LightFair International 2022 Tradeshow Findings

September 8th, 2022

Bonneville
POWER ADMINISTRATION

Agenda

1. Review LightFair goals and methodology
2. Key findings from LightFair
3. Findings Implications

LightFair Goals and Methodology

Goals for Attending LightFair

Most **cost-effective** way to gather large amounts of data from market experts

Provide context to **sales data** findings

Inform **findings and analysis** in all other BPA lighting projects

Provide context for future non-residential lighting **modeling efforts**

Observe **new trends** in the lighting market

Methodology

- Attended **3 days** of LightFair
- Interviewed **22** lighting manufacturers and other industry experts
- Information gathered through booth visits and long form interviews
- Coordinated some visits and interviews with NEEA

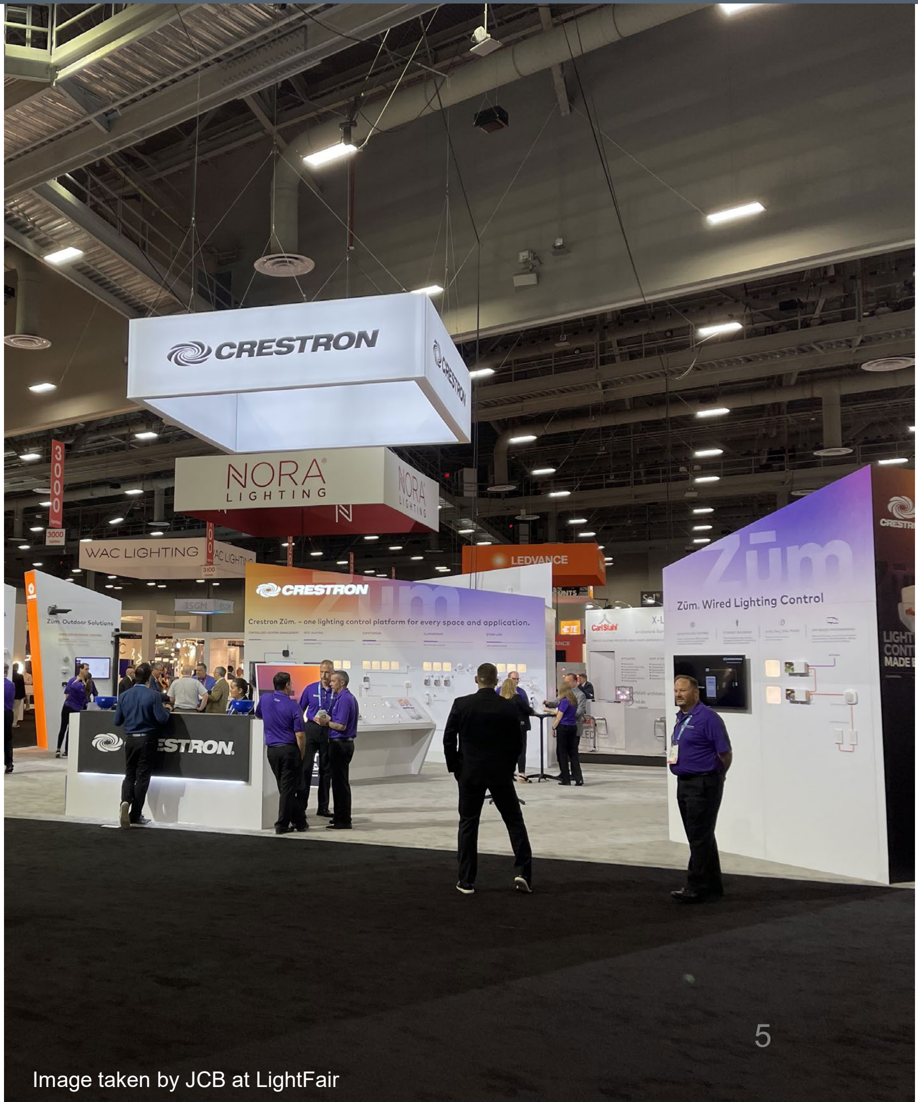


Image taken by JCB at LightFair

We spoke with a range of lighting industry experts

RAB LIGHTING
COOPER Lighting Solutions
signify
GE current
avi-on Simple Bluetooth® Controls
encentivenergy
SATCO
enlighted A Siemens Company
NORA LIGHTING
LEDVANCE
CRESTRON
SILVAIR
CASAMBI
Fernhill Shopworks

Reminders

Findings are based on statements from lighting experts interviewed at LightFair

Any numbers and percentages presented are anecdotal, unless otherwise cited.

Key Findings from LightFair

Key Findings

Focused on LED fixture sales, though non-LED products remain relevant

Code and technology improvements increased controls adoption

COVID-19 caused market actors to adjust sales strategies

Increased costs caused market actors to reduce supply chain costs

Market actors rely on utility programs to sell energy-efficient technology

LED and Legacy Product Trends

Manufacturers are focused on LED fixture sales

- LED fixture sales are increasingly recommended over TLEDs for retrofits and new construction
- Fixture sales are higher in coastal areas

According to sales data collection, only **9%** of linear product sales are currently LED fixtures

Image taken by JCB at LightFair

Manufacturers still value legacy product sales

- Key players in the market continue selling legacy products while market demand persists

- “We will be the last one standing in that space”

  Large international manufacturer of lighting and controls products

“Legacy” products are all non-LED products

According to sales data collection, legacy products still make up **32%** of sales in the Northwest

LED replacement provides opportunity for controls

Reasons for replacement

- Look and feel
- Driver failure
- End of life

Controls Trends

Lighting experts predict dramatic controls adoption

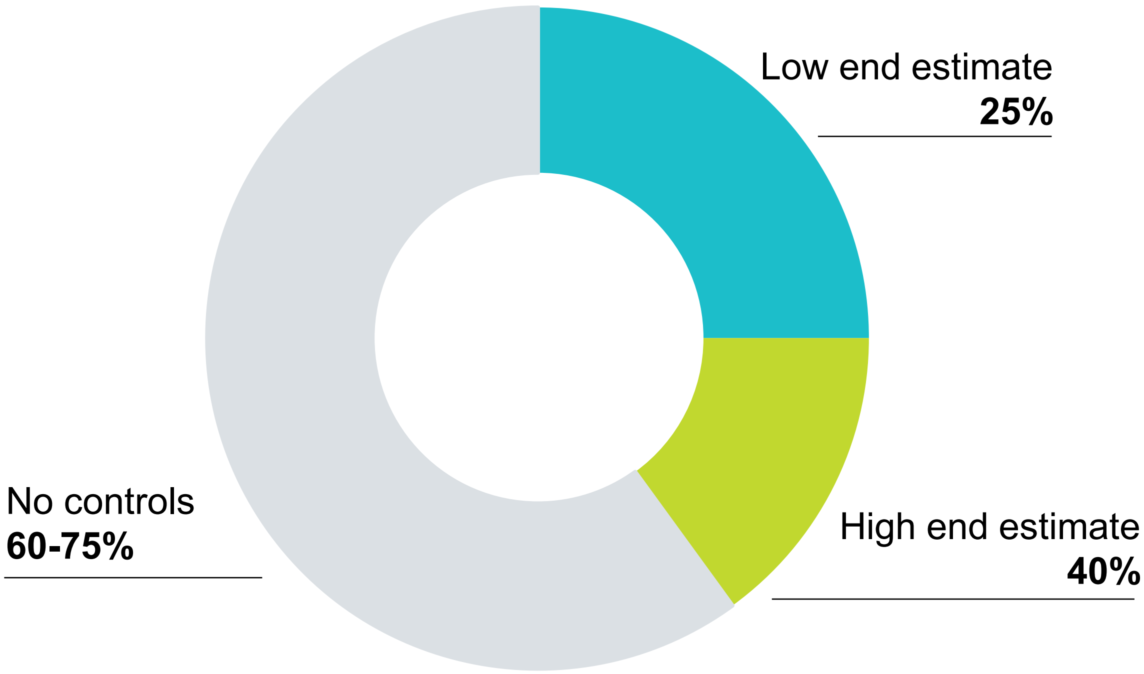
"In 10 years 100% of luminaires will be sold with controls"

Lighting-only Manufacturer

"In the next 5-10 years everything will have controls"

Global Lighting and Controls Manufacturer

ESTIMATED PORTION OF LIGHTING PROJECTS WITH CONTROLS



Manufacturers focused on promoting wireless controls

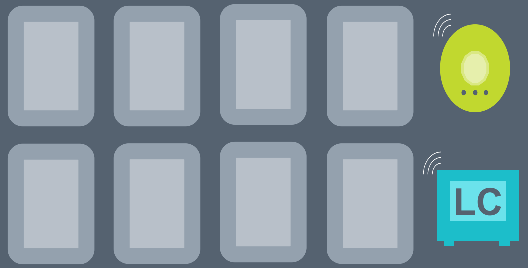
- Wireless controls are favored due to:
  - Ease of installation and commissioning
  - Reduction of labor and maintenance cost
  - Lower materials cost
- One common barrier:
  - Compatibility issues due to proprietary systems

Image from memoori.com

Within wireless, zonal controls are the most common practice

NLC CONFIGURATION

1 sensor : many fixtures



1 load controller : many fixtures

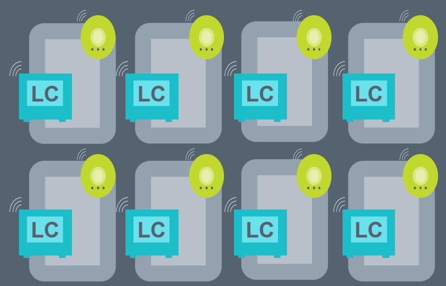
INDIVIDUALLY ADDRESSABLE

1 sensor: many fixtures

1 load controller : 1 fixture

LLLC

1 sensor : 1 fixture



1 load controller : 1 fixture

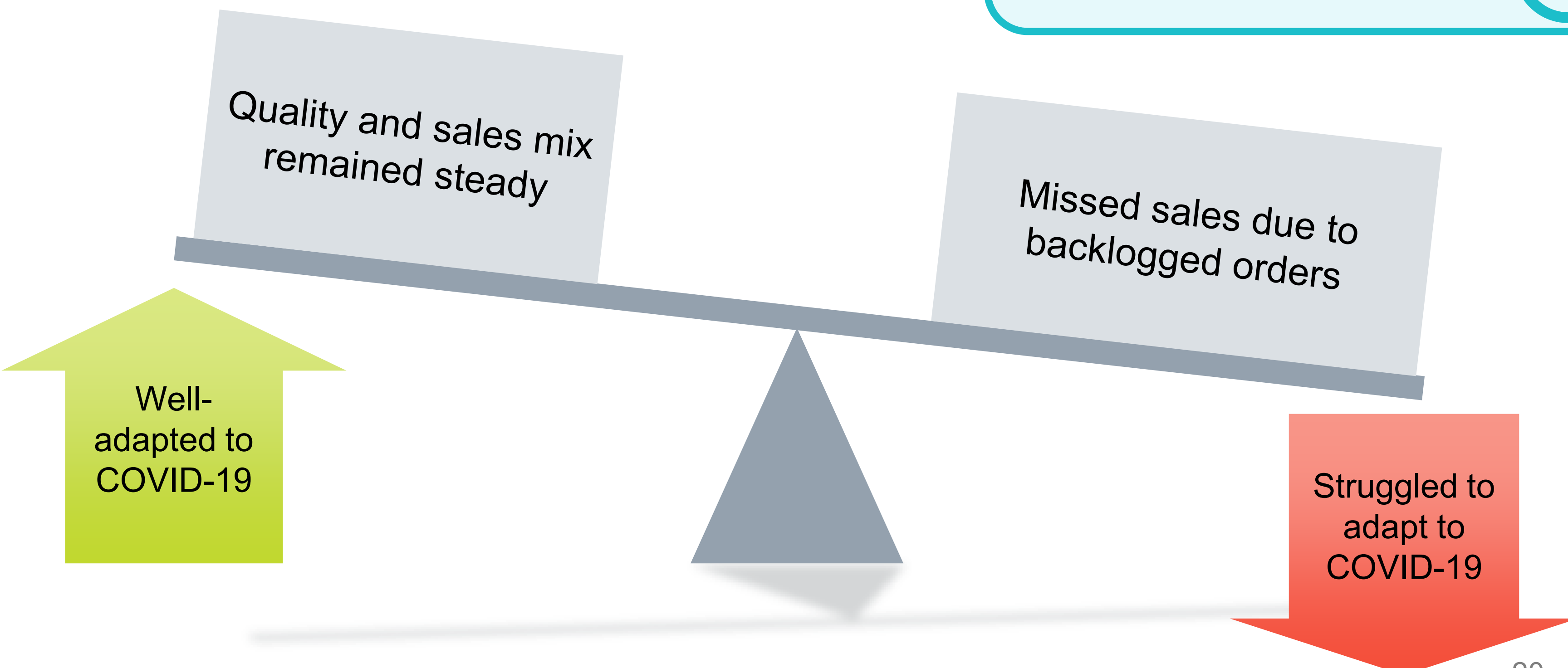
Code drives controls baseline and sales trends

- Without significant economic incentive, building code drives adoption
- Building code is pushing controls in warehouse, office, and school applications

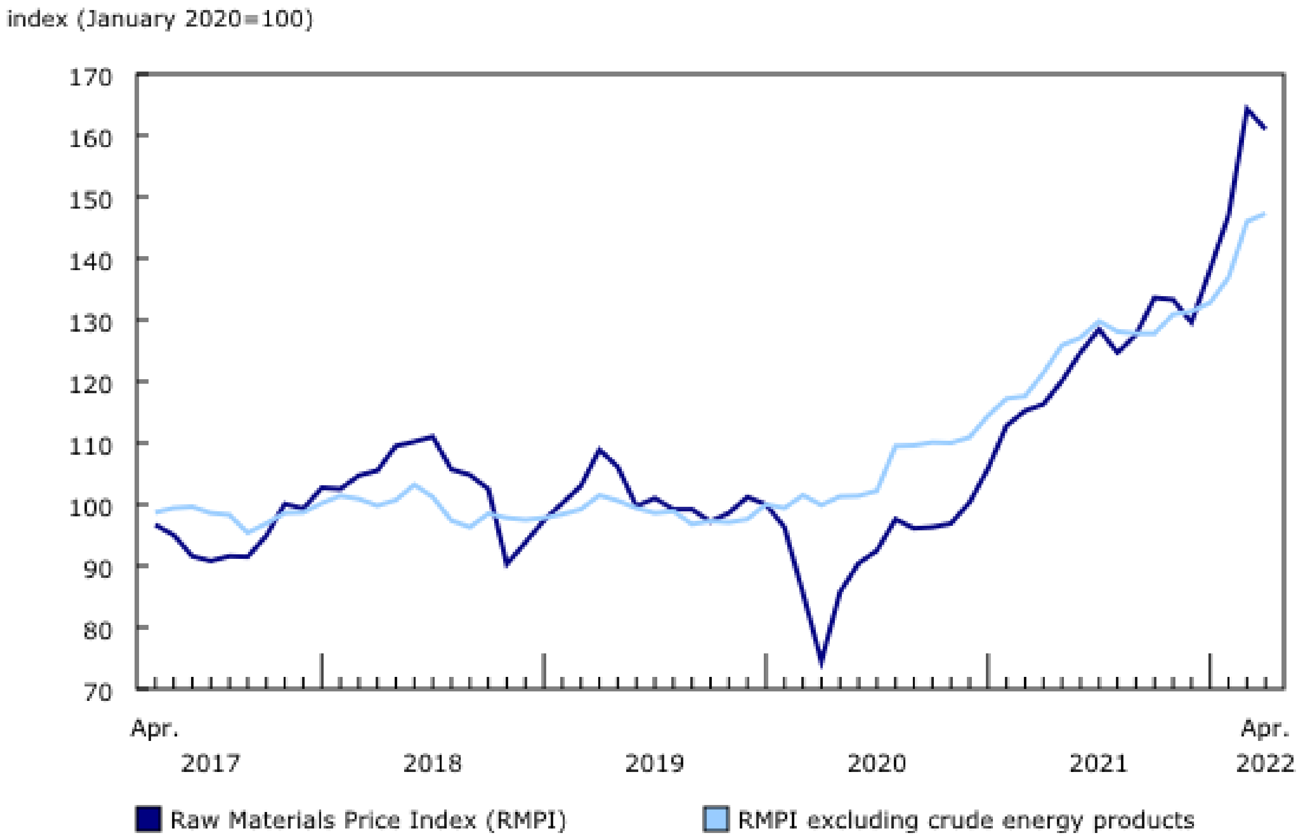
Impacts of COVID-19

COVID-19 impacted each company differently

Sales data showed an increase in LED sales from 2020 - 2021



Prices increased for most technologies



www150.statcan.gc.ca

Large International Manufacturer

→ Reported a 50% price increase for legacy products due to cost of raw materials

Industrial sales outperformed commercial during early COVID-19

- Safety protocols impacted commercial more than industrial
- Large retail companies increased production

One large international lighting and controls manufacturer saw record sales in 2020 and 2021 in industrial high bay lighting

Drivers of industrial sales

- Amazon
- Tech industry
- Auto industry

COVID-19 provided opportunity to market advanced controls

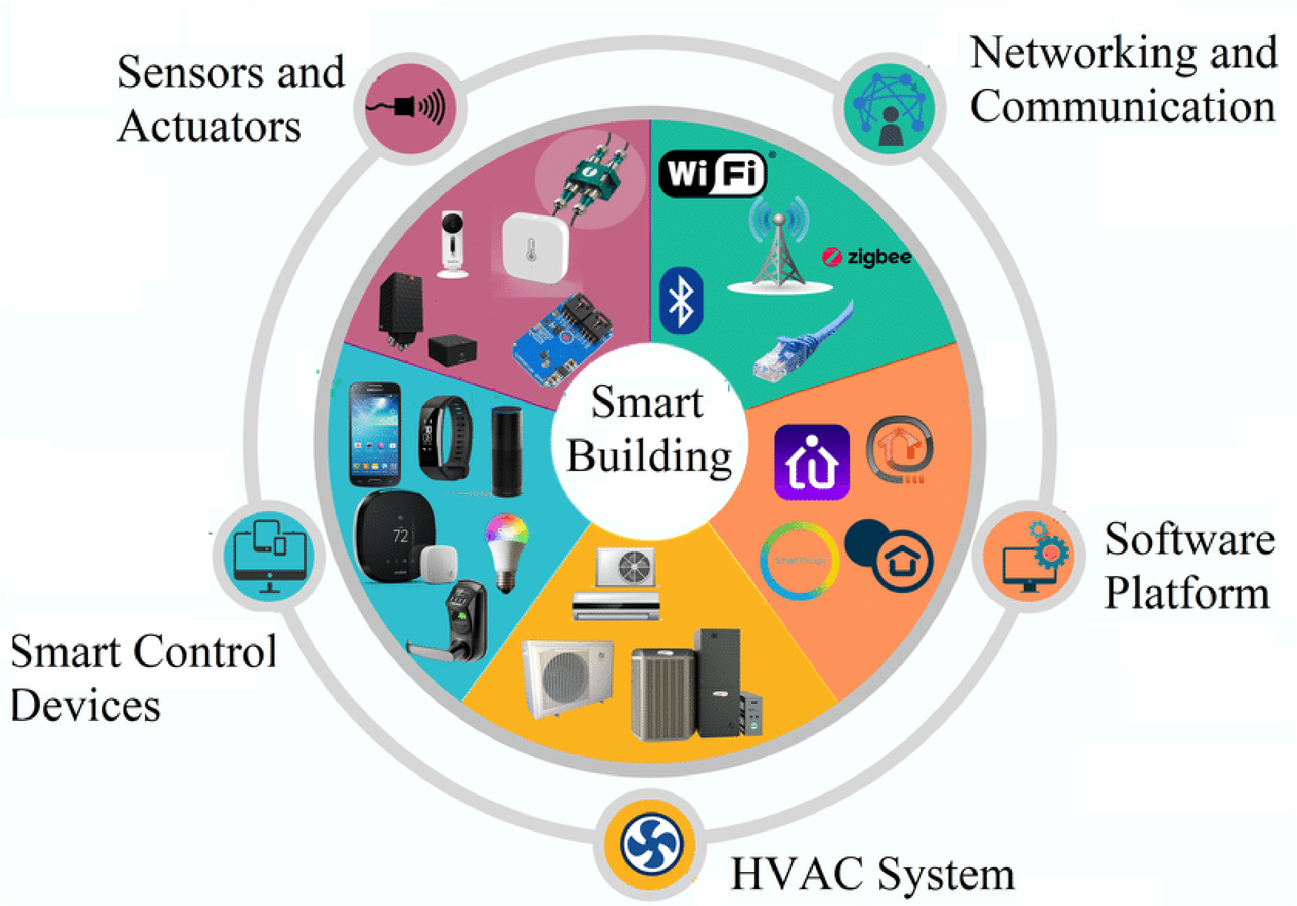


Image from researchgate.net

Supply Chain Changes

2022 saw large increases in shipping costs

Two different types of lighting manufacturers said:

"2022 will be known as a supply chain and freight surcharge year"

"Shipping container prices went from $5,000 to $25,000 during the pandemic"

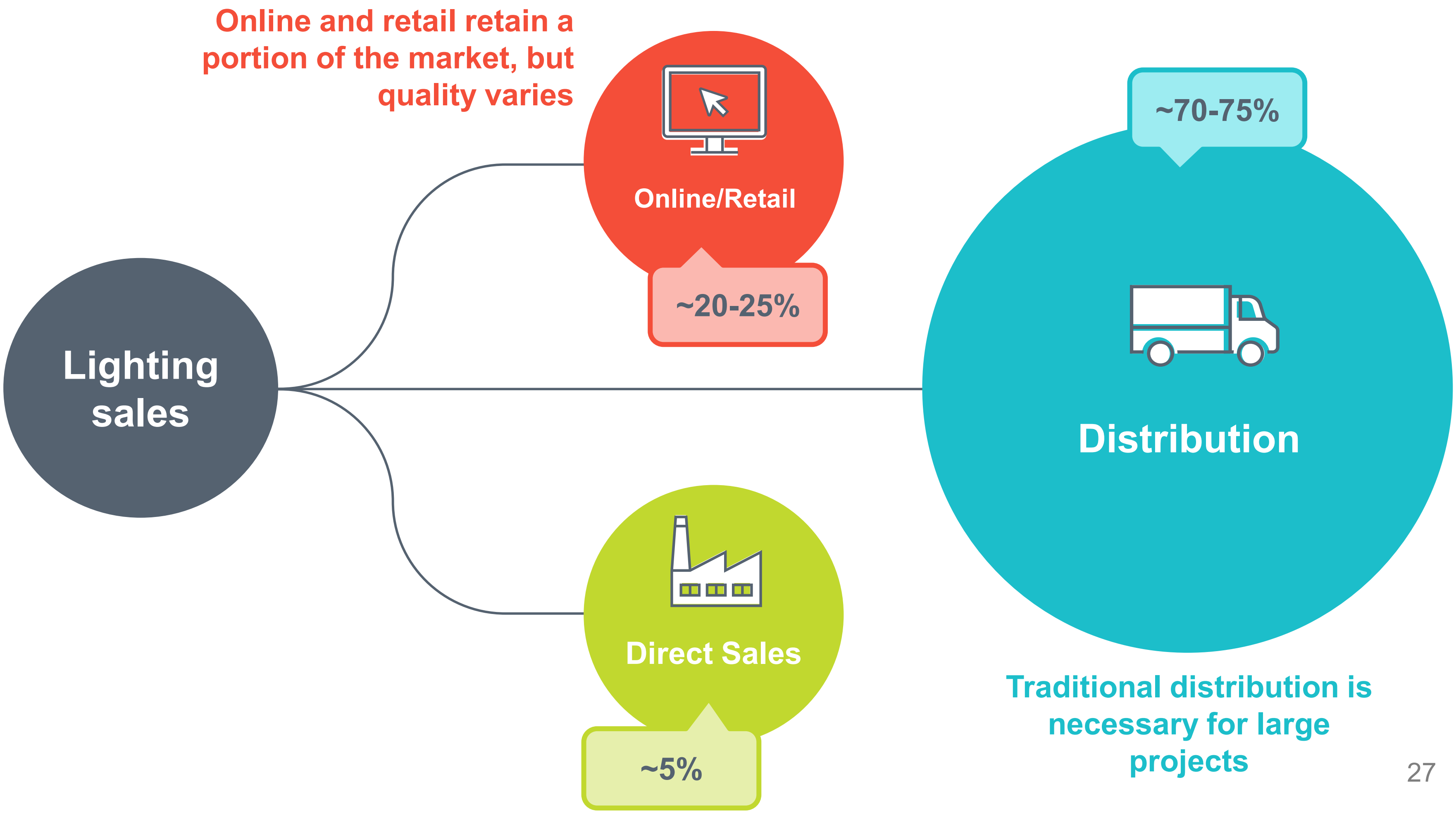
Image from fastcompany.com

Companies are getting creative to reduce costs

- Some companies are designing products to fit into smaller spaces to reduce shipping costs

Image from ledvance.com

Customers purchase through a variety of distribution channels



Role of Utility Companies

Companies rely on incentive programs to sell their products

- Price increases renew importance of incentive programs to sell more efficient products
  - Desire to make rebates more user-friendly for contractors
- There is demand for LED and controls incentives

"We would love to see rebate programs give controls incentives [for first generation LED replacements]"

Controls Manufacturer

Findings Implications

Despite COVID-19, lighting market continues to evolve

- Controls are growing in importance for the lighting industry
  - Supports BPAs plans to explore future modeling of controls technologies

Image taken by JCB at LightFair

LED sales continue to be dynamic

- Evidence shows increased LED sales
- LED fixture sales gaining momentum
  - Continue monitoring fixture sales as a rising portion of replacements projects

Image taken by JCB at LightFair

Findings Summary

Lighting controls and system adoptions will surge in coming years

Supply chain cost increases will continue to disrupt the market

LED fixtures are now directly competing with TLED lamp replacement sales

Image from lightfairblog.com

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