Energy-Saving Crosscutting Intelligent Infrastructure" (pg 3.).

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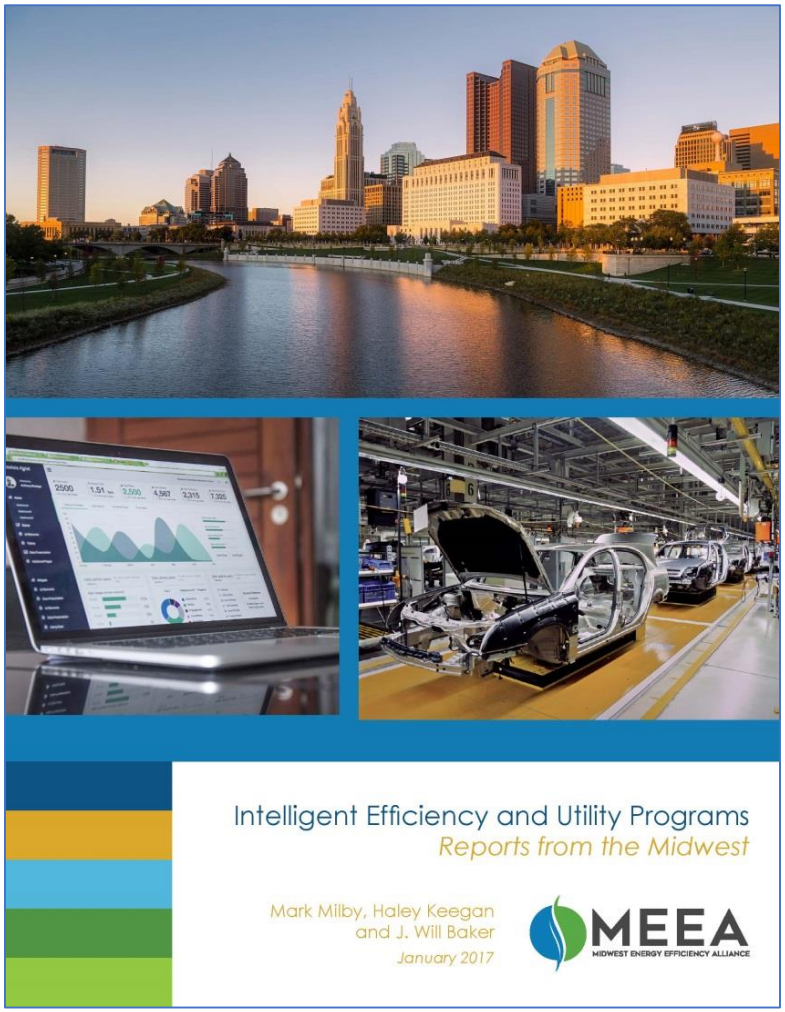
Mark Milby

Midwest Energy Efficiency Alliance

Intelligent Efficiency and Utility Programs

MEEA White Paper



- Defines intelligent efficiency – why is it an important trend?
- Highlights notable Midwest programs
- 25 industry interviews
- Barriers to technology adoption & scale
- Recommendations for utilities, implementers, service providers & manufacturers

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Intelligent Efficiency and Utility Programs

MEEA White Paper

- Home Energy Management Systems
- Commercial Advanced Lighting Controls
- Energy Management Information Systems
- Smart Cities
- Smart Manufacturing

AEP Ohio Adv. Lighting Controls

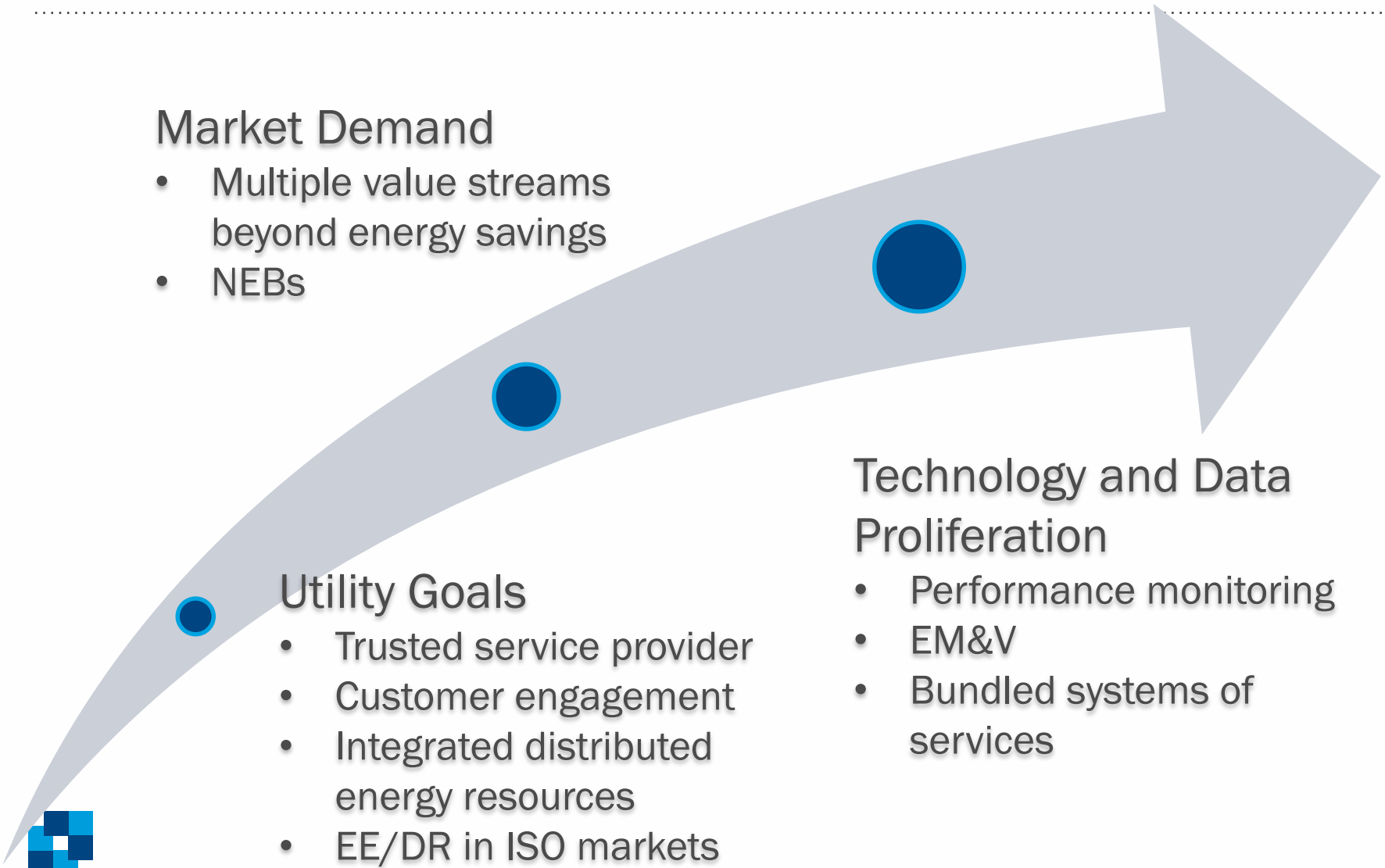
DTE Insight App

Smart Energy Analytics Campaign

Olivia Patterson

Opinion Dynamics

Intelligent Efficiency – Market Trends & Opportunities



Market Demand

- Multiple value streams beyond energy savings
- NEBs

Utility Goals

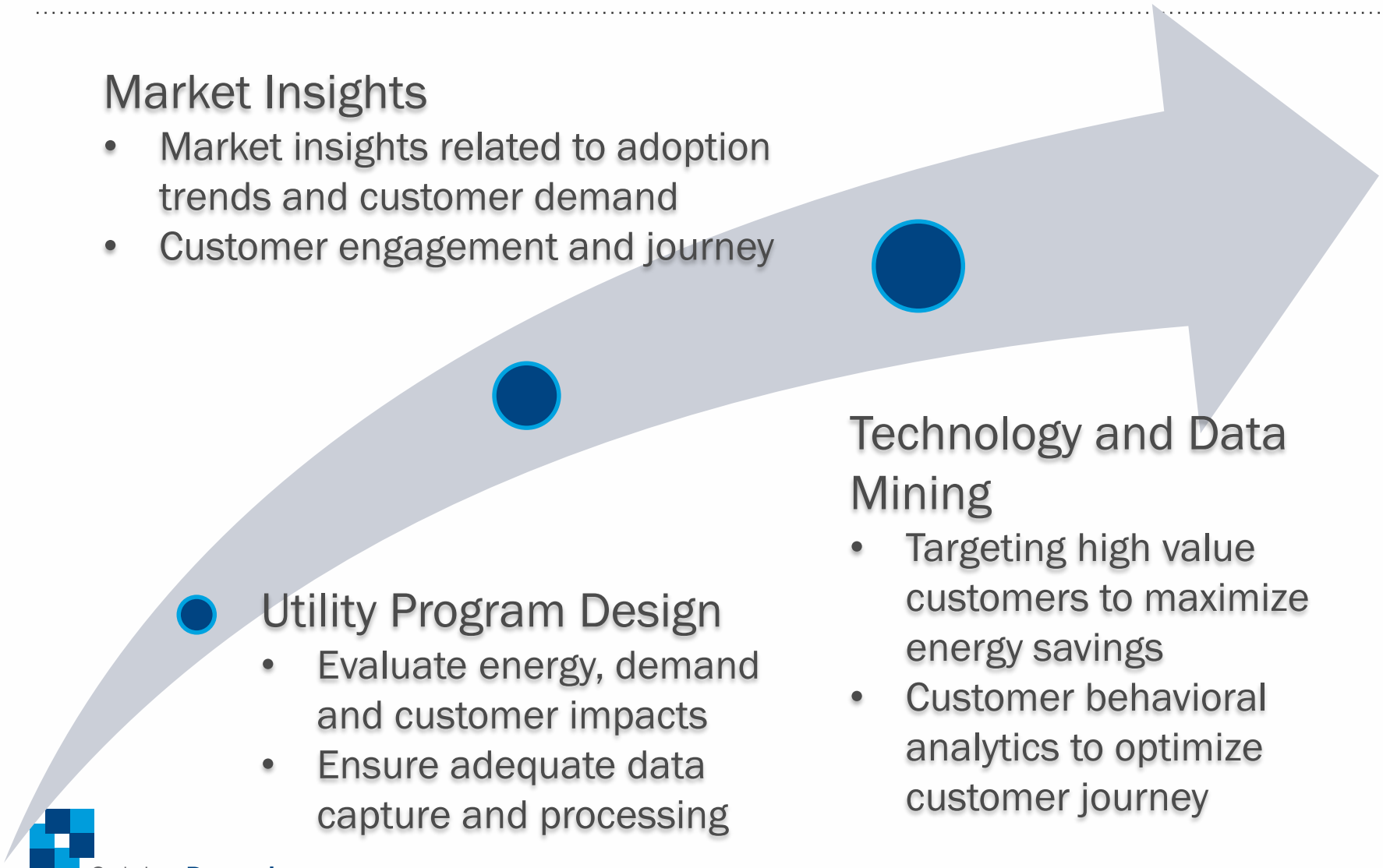
- Trusted service provider
- Customer engagement
- Integrated distributed energy resources
- EE/DR in ISO markets

Technology and Data Proliferation

- Performance monitoring
- EM&V
- Bundled systems of services

Opinion **Dynamics**

Intelligent Efficiency – Research Services



Market Insights

- Market insights related to adoption trends and customer demand
- Customer engagement and journey

Utility Program Design

- Evaluate energy, demand and customer impacts
- Ensure adequate data capture and processing

Technology and Data Mining

- Targeting high value customers to maximize energy savings
- Customer behavioral analytics to optimize customer journey

SESSION EVALUATIONS

Please share your feedback so we can continue to improve!

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