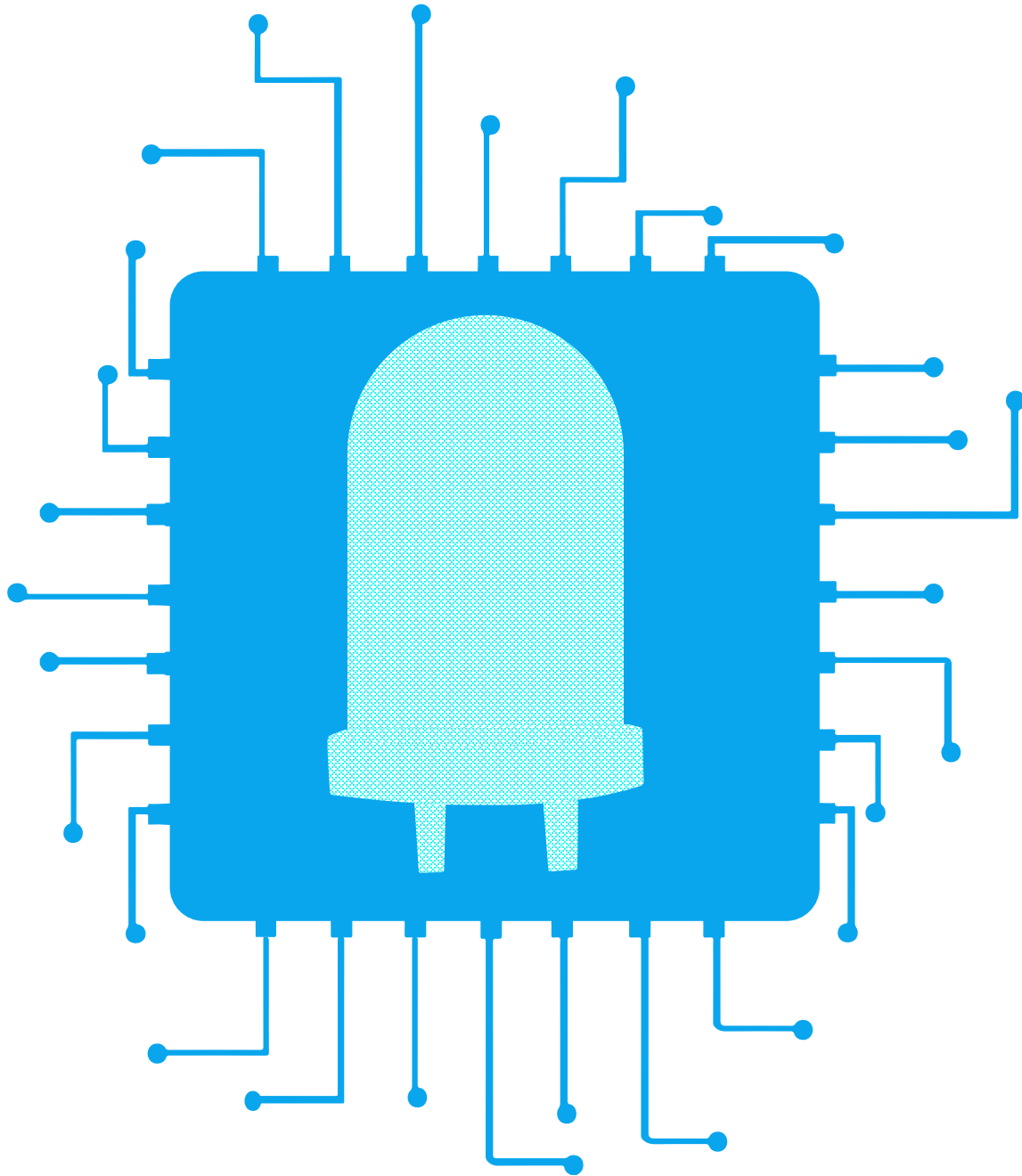


# Taming Advanced Lighting System Complexity: A Call to Action

Michael C. Skurla

Chief Product Officer / Radix IoT (a Compass Datacenters Company)  
LEED AP O+M & BD+C, MIES, ASHRAE, IM



**“Consistency  
is what  
Transforms  
Average into  
Excellence”**

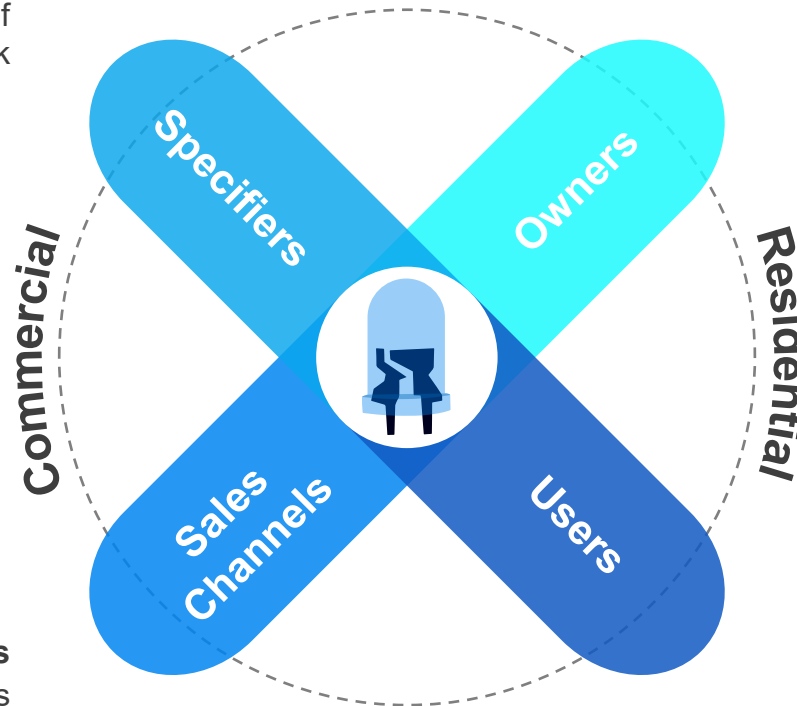
Josh Loe

# CLS Systems

By stakeholder Market

**Specifiers**  
Though sometimes in residential, the specification community has a high degree of influence in commercial work

**Owners**  
Individuals or companies that have a stake in the useability and functionality long-term, and conversely are impacted by decisions far after the project is completed.



**Sales Channels**  
Distributors, agents, dealers, and contractors make buying decisions based on project requirements or financial incentives

**Users**  
The occupants or day to day beneficiaries of a solution.



A glowing blue square chip is centered on a circuit board. Numerous glowing blue lines radiate from the chip, connecting to various points on the board and extending towards the edges of the frame. The background is a dark blue gradient with faint circuit patterns and glowing particles.

# So where are we at?

Its complicated and inconsistent

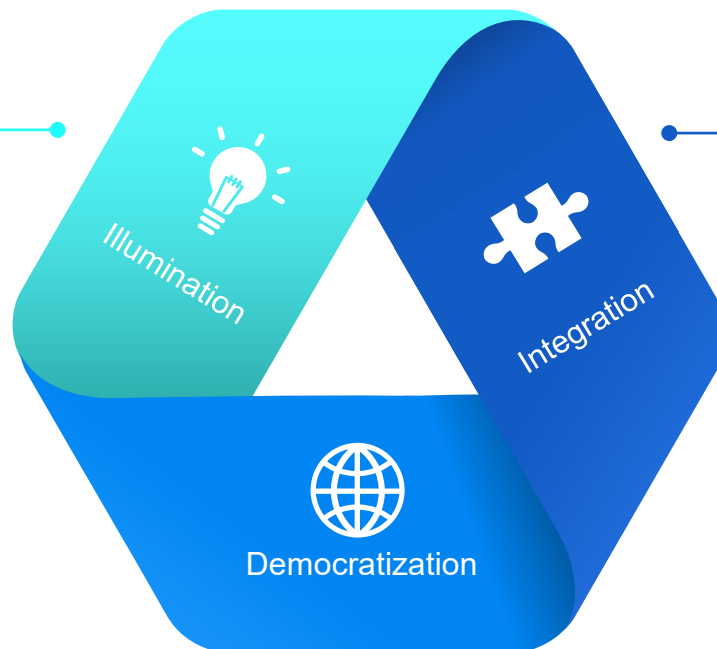
# The Lighting Equation

## Illumination

- Safety
- Productive & Artistic
- Efficient

## Integration

- Networked Control
  - Protocols
  - Software



## Democratization

- Unification of Property Solutions
- Clear access to data (Not Purpose built)
  - Fixture Diversity beyond lighting



#### Safety

- Cost Effective
- Reliability

#### Productive & Artistic

- Fixture Diversity
- Optic Diversity
- Controllability

#### Efficient

- SSL
- Controls
- Codes

#### Shortcomings



#### Shortcomings



#### Shortcomings



# Illumination

## Nailed it

And honestly keeps getting better and better driven by by public and private funding globally.



#### Networked Control

- Scaled Automation
- LV / Wireless

#### Protocols

- Line Voltage Norms
- Bridging Capability
- Dali / DMX

#### Software

- Custom Flexibility
- Show Control

#### Shortcomings

- Proprietary Hardware
- Proprietary Setup
- Proprietary Comm
- Proprietary Service
- Proprietary Useability

#### Shortcomings

- Poor Access to data
- Complex control equations for Illumination
- Lack Luster Security frameworks

#### Shortcomings

- Siloed Data
- Poor Configuration Tools
- Lack of purpose beyond setup

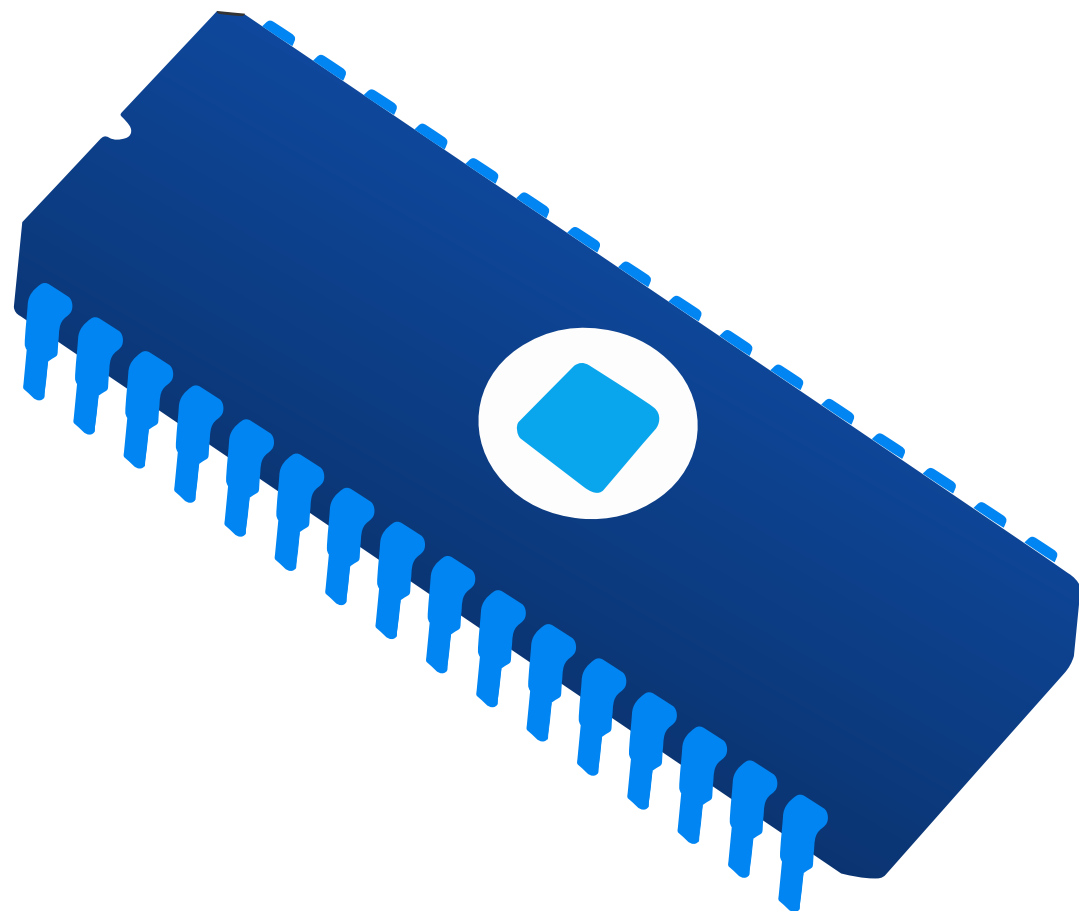
# Integration

## Siloed at best

A fair degree of proprietary technology exists at this level which offers some commercial advantages, but heavily limits the interoperability (and consequently educated install-ability) and long-term serviceability of solutions deployed.



# Lighting as a Platform



## In Democratization

### Huge Benefits for Simple Reasons

Lighting by nature stands as the potential focal point of infrastructure from reasons that have simple tenants:



It's always  
needed



It has power



Its uniform in  
location



Its theoretically  
data capable

Lighting provides carrier infrastructure through these traits that enable an alternative growth model to lighting ecosystems.





# Democratization

## We haven't gotten here

(Beyond marketing)

The promises of lighting are substantial from things such as IPS, LiFi, Carrier Services, etc. But if we can't solve the integration problem, all of this is truly moot.

**No one will want it** - and to be fair the problems will be solved by the I.T. industry. Leaving lighting, with Illumination. Look at who is succeeding in the residential space now...

# What does this mean

01

## **CLS Remain Relegated to Specialists**

- The only person winning is the salesperson
- Contractors will not / cannot understand them given our installation model

02

## **Future-proofing is a tall-tail**

Customers do not expect to replace a lighting system in 10 years given

03

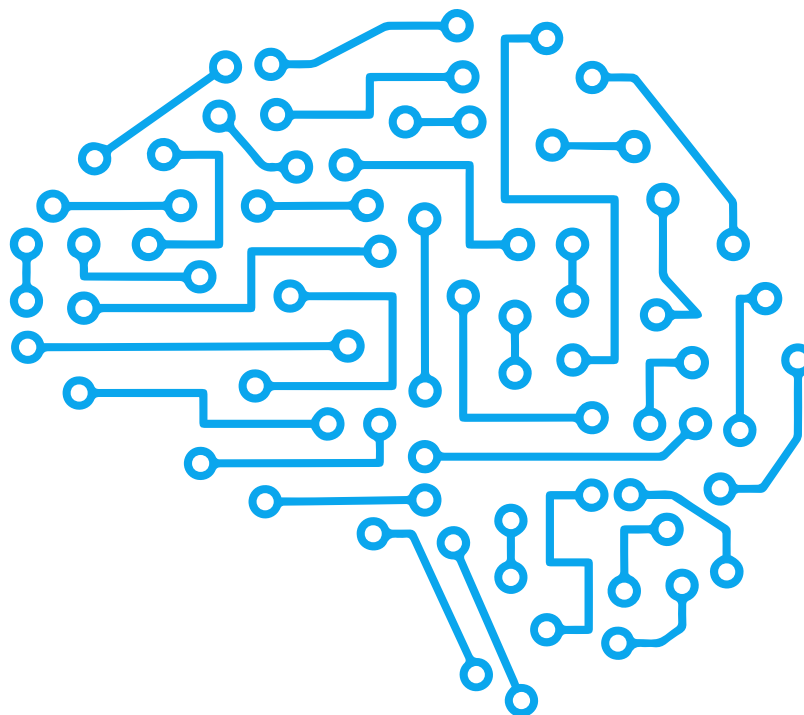
## **Petrification**

- Lighting will be relegated to its silo as others reach for larger slices of the pie

# Concepts of Consistency

Constancy of hardware installation wiring  
Ability to communicate with others (easily)  
Long-term upgradability  
Setup Easy (Even in mid-sized systems)  
Interchangeable parts between vendors  
Longevity of maintenance ability  
Industry API Theory  
Minimum set of standards

Technological



Uniform Vocabulary  
Uniform Installation process  
Published cross vendor expectations  
Industry control specific narrative  
Published fundamentals of Security

Process

A minimal but defined consistency across all NLCs





## Michael C Skurla

LEED AP O+M & BD+C, ASHRAE, MIES, IM

Chief Product Officer  
Radix IoT, LLC.

A Compass Datacenters Company

[Michael.Skurla@radixiot.com](mailto:Michael.Skurla@radixiot.com)

[www.linkedin.com/in/mikeskurla](https://www.linkedin.com/in/mikeskurla)

[www.radixiot.com](http://www.radixiot.com)

