




**Vividtechnology™**


**EEC Conference**

**November 2017**




# Intelligent Lighting Solutions – Coca-Cola Amatil

 **Coca-Cola Amatil** 1w

We are thrilled to announce a whopping 91.7% of energy savings in lighting through the installation of LED lights at Neverfail facility in Peats Ridge. Thanks to our partners **Vivid Industrial** for a successful roll out!



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“We are thrilled to announce a whopping **91.7%** of energy savings in lighting through the installation of LED lights at Neverfail facility in Peats Ridge. Thanks to our partners **Vivid Industrial** for a successful roll out.”

# Intelligent Industrial LED lighting



Actually a trojan horse:

- ▶ big data
- ▶ IoT
- ▶ Business intelligence
- ▶ Demand Management
- ▶ .... as a service

## Innovation in energy efficiency

- **Connected devices** transforming business models for energy efficiency
- **Embedded M&V** providing **investment certainty** and enabling long term, **service** based relationships
- Opportunities enabled by '**data rich**' environments

Technology is the enabler, not the panacea

Connectedness is key – across the business, with partners, industry and government



**Innovation in** is about  
**energy efficiency**  
engineering & measurement  
connectivity, control and IoT  
data, insights & algorithms (AI)  
policy, governance & risk

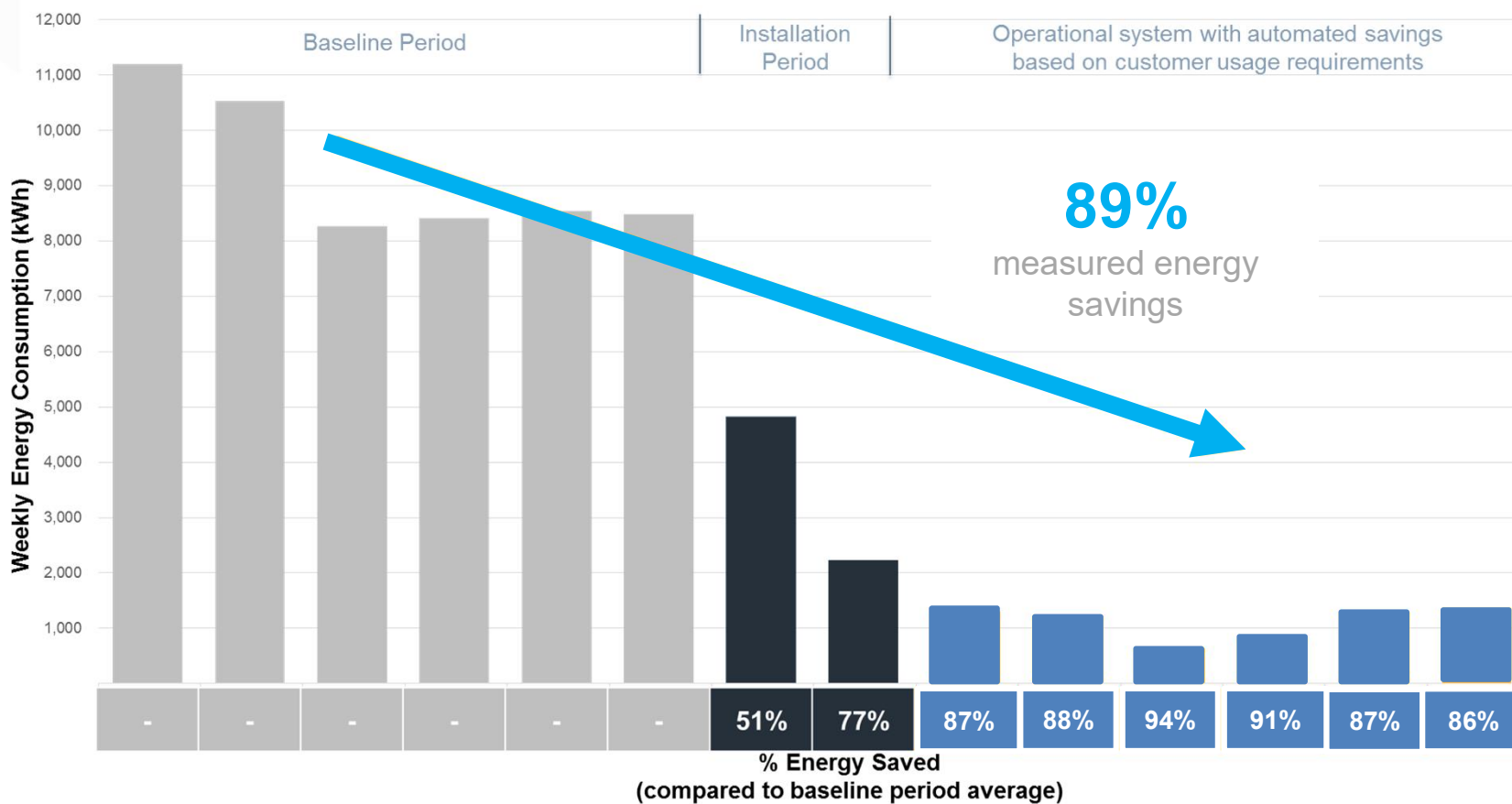


# Quantifiable Savings

## Delivered at Zero Risk to your Brand

Case Study: 36,000 Sqm Warehouse Facility

Energy Use Before and After Upgrading to Matrixx® Lighting System



**>\$125k**  
savings p/a  
operating costs

**70%**  
improvement in light  
levels

**341 tonnes**  
of CO2 emissions  
reduced

# Connectivity, Control and IoT

## An IoT Connected Eco-System

A FUTURE PROOF INTELLIGENT SOLUTION WHICH MAXIMISES ENERGY EFFICIENCY SAVINGS FOR CUSTOMERS

*Lighting*  
*"Ubiquitous & Powered"*

### ▶ LIGHTING PLATFORMS

New intelligent lighting platforms have changed the capability of metering and control

### ▶ HOMOGENEOUSLY SPACED

The ubiquitous instances in lighting fixtures at pre-determined intervals provides for a ideal platform to monitor, report and control environments



*"Homogeneously spaced"*

### ▶ EMBEDDED SENSORS

The increased capability and reduced cost of embedding sensors as part of the lighting framework to provide a holistic view of the monitored environment

### ▶ ALWAYS POWERED

Intelligent Lighting platforms provide power and communication to facilitate sensor deployment and data transmission capability

You cannot **MANAGE** what you don't **MEASURE** and **MONITOR**



# Data, insights & algorithms (AI)

## Why Measure NOT Guess

- ▶ Facilitates an:  
“**Outcome Based Service Model**”  
where customers are able to validate and verify efficiency gains on a monthly basis
- ▶ Provides deep insight into organisational operational activity, allowing changes to be undertaken based on fact and insight not “gut-feel”. eg (Heat-Mapping)
- ▶ Provides verifiable data to help customers identify areas of adjacent efficiencies. eg (Storm Damage)



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# Smart Efficient ..... Lighting as a Service

## An IoT Connected Eco-System

OVER  
**90%**  
ENERGY SAVED

Maintained energy cost savings of up to 90%



Reporting

Matrixx<sup>®</sup> is an IIoT Technology  
*We measure, we don't guess*



Reduced maintenance

Multi-decade maintainable asset



 **klarity**<sup>®</sup>

Our data analytics and dashboard platform



 **matrixx**<sup>®</sup>  
IIoT Intelligent LED Lighting Platform

# Policy, Governance & Risk

## Certainty of outcome



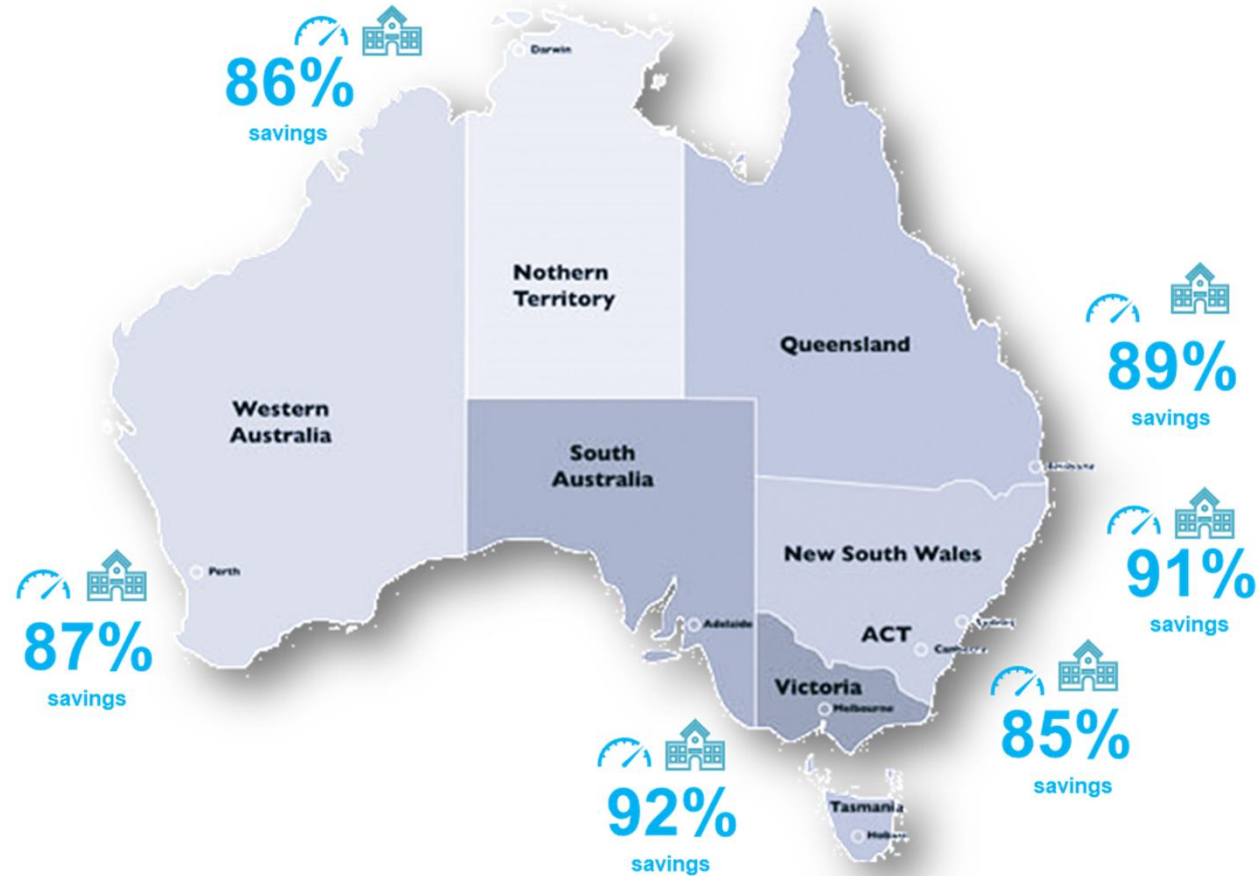
Reduce Lighting Energy costs by  
>85% Per Site



Improve OH&S requirements with  
real time monitoring



Non-Energy productivity gains with  
heat mapping & usage patterns



Actual savings received for customers via Matrixo® Systems across Australia & Hong Kong (Average monthly savings – May 2017)

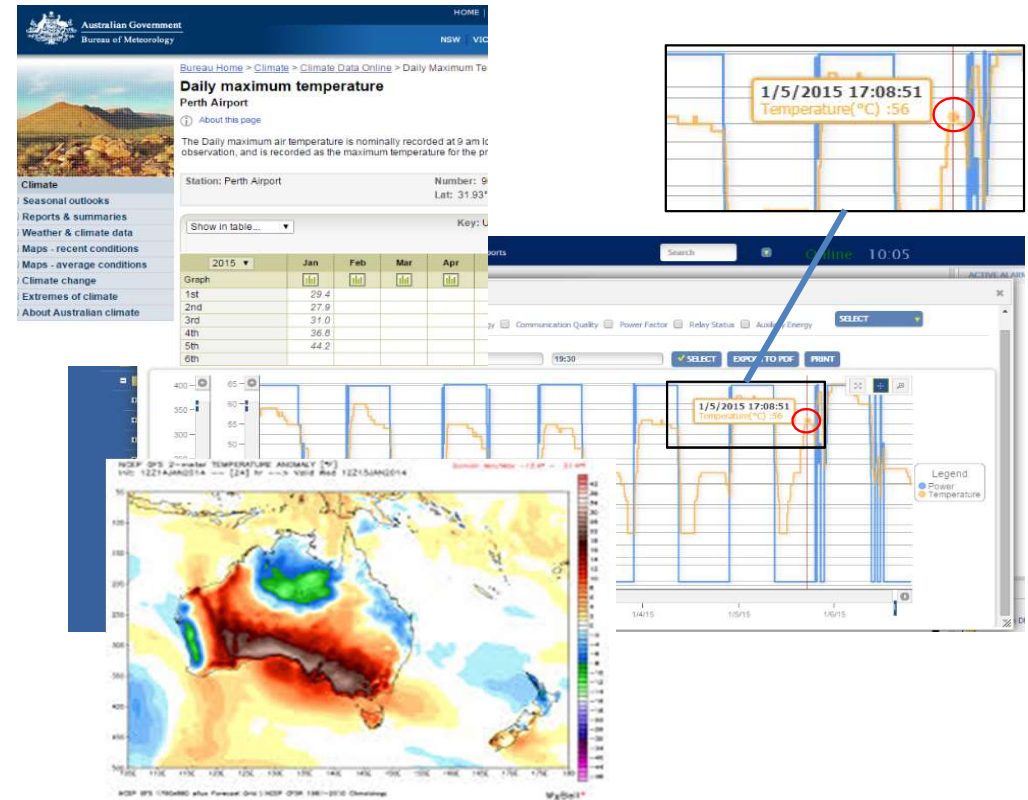
## Connectedness

- ▶ Data and datasets are **connected in space and time**
- ▶ We can **connect datasets** to generate **new insight** and drive **better business decisions**
- ▶ We can have **algorithms (AI)** make **these decisions** on our behalf

# Temperature Control

## Why Measure NOT Guess

- ▶ Ambient temperature under-roof more than 11 degrees higher than external temperature
- ▶ modern insulated roofs ~5 degrees higher than ambient



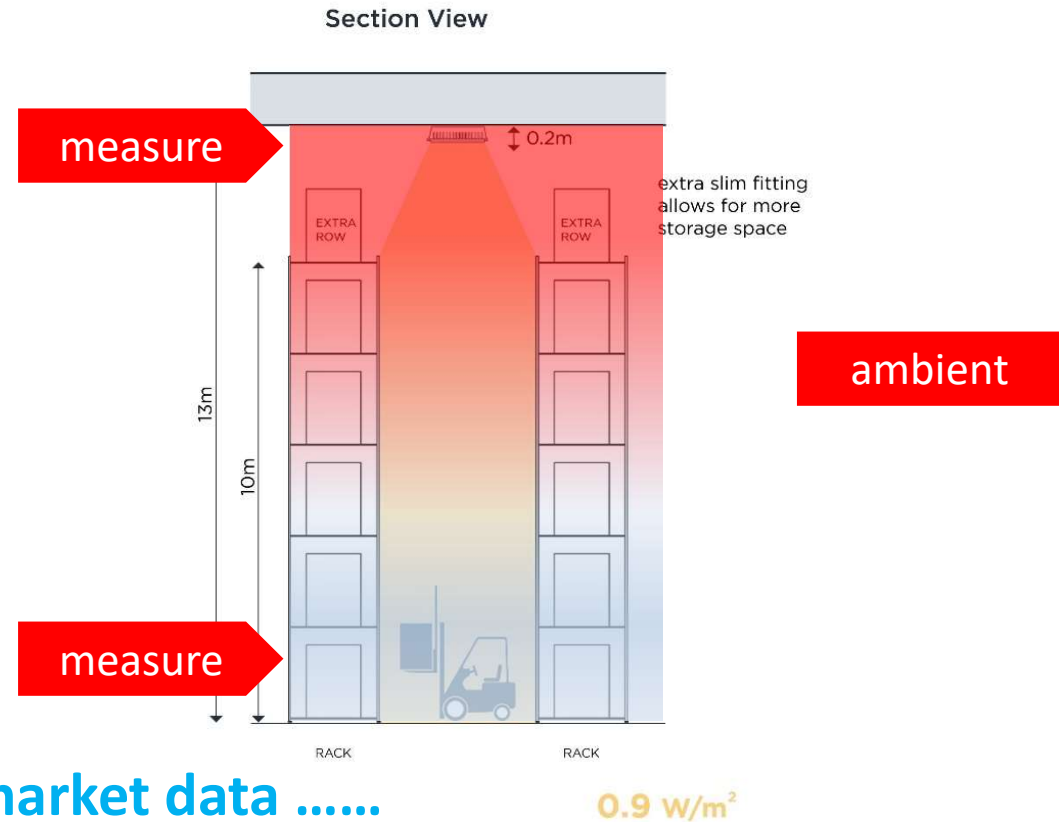
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# Temperature Control

## Vertical thermal model of warehouse



- ▶ Correlate internal sensor measurements with BOM data
- ▶ Provide a thermal profile of warehouse for insight into shelf life and storage strategies



- ▶ Connect to meter and energy market data .....

You cannot **MANAGE** what you don't **MEASURE** and **MONITOR**



# Thank You

Energy Efficiency Solutions  
Intelligent, Sustainable, Profitable

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