



TRANSFORMING  
THE FUTURE OF LIGHT  
AND TECHNOLOGY



The Impact of LED Technology  
On Leadership Talent  
May 11, 2017 11:30 am  
Ted Konnerth/Russ Clark/Bill Astary  
A collaboration of Egret Consulting & Georgia  
Tech Professional Education

PHILADELPHIA, PA USA  
Pennsylvania Convention Center

[LIGHTFAIR.COM](http://LIGHTFAIR.COM)



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# LED Technology defined:

- The emerging application of semi-conductor light emitting diodes (LED).
- Embedded software
- Sensor networks
- Facilitates luminaire function and capture of data to be used for predictive “information” (SSL).
- Primarily used for energy savings.
- Connects people, spaces, and building systems (IoT).

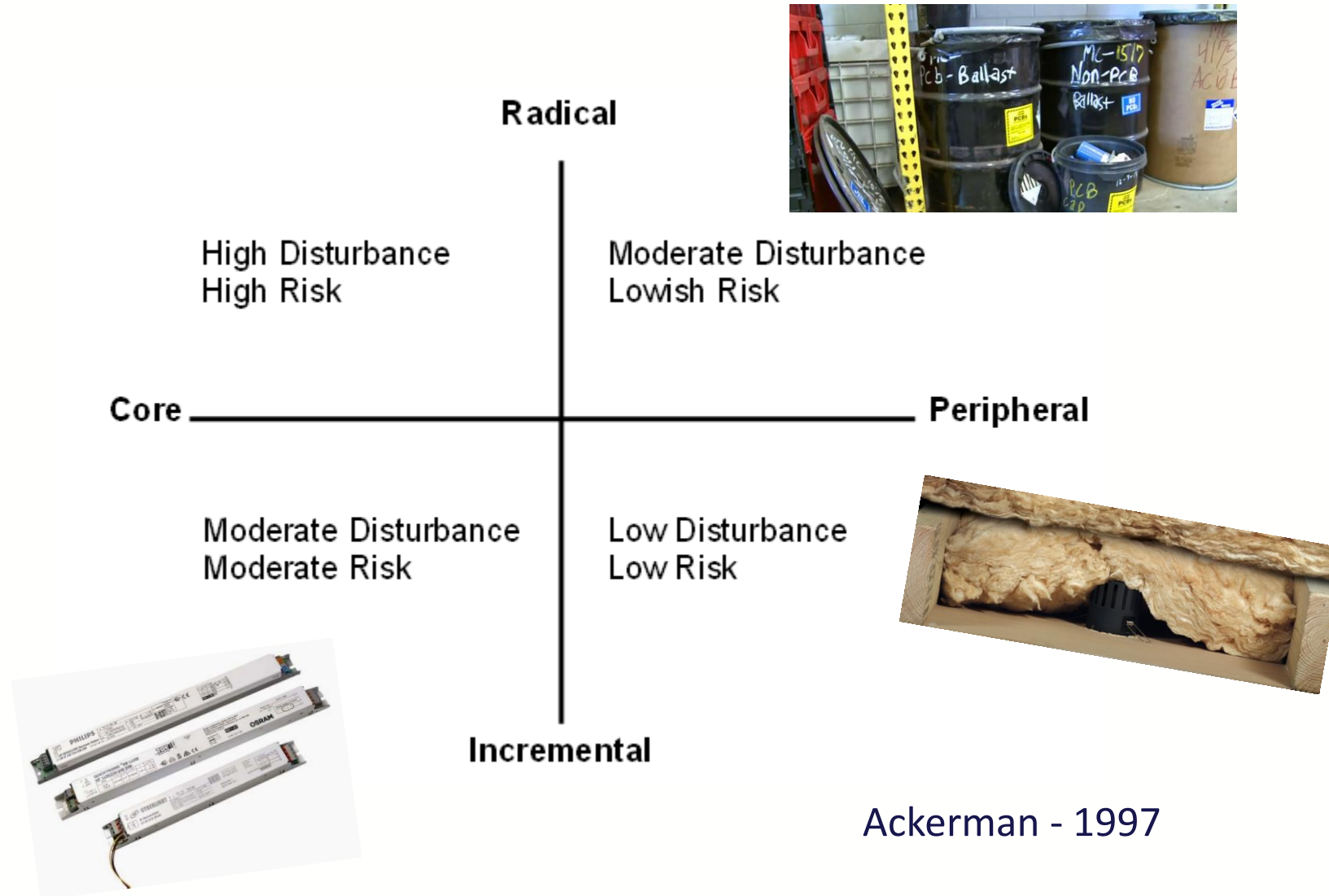
# The Impact of LED Technology on Leadership Talent

- This is not a discussion about LED technologies.
- About a broader shift in the electrical world that WILL affect you.
- What are the opportunities/threats.
- Most importantly how do I begin to frame my thoughts so my organization is a winner.

“What attracts human attention is change... if the temperature around you changes, if the telephone rings – that gets your attention. The way in which a story begins is a starting event that creates a moment of change”

- Robert McKee

# Types of Change.... Rate of Change.....



# The Impact of LED Technology on Leadership Talent

- Changes that get our attention...
  - Energy savings
  - Interoperability
  - Emerging business models
  - Movement from “things to outcomes”

# From “*Things to Outcomes*”

- Don't focus on the technology, instead focus on the results
- Not sensors, controls, or networks
- Instead, focus on:
  - Reduced cost
  - Improved efficiency
  - Fewer accidents
  - Increased throughput
  - Reduced downtime

# The Impact of LED Technology on Leadership Talent

- Improved efficiencies
- New product opportunities
- New partnerships
- New business models
- New levels of customer intimacy





# Technology and Impacts

- Technology creates exciting new opportunities
- And also brings significant new challenges!



# Technology and Impacts - Scalability

- Your new service must be prepared for exponential growth

– Consider: One sensor \* 16 bits \* 1 sample/sec \* 60 secs/min \* 60 days/wk =

**1,209,600 bytes/week raw data**

- Add a timestamp and you have 314 Mbytes/year
- That's just ONE sensor!
- Multiply that by hundreds per customer that must be collected, stored, and analyzed.



# Technology and Impacts - Security



## Security

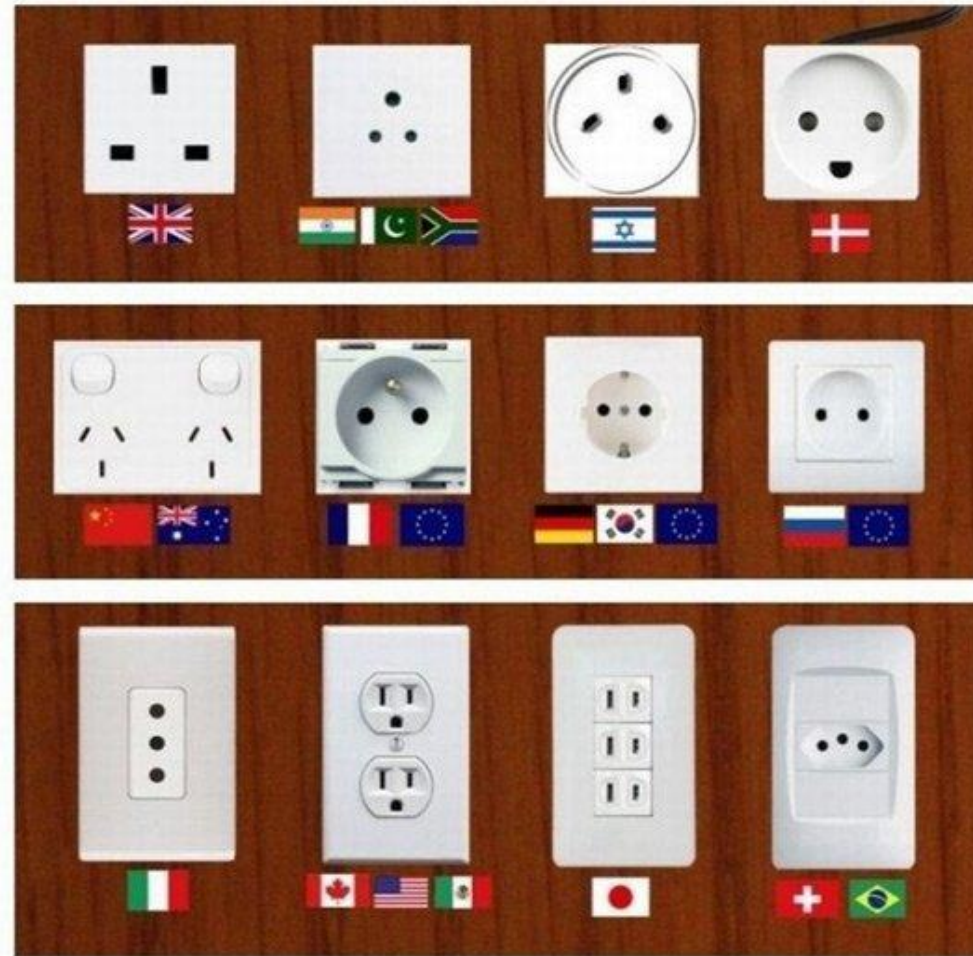
**Hotel light control hack illuminates lamentable state of IoT security**

KIM ZETTER SECURITY 05.06.13 6:30 AM

**RESEARCHERS HACK BUILDING CONTROL SYSTEM AT GOOGLE AUSTRALIA OFFICE**

# Technology and Impacts - Interoperability

Standards are great! Everybody should have one.



# Technology and Impacts - Liability

## What if something goes terribly wrong?

“In short, QER 1.2 shows that all energy-industry stakeholders, including private-sector companies, must be cognizant of cybersecurity and develop plans and procedures to mitigate and respond to cybersecurity risks. Failure to do so could expose companies to potential liability for losses resulting from a cybersecurity incident or from an ill-planned response to such an incident. ” <http://www.jdsupra.com/legalnews/task-force-report-and-nist-revisions-57182/>

**Recent Decision Increases Class Action Risk for Companies that Utilize Pre-Installed Software and Adware**

**Osler Hoskin & Harcourt LLP**

# Channel Adoption, Current research

- Survey of lighting distributors and representatives
- Responses from 20 distributors and 30 lighting reps
- Most are bullish on the future of LED/SSL
  - 96% expect it to be 90% of revenue by 2025
- Yet, it remains a small part of the business
  - Less than 50% for distributors, slightly more for reps

# Research Results: Talent Development

- Most are already investing in LED/SSL skills
  - 90% in LED
  - 60% SSL
- Most respondents think they have the talent they need to win in LED/SSL
  - 88% for reps, 60% for distributors
- But this drops off dramatically with IoT
  - 33% for reps, 5% for distributors

# Research Results: Notable Comments

- “It is hard to focus and form a business around the changing LED landscape, the best you can hope for is to stay nimble, constantly learning and looking for trends and changes to the industry and be quick to move to those.”
- “SSL, IoT, are going to be a major part of our world of lighting in the future. Technology companies such as Cisco will play an increasing role and who knows who else will emerge at market disrupters. It is a great time to be in the lighting industry as there will continue to be huge opportunities. There will also be huge challenges to the traditional model of lighting reps and legacy channels of getting products to market.”
- “The LED/SSL technologies require much more expertise when it comes to providing the proper solution to the end customer. This is due to the numerous amount of choices of LED products and the lighting controls that are available.”



# Technology & Leadership

Lighting has reached the 2<sup>nd</sup> Pivot

## Pivot 1

LED and digitization of light

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- Energy savings
- New applications
- Blue ocean expansion
- KEY ISSUE.. It's still about LIGHTING

## Pivot 2

IoT

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- Sensors
- Data aggregation
- Software
- Where's lighting?

## Déjà vu is Déjà gone

- Our research shows that legacy channel relationships are changing
- Manufacturing processes and product plans have changed
- Customer relationships of old... are just OLD?
- New entrants have crafted new markets
- Communication media have changed
- The leaders of today are different than yesterday



## Baby Boomers



Boomers are retiring at increasing rates

# Generational Impacts

- Tech skills are requisite
- Communication media have changed:
  - Text and Twitter are shorthand
  - Social media enables personal/professional attacks with anonymity
  - Writing skills have degraded
  - Social skills have degraded
  - Multi-tasking is a myth
- Women and minority influences will grow

## Millennials



Millennials' career path= 2-3 year company moves



## Talent for the Future

- Global view
- Software literate
- IP driven
- Broad view of the market
- Empathetic with legacy approach
- Politically nimble
- Lighting as an art and skill
- Acceptance of new business models
  - SaaS, Licensing, Li-Fi, LaaS
  - Niche marketing strategy
  - Gestalt view of the industry at large



## Leadership threats

- Increase in IP battles
- Margin declines
- Global competition with open markets
- Relaxing standards of lighting design
- Diversity of competition
  - Tech companies
  - Security
  - HVAC
  - Data/Com
  - Amazon

And many more to come....

# How do we find talent like this?

## Buy or Grow?

### Buy

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- Recruit from competitors, tech companies, emerging channel players (HVAC, Security, etc.)
- Advantage: faster learning curve with higher ROI
- Disadvantage: high initial cost

### Grow

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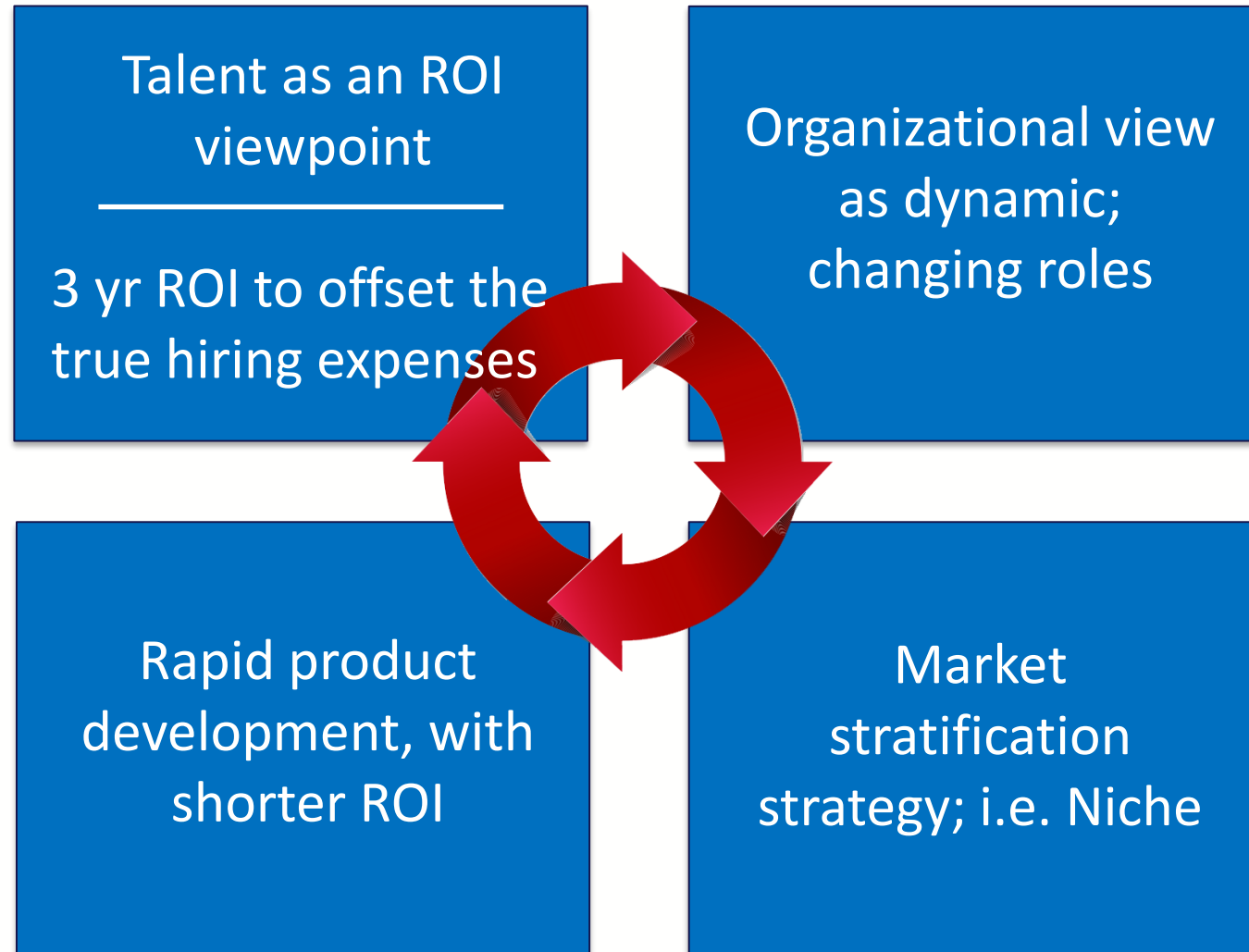
- College recruit for smart, tech savvy people
- Training regimen; intensive and thorough
- Advantage: trained in your vision and approach
- Disadvantage: slow foundational build, expensive investment in training



## Current Talent Status

- <3% of college educated are unemployed  
    <2% with advanced degrees
- Rush to craft non-compete contracts
- Anachronistic hiring practices; slow, methodical
- Diversity of future talent skills requires much higher level of strategic skills
- Talent pool of people who have both Tech and Lighting.. Is a puddle
- Training programs to develop people across the diversity of the needs are not in place currently

# Next Steps Forward





## Conclusions....

**“If you’re NOT  
changing  
faster than  
the changes  
around you...  
you’re  
backing up”**



# Thank You!

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- Define the go-to market strategy
- Clarify your strategic plan



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Please remember to  
complete the  
course evaluations.  
Thank you.