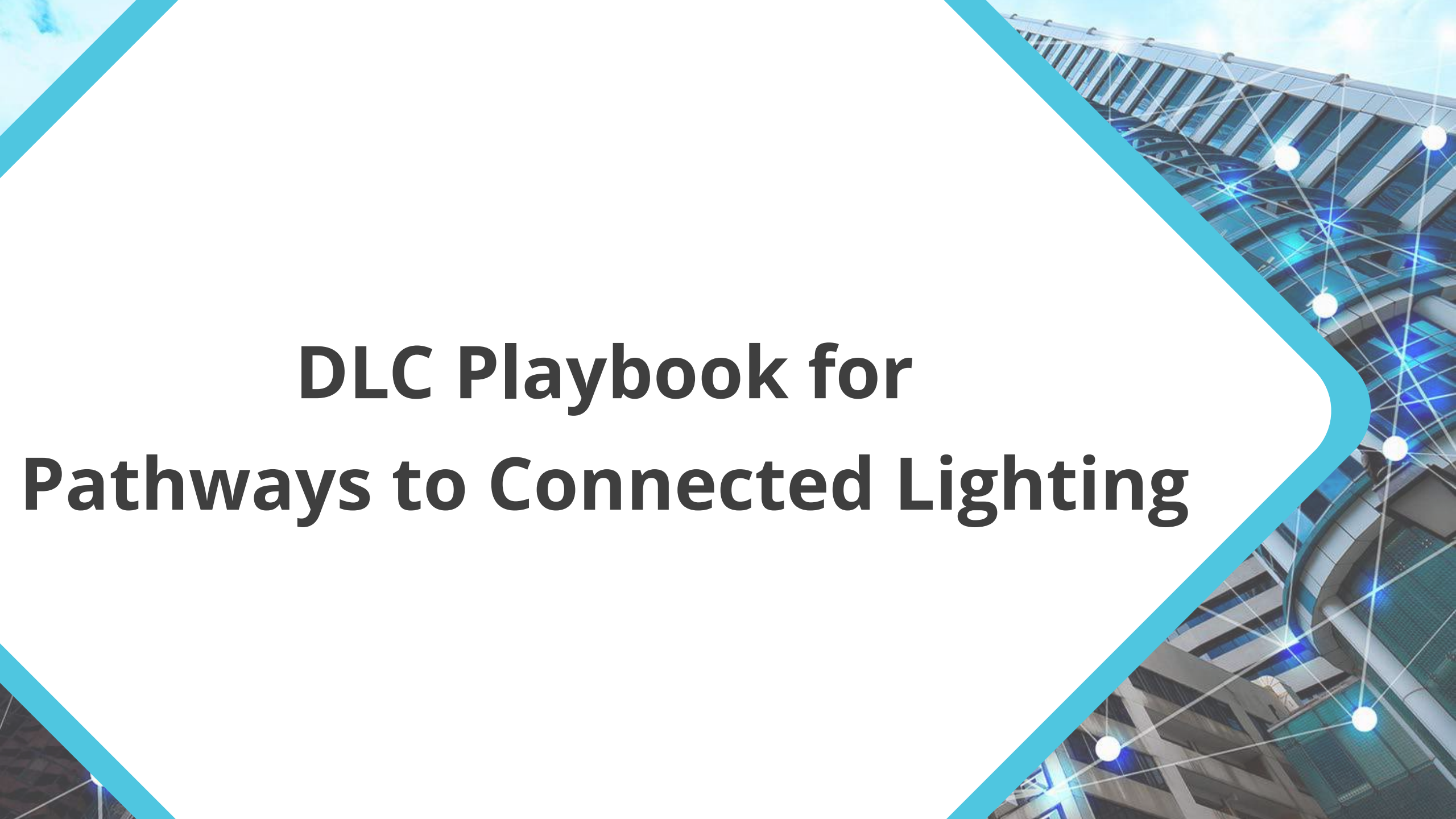
DLC Playbook for Pathways to Connected Lighting



Summit Panel on Playbook for Pathways to Connected Lighting

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Playbook Objectives

1. Share best practices discovered in survey and interviews

2. Provide actionable information to program administrators

3. Useful for each efficiency program in its current situation

Playbook Contents

1 Background information about this project

2 How to navigate and use this guide

3 Findings from the project survey and interviews

4 Evaluating and identifying your program

5 Understanding your goals and objectives

6 Selecting and calling your play(s)

7 Strategies and resources to execute your play(s)

8 Advanced strategies to accelerate your program

Click to navigate

What does your utility prioritize?

Controlled by Sensors

Connected & Communicating

	"Camp Controls" Get Savings Today	**"Camp Connected" Invest for the Future**
It's about	turning the lights on and off and dimming them.	systems talking to systems.
Mission	We're saving energy and carrying the load to achieve targets – that's our job…	The research supports massive savings beyond standalone lighting. We will never achieve the potential unless…
Key thing	Getting more sensors into more fixtures is the key	Integrating and connecting systems through standards is the key
Pragmatism vs. Idealism	Let's be real about what efficiency programs can actually influence and where we can make an immediate savings impact.	Without utilities forcing the standard – none of this integration savings potential will become real

What do you prioritize?

Six Program Strategies that Lead to Connected Lighting

Program Strategy	TIER 1	TIER 2	TIER 3	TIER 4
Custom Delivery Path				
Deemed NLC				
Deemed LLLC				
Trade Ally Network				
Incentive Levers				
Midstream Delivery Path				

Six Program Strategies that Lead to Connected Lighting

Program Strategy	TIER 1	TIER 2	TIER 3	TIER 4
Custom Delivery Path	Prescriptive standalone controls ***only***	NLC / LLLC projects require custom path	Lighting projects rarely require custom path	
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Trade Ally Network	Identify active trade allies	Host at least one annual training event	- Sponsors multiple workshops annually - Offers *on-demand* 101 level training for lighting and controls	- Recognizes Trade Ally Network contributions - Tech symposium for businesses
Incentive Levers	NA	- Temporary incentive bonus - Raise incentive cap	- Project Development Incentive - Incentive for Systems Integration - Demand response enabled	
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Deemed NLC & Deemed LLLC

Program Strategy	TIER 1	TIER 2	TIER 3	TIER 4
Deemed NLC	NA	Prescriptive incentives for NLC		Prescriptive bonus incentives for commissioning or energy monitoring NLC systems
Deemed LLLC	NA	NA	Prescriptive incentives for LLLC	Prescriptive bonus incentives to commission LLLC

A. If you don't have distinction between NLC and LLLC – that's a good place to start.

- Leverage DLC existing definitions
- Leverage existing TRMs to fast-track measure development

B. Utilities with deemed NLC and LLLC should consider novel incentive approaches that promote system setup and documentation as well as increased capabilities.

Trade Ally Networks

Program Strategy	TIER 1	TIER 2	TIER 3	TIER 4
Trade Ally Network	Identify active trade allies	Host at least one annual training event	- Sponsors multiple workshops annually - Offers *on-demand* 101 level training for lighting and controls - Expand network to include Design Allies	- Recognizes Trade Ally Network contributions - Tech symposium for businesses - Coordinate with neighboring utilities

A. Utilities should seek to create a pro-active strategic alliance with both trade and design communities (T/DANs).
   - T/DAN program goals
   - Identify and document the network
   - Develop 5 year strategy – implement 1 year plan

B. Consider leveraging existing on-demand trainings as a resource to the local TAN communities

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Amy Dickerson

Lead Engineer
Tech Sales & Support

National Grid NY

Date

Barriers Faced – National Grid Incentive Programs

- Even with higher incentives for LEDs with LLLC
  - Customers don't want to be bothered
  - Too expensive and cumbersome
  - Lack of knowledge and understanding
  - No one available to set up and train
- Custom Networked control projects
  - Limited interest
  - Difficult to verify energy savings
  - Costly

Playbook Vision

- Used and directed to multiple users
  - End user – Small Commercial and Large Commercial
  - Distributor
  - Electrician
  - Utility/ Incentive Program
- Training and Education Resources
- Guidance on TRM and savings calculations for both LLLC and NLC
- Additional benefits – how to connect to HVAC system

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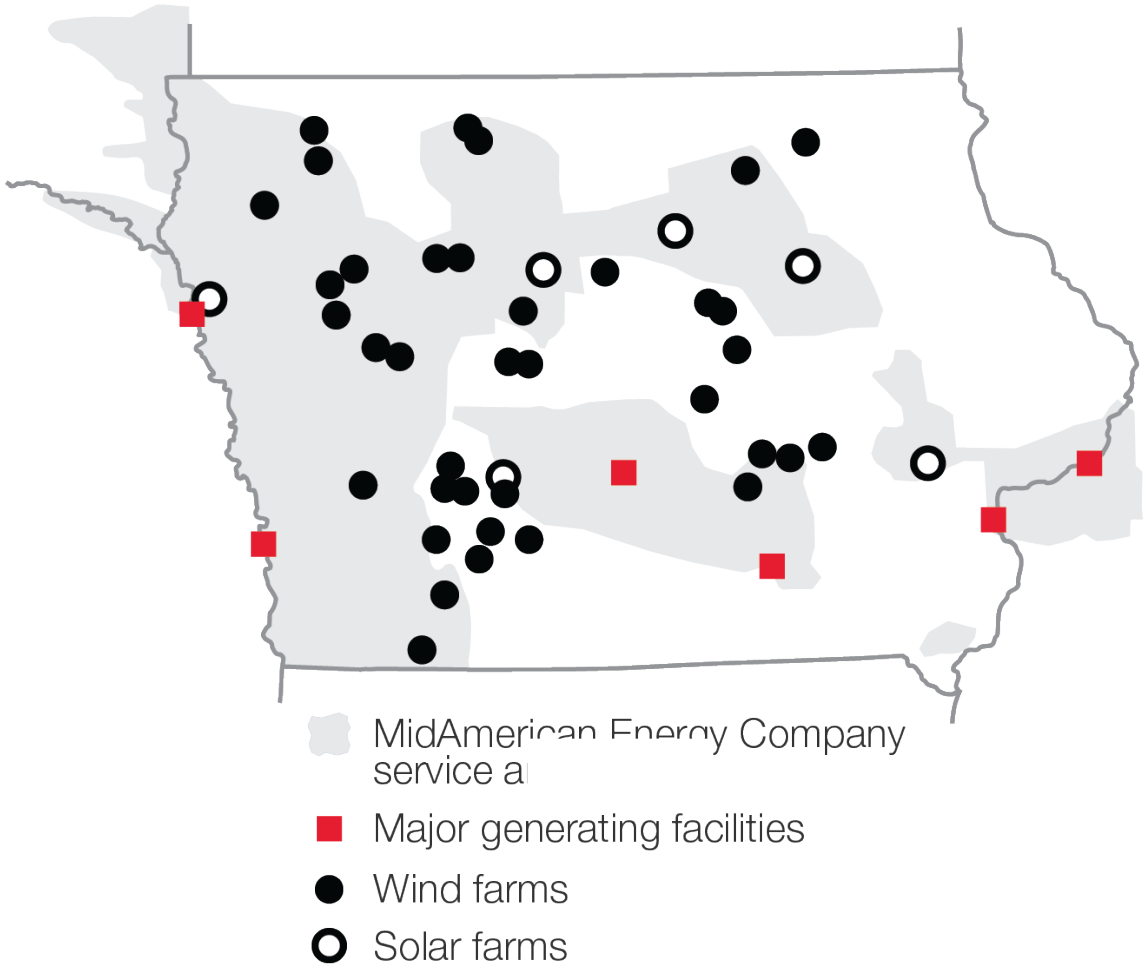
David McCammant

Senior Energy
Efficiency Manager

MidAmerican Energy
Company

Date

MidAmerican Energy Overview



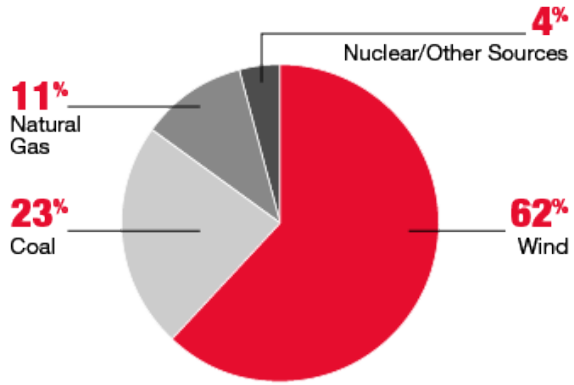
797,000
Natural Gas Customers

820,000
Electric Customers

3,100
MidAmerican Employees

423
Communities Served

GENERATION
CAPACITY 2023



MidAmerican Energy Company – Lighting Controls Program Barriers

- Transitioning from prescriptive rebates to mid-stream
  - Lighting trade allies must submit customer information to the participating distributor instead of helping customers submit rebate applications directly to MidAmerican
  - Ensure Small Business Express and Custom project customers don't double dip
- Program requirement of one-for-one replacement of fluorescent or high intensity discharge (HID) lamps or fixtures
  - Customers that were early adopters of LED products are now expecting rebates for LEDs replacing LEDs and there is little energy savings available.
- We have done some Custom projects with lighting controls, but not having a prescriptive rebate through the Iowa TRM is a barrier
- We must align our programs with the Iowa TRM
  - Adding a new measure such as Luminaire-Level Lighting Controls can take more than a year

How will the DLC Playbook for Energy Efficiency Lighting Control Program Design be used?

- Provide program offerings to early adopters of LED lighting that are not eligible for a second round of LED rebates
  - Mid-stream
  - Custom
  - Small Business Express
- Help inform updates to the Iowa TRM
- Increase customer satisfaction by driving increased energy savings and providing additional energy efficiency program participation opportunities
  - Provide Business Connections Managers (BCMs) with an exciting new energy efficiency option to present to customers during annual planning meetings

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Sarah Speck

Regional Technical Manager

Franklin Energy Services

Date

Program Barriers

- Lack of measure usage in programs
- Inconsistent program measures
- Differing Technical Reference Manual methodologies

Playbook Usage

- Self-Evaluate where our programs are at and how we can enhance them
- Integrate more deemed and prescriptive offerings
- Use it as a tool to help align utilities and programs for consistency within states and regions

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Chris Primous

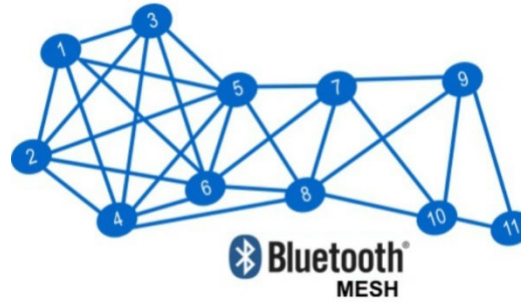
EVP of Sales &
Marketing

Litetrace-Autani

Date

Defining ”Networked” Lighting controls in 2024

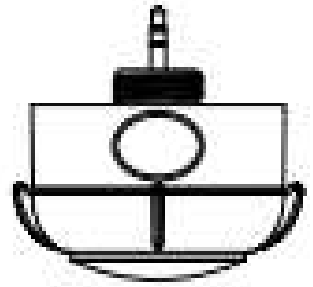
- The concept of “Networked” is changing for many stakeholders
- Networked =
  - Simply meets the DLC definition per NLC?
  - Online and connected to the cloud?
  - Can controls be LOCAL, gateway and cloud-free, and still Networked?
  - Combination of LOCAL and CLOUD-CONNECTED?



LLLC – “Controls Capable” vs Installed

- Some confusion exists between manufacturer and customer understanding of programs that require LLLC
  - Do luminaires that are “Integrated Controls Capable” or “Controls Ready” qualify for incentives?

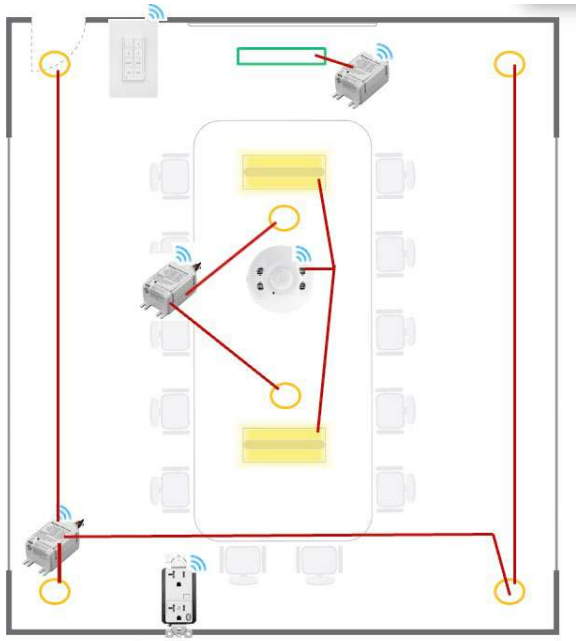
Metalux High Bay “sensor- ready” luminaire



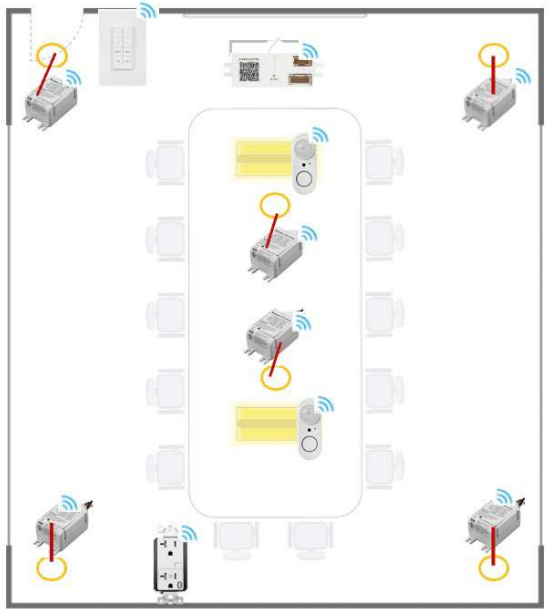
Keilton+autani High Bay Sensor with 3.5mm”audio jack” base

Room-based vs LLLC

- Room-based sensor solutions may be better for certain applications
  - Downlights
  - Retrofit solutions



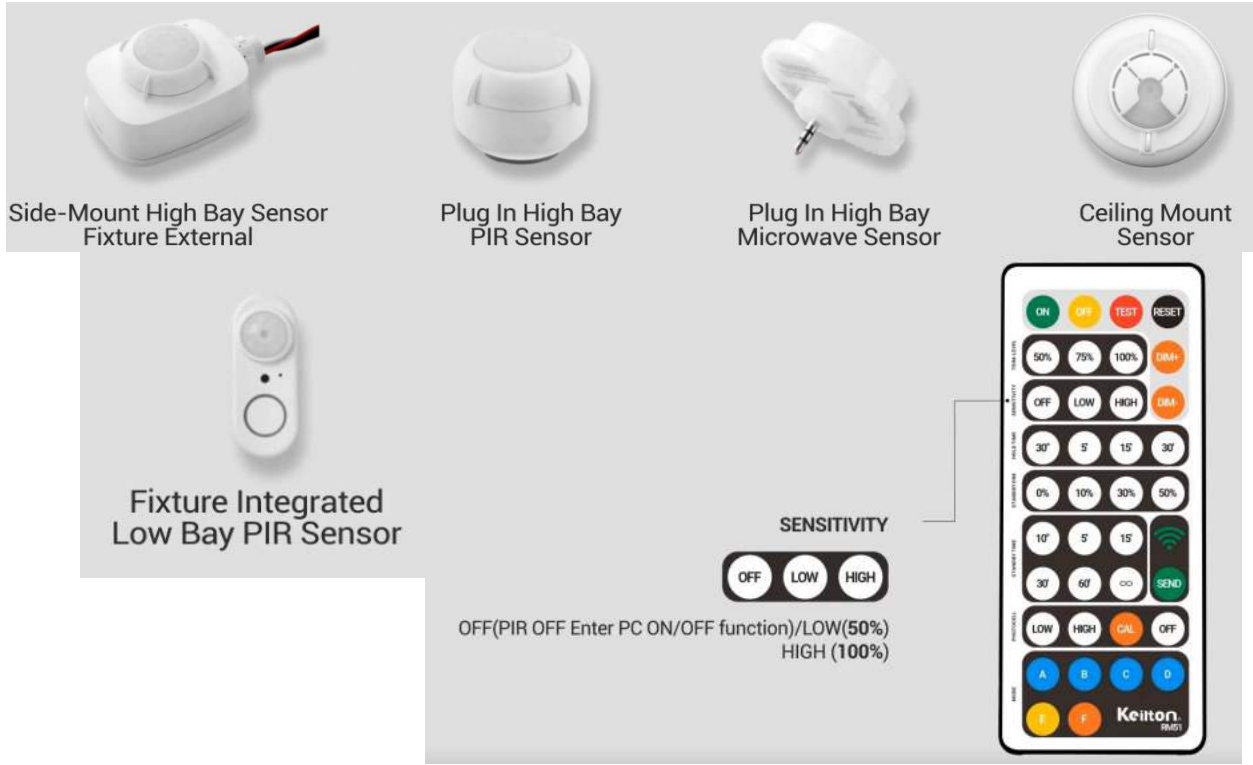
Conference Rm – Room Control
4-Zones



Conference Rm – LLLC
4-Zones

LLLC – Networked or Standalone

- LLLC can be networked or standalone
  - Many users still prefer remote-control sensors that do not have networking capabilities or require the use of apps for settings or functions



Keilton Basic infrared remote for use with various standalone, non-networked, luminaire sensors

LLLC – Networked or Standalone

- LLLC can be networked or standalone
  - Networked, NLC lighting controls and luminaires

Keilton+autani app for use with Bluetooth® NLC sensors

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DLC Controls Summit Panel & Breakout Session, Pathways Playbook Topics for Discussion

For Whom	Tbl. #	Question
All	1, 7	Feedback about the Playbook concept and content preview on following pages: what do you like, what could be improved, what additional resources could you contribute?
All	2, 8	How is the information relevant to trade allies (installation contractors)
All	3, 9	How are decisions driven by "Savings now" vs. "Investing in the future"?
EE programs	4, 10	How might this Playbook be useful to your program?
Others besides EE programs	5, 11	Would parts of this information be useful to you?
All	6	What additional resources would be helpful related to this topic? What do you need? What are the gaps?

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