



The Electrical Contractor as the Integrator



The Electrical Contractor as the Integrator

Michael McLin & Walead Atiyeh
Maxim Consulting Group

**This session is eligible for
1 Continuing Education Hour**

For these hours to appear on your certificate, you must:

- Have your badge scanned at the door
- Attend 90% of this presentation
- Fill out the online evaluation for this session: www.necanet.org/neca2018

Maxim Consulting Group Overview

Management Consulting	Lean Transformations	Peer Groups	Corporate Finance Advisory
<ul style="list-style-type: none">▪ Strategic Planning▪ Operational Excellence▪ Technology Integration▪ Training & Development	<ul style="list-style-type: none">▪ Supply Chain Management▪ Design Standards▪ Enterprise Scheduling▪ Process Standardization	<ul style="list-style-type: none">▪ Electrical▪ Mechanical▪ Fire Protection▪ General Contractor▪ Heavy Civil▪ Utility	<ul style="list-style-type: none">▪ Mergers & Acquisitions Advisory▪ Equity & Debt Financing▪ Ownership Transition▪ Management Succession▪ Captive Insurance

NECA 2018
CONVENTION EDUCATION 

Agenda

- The Opportunity
- Survey Approach
- Key Findings
- Market Drivers and Growth
- Market Entry Options

NECA 2018
CONVENTION EDUCATION 



The Opportunity



The Opportunity

- Rapid Changes in Technology are Changing the Electrical Contractors Scope of Services
 - Reduction in core conduit and wire installation due to technology changes
 - Diffusion of do-it-yourself plug and play low voltage devices
 - Increasing threats from non-union low voltage installers
 - Increasing complexity in integrating low voltage systems requiring specialized knowledge
 - A growing market that will double in size every 5-7 years



Study Approach



Study Approach

- Conduct in depth interviews with EC's that have significant low voltage presence
- Conduct On-line survey to validate findings
- Use Task Force of ELECTRI members as sounding board
- Use ELECTRI Manufacturers for market direction information
- Purchase secondary market research study with quantifiable market data
- Use Maxim's industry knowledge and peer groups



Key Findings



Key Findings

1. Proprietary systems hamper contractor perceptions of the market opportunity
2. 70% of contractors operate Low Voltage as a division within the EC
3. Over 80% of contractors entered the market organically as a service line extension requiring investment over time
4. Acquisitions were primarily used to add LV system applications to the portfolio of capabilities thereby strengthening market presence
5. Smaller geographic markets are generally perceived as being more difficult to penetrate than larger geographic markets
6. Maintenance contracts require expensive inventory to be kept on hand
7. Managing and integrating multiple system providers will have a greater level of effort than managing just a single proprietary vendor

Key Findings *(Cont.)*

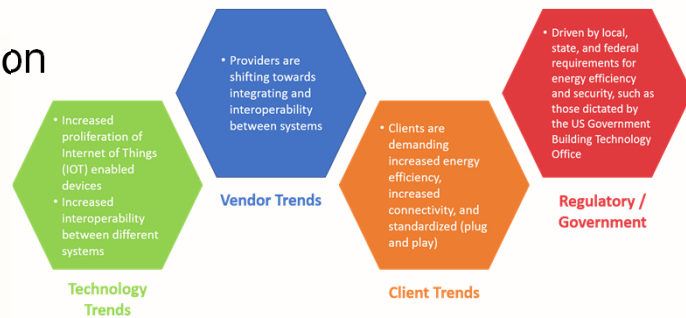
8. Rapid changes in technology is requiring key workers have knowledge in both electrical and low voltage systems.
9. Most manufacturers require specialized training for tasks beyond basic installation
10. Maintenance contracts can be so lucrative that companies sell the original solution at a loss
11. Low voltage systems contain many situations where if the system does not perform as expected the client may seek damages from the contractor – this is where having a well thought out commissioning process can help
12. Systems integration with a client for whom a traditional electrical contractor already provides services to reduces the cost of pursuing that work and increases profitability.

NECA 2018
CONVENTION EDUCATION 

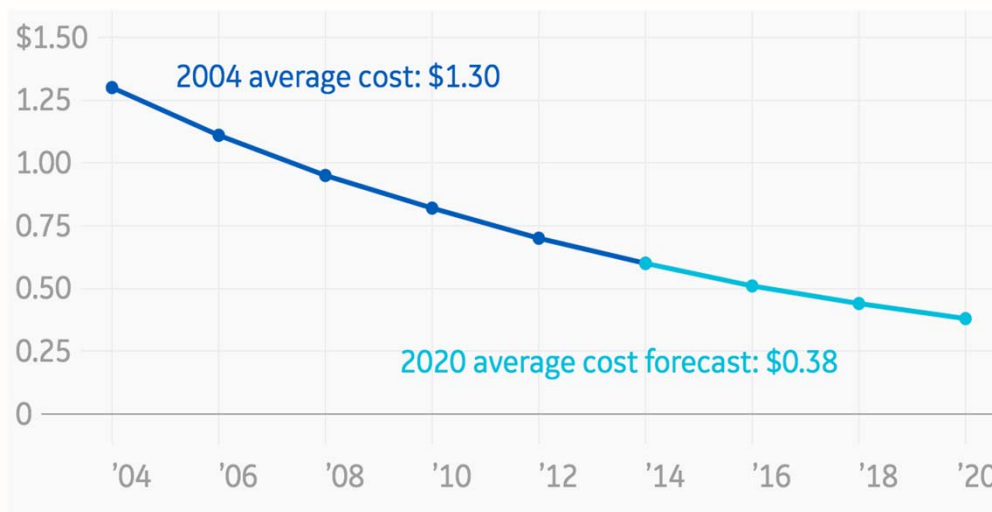


Market Drivers

- Internet of Things
- Vendor Solutions
- Client Demands
- Governmental Regulation



Internet of Things



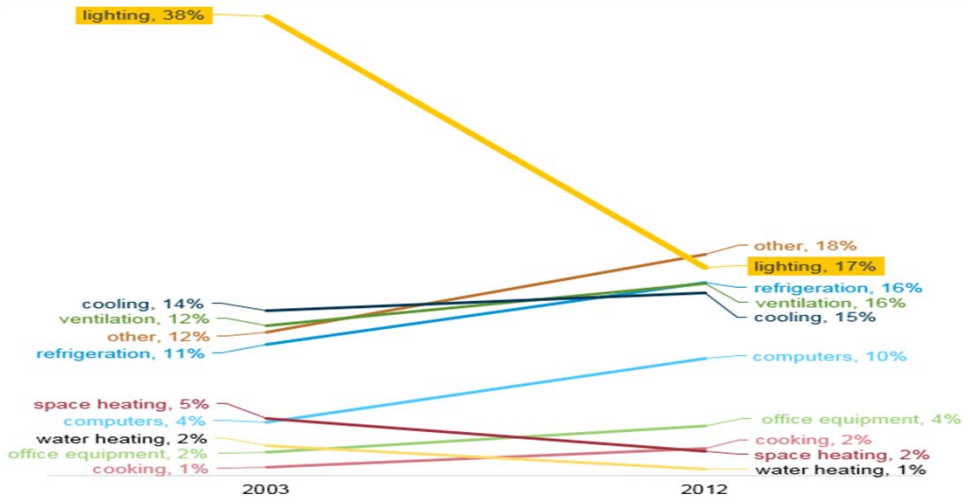
Vendor Solutions

- Siemens Building Technologies Inc.
- Schneider Electric
- Honeywell International, Inc.
- Jonsen Control, Inc.
- United Technologies Corporation
- Emerson
- ABB
- Rockwell
- WEG
- Yokogawa

Client Demands

- Networked solutions that combine access control, video surveillance, and other alarms to provide more proactive security
- Combining automated building functions (lighting, HVAC) with security due to the increased proliferation of devices equipped with the IoT
- Lighting sensors, intrusion detection, and access control systems can provide data to first responders about the location of occupants in distress.

Government Regulation (Energy Consumption)



NECA 2018
CONVENTION EDUCATION

Market Growth

Application	2016	2017	2018	2019	2020	2021	2022	2023	2024	CAGR (2016 – 24)
Security Systems	5.50*	6.27	7.09	7.95	8.85	9.82	10.83	11.91	13.06	11.4%
Life Safety Systems	2.69	3.04	3.41	3.78	4.18	4.59	5.02	5.48	5.96	10.4%
Facility Management Systems	6.88	7.54	8.18	8.80	9.41	10.02	10.60	11.18	11.77	6.9%
Building Energy Management System	2.00	2.21	2.42	2.62	2.83	3.04	3.24	3.45	3.67	7.9%
Total	17.07	19.06	21.09	23.16	25.27	27.47	29.69	32.02	34.47	9.2%

NECA 2018
CONVENTION EDUCATION



NECA
2018
PHILADELPHIA
SEPTEMBER 29-OCTOBER 2

CONVENTION EDUCATION

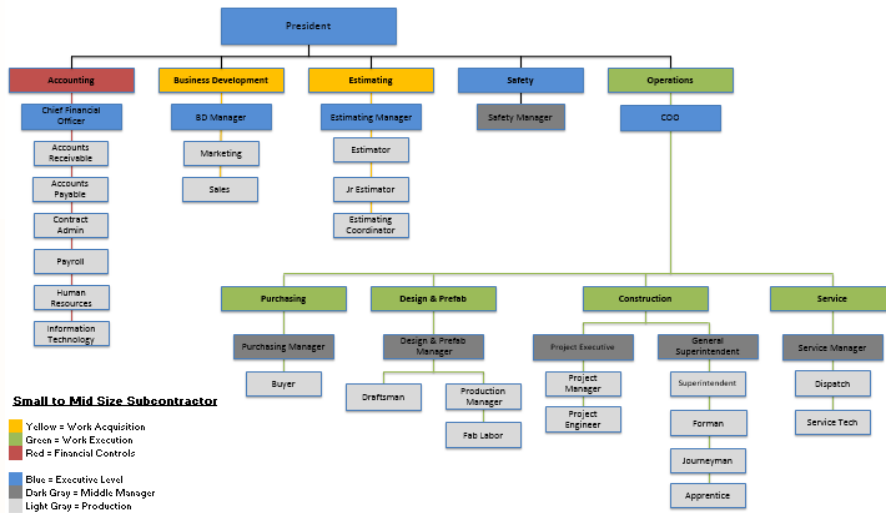
Market Entry options



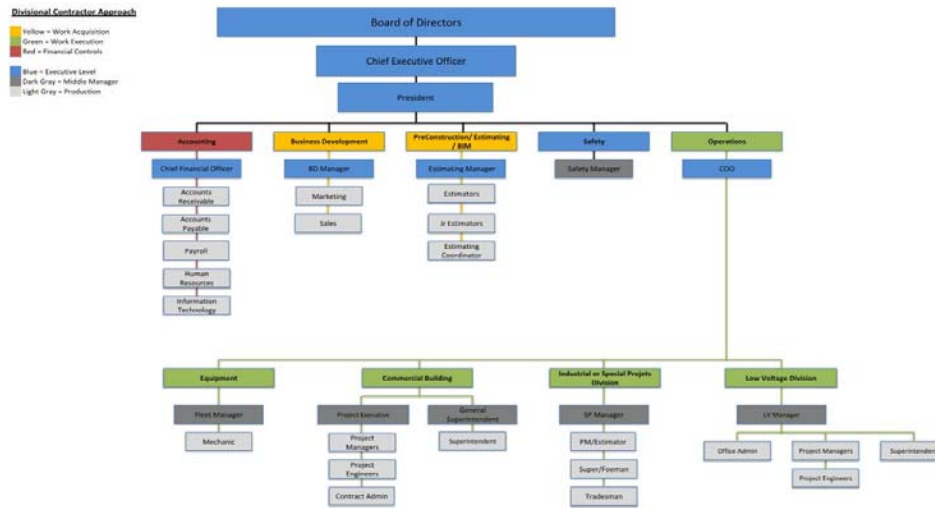
Market Entry Options



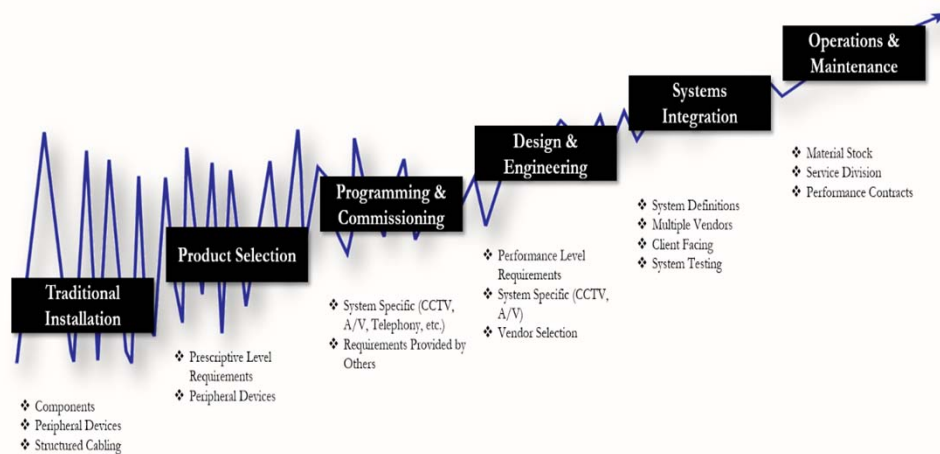
Organizational Structure - Functional



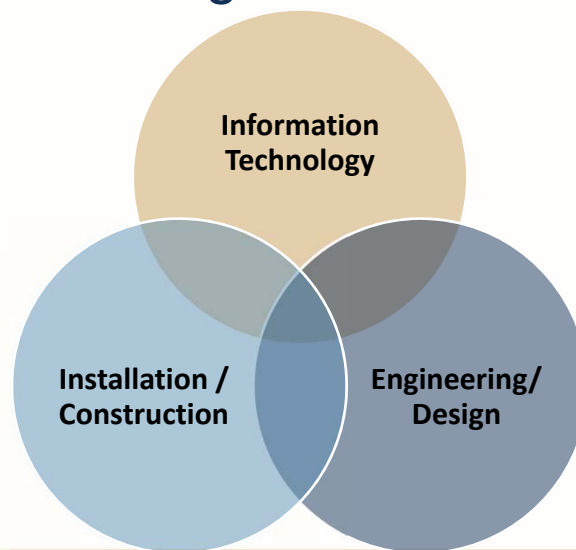
Organizational Structure - Divisional



Increasing Complexity & Required Skillsets



Convergence of Skills



Scope of Services

- Installation
- Engineering & Design
- Programming and Commissioning
- Service & Maintenance
- SCADA & Automation

Summary

- The erosion of traditional pipe and wire contractors represents a threat as well as an opportunity
- Look at the market by application, not by product....the products are always changing
- Identify the appropriate market entry strategy and set a target
- Organize the department for success (Structure, R&R)
- Take skill sets and associated scope of services to market

Thank You



Michael J. McLin
Managing Director

Walead Atiyeh
Associate Director

Maxim Consulting Group, LLC
9800 Mt. Pyramid Court, Suite 400
Englewood, CO 80112
Office: 303.688.0503
Mobile: 303.898.8440

michael.mclin@maximconsulting.com
www.maximconsulting.com

NECA 2018
CONVENTION EDUCATION 

Questions?

Don't forget...

- 10:15 am – 11:30 am – Opening General Session with Keller Rinaudo
- 11:30 am – 5:00 pm – NECA Show Hours

NECA 2018
CONVENTION EDUCATION 