



MINDSETT PRISM®

Be First to the Future

# Asset Management Requirement



01

Identify and validate  
energy conservation  
measures



02

Allocate relevant  
funding (CAPEX) to  
asset replacement  
requirements



03

Validate the  
effectiveness of  
maintenance



04

Apply the optimum  
maintenance  
regime to balance  
cost versus planned  
and un-planned  
down-time

# 01 Identify and validate energy conservation measures



## Today's World

### Smart-meters

### BMS/Smart Buildings/Sensors

### Sub-metering devices

### Manual estimations

#### What are the limitations?

- No down-stream system/asset-specific information
- Power factor often not separated out/available

- Dependent on sensors
- Only measures parameters considered within design and installation
- Complex and wide-scale commissioning required
- Need regular maintenance and recalibration
- Designed and installed specific to building
- Limited in agility to changes in building usage versus design
- Maintenance and upgrades often expensive (highly skilled labour)
- Expensive to install

- Expensive if required at scale/ slow if applied on a case by case basis
- Limited to power-related information,
- Specific to single asset or system being monitored, cannot see correlations between assets

- Inaccurate
- Limited validity (cannot track changes)

## Tomorrow's World with Mindset PRISM®

- All assets monitored as wired at distribution board level
- Power, True Power (Power factor), plus harmonic information gathered

- No sensors required!
- Practically infinite parameters measured via harmonics (magnetic field around cables generated by electricity flow)
- Simple start up and self-learning
- Self-monitored and maintenance free
- Units can be easily re-deployed
- No impact to monitoring capacity
- No maintenance required, upgrades included in subscription
- Extremely commercial solution!

- For sub-metering – VP is, “one PRISM with one installation can monitor up to 36 assets instead of 36 separate sub-meters and specific installations. It will also provide more information on more parameters than sub-metering

- Granular and accurate data
- Real time



# 02

## Allocate relevant funding (CAPEX) to asset replacement requirements



### Today's World

Age-based life expectancy data  
(e.g. CIBSE/ASHRAE)

Maintenance history  
and observed condition

CMMS/CAFM info.  
E.g. Mean Time Between Failures, Uptime Statistics,  
Costs of PPM and reactive maintenance.

### What are the limitations?

- Does not reflect or consider actual operating conditions and asset performance
- Usually long (annual) periods to refresh information.

- Subject to standard of maintenance attendances and subjectivity of condition assessments.
- High level of manual effort required in analysis.
- Usually long (annual) periods to refresh information.

- Requires accurate and consistent data upload by field and management staff which is rarely undertaken in practice.
- Still requires a degree of manual analysis.
- Usually long (annual) periods to refresh information.

### Tomorrow's World with Mindsett PRISM®

- Mindsett Index automatically provides asset-specific performance baseline and flags any decay trends. This together with asset peer group comparison enables accurate and dynamic decision making via virtually real-time data.

- As above plus Mindsett Index provides objective information from continuously monitored parameters.

- As above plus Mindsett PRISM data capture is automatic and not reliant on human intervention.

# 03 Validate the effectiveness of maintenance



## Today's World

Rely on attending engineers skills, knowledge and transparency.

## Apply audit process

### What are the limitations?

- Difficult to confirm post-maintenance operation without local inspection and, or sensor (BMS/controls) data.

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### Tomorrow's World with Mindsett PRISM®

- Asset-specific, continuous monitoring of multi-parameters provides pre and post-maintenance validation of performance restoration.

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# 04

## Apply the optimum maintenance regime to balance cost versus planned and un-planned down-time



### Today's World

Follow manufacturers' recommendations and industry standard specifications (e.g. SFG20, etc.) for PPM

### Condition-based monitoring

### Total or limited run to failure

### What are the limitations?

- Doesn't take into account variations in operating environments, as-installed characteristics or changes in demand/load versus design intent.
- Higher degrees of planned maintenance require increased planned asset down-time, also does not protect against reactive down time through unexpected break-down

- Requires local, asset-specific sensors and, or intervention related to pre-determined parameters. This is expensive and may miss issues where not capturing data on unconsidered parameters. Applications such as vibration monitoring give a broader spectrum but are expensive and can only be applied at asset level.

- Results in un-planned down-time and related disturbance to customer operations

### Tomorrow's World with Mindsett PRISM®

- PRISM data provides asset-specific, continuous monitoring of multi-parameters that provides immediate indication when maintenance is required from deviations and or rates of deviations in relevant parameters.
- Effectively eliminating un-planned down-time and optimising planned attendances.
- As above. Also Mindsett PRISM enables the optimum merge of planned and reactive into predictive (and planned) attendance.

- As above and Mindsett PRISM provides CBM for all assets at distribution board level.

- As above, Mindsett PRISM eliminates un-expected breakdowns.

# MINDSETT

We tell you **how** your assets can  
**save energy**

We tell you **when** your assets  
**need replacing**

We tell you **when** your assets are going to  
**break-down**