



Innovation and fit the purpose principles of Asset and Facilities Management, linked with technology and IoT (Industry of Things) within the Health and Science industry

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Smart Hospitals



Where to start and
how to keep it
simple?

- Introduction to Pragma
- Asset & Facility Management challenges
- Standards
- Good vs Bad example
- Where to start (Strategy, People, Systems and Innovation)
- Summary and closing
- Questions

Our Vision



Smart enterprise
asset management
solutions for the
world | The Pragma
Way





Smart enterprises

Smart People

competent and informed with access to real time asset information

Smart Assets

enable Industry 4.0 and have a “voice” to tell us how they feel, where they are, and how they are performing

Smart Operations

drive operational excellence through asset management best practices: balancing performance, cost and risk

Our Global Footprint



Our References and Clients | Africa



Our References and Clients | Africa

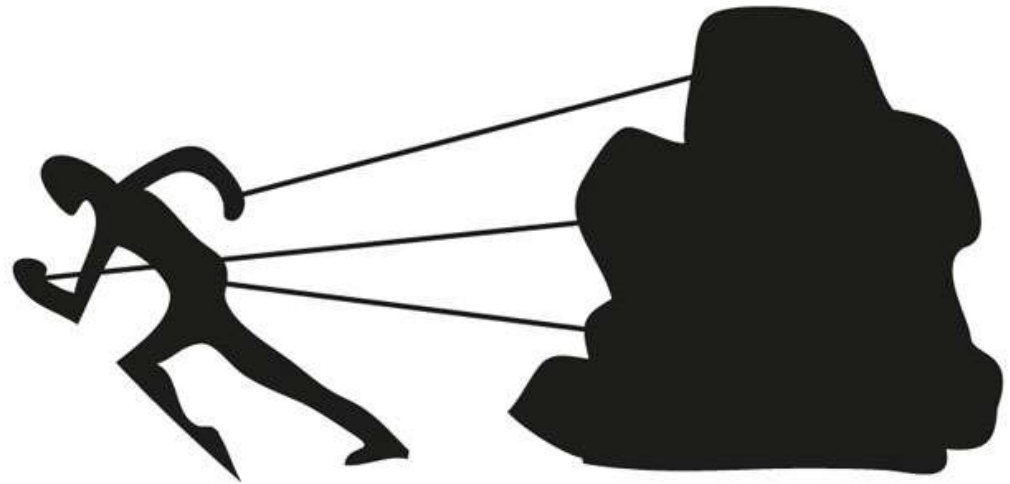




Challenges



Asset and Facilities
Management



Key Challenges | Do you Know ...

what assets you have, where they are,
their condition
and their current value?



Key Challenges | Do you Know ...

how to operate
and maintain
your assets
to ensure
their reliability?



Key Challenges | Do you Know ...

what resources
(labour, spares
and contractors)
are required
to perform work
on assets?



Key Challenges | Do you Know ...

how to manage
the acquisition of
new assets
and the disposal of
old assets?



Key Challenges | Do you Know ...

whether your
asset-related risks
are contained
and if they
comply with
statutory and
legal regulations?



Key Challenges | Do you Know ...

the performance
of your assets
and how to improve
their performance?



Key Challenges | Do you Know ...

that your assets
are safe
to people and
the environment?



Key Challenges | Do you Know ...

your asset strategy,
your asset management strategy
and their associated improvement plans?



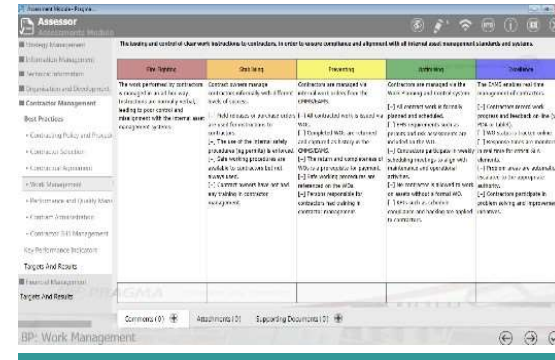
Key Challenge | Do you Know ...

where your field workers / contractors are and that they are actually completing work and giving feedback from the actual point of work?

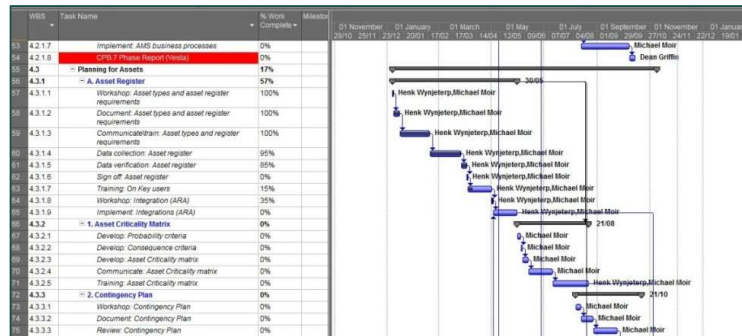
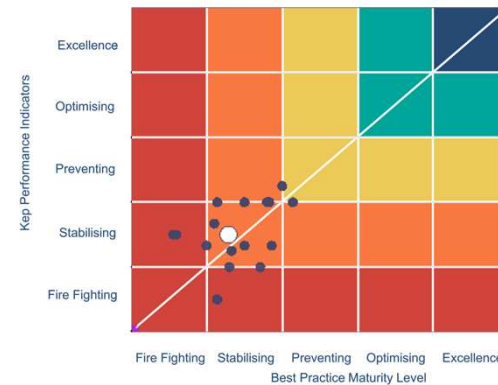




Asset and Facility management Assessment



AMIP Assessment Results



AMIP KPA's

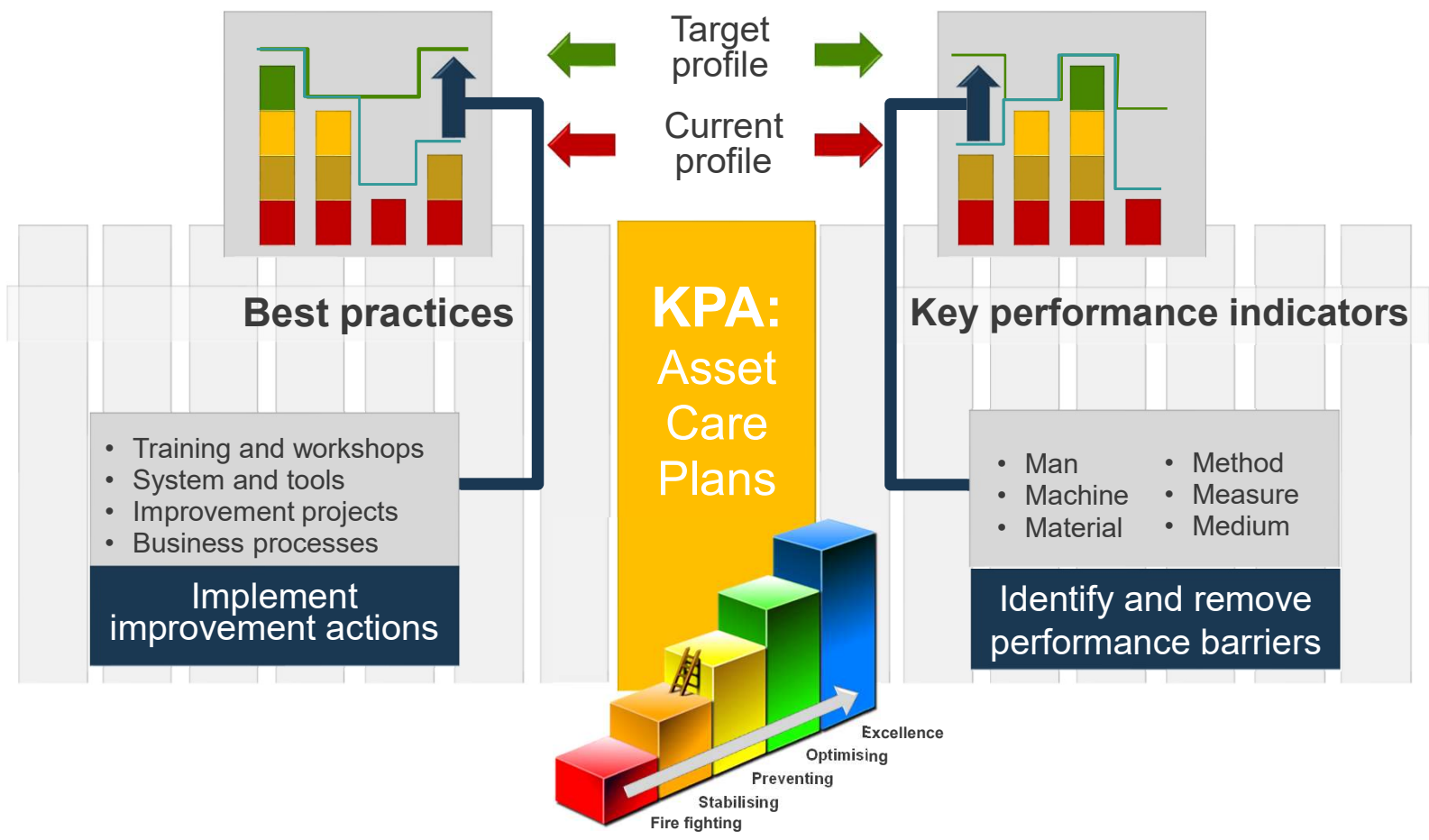
- Strategy Management
- Information Management
- Technical Information
- Organisation and Development
- Contractor Management
- Financial Management
- Risk Management
- Health, Safety, Security and Environment
- Asset Care Plans
- Work Planning and Control
- Operator Asset Care
- Material Management
- Support Facilities and Tools
- Life Cycle Management
- Shutdown and Outage Management
- Performance Measurement
- Focused Improvement



Assessment Methodology

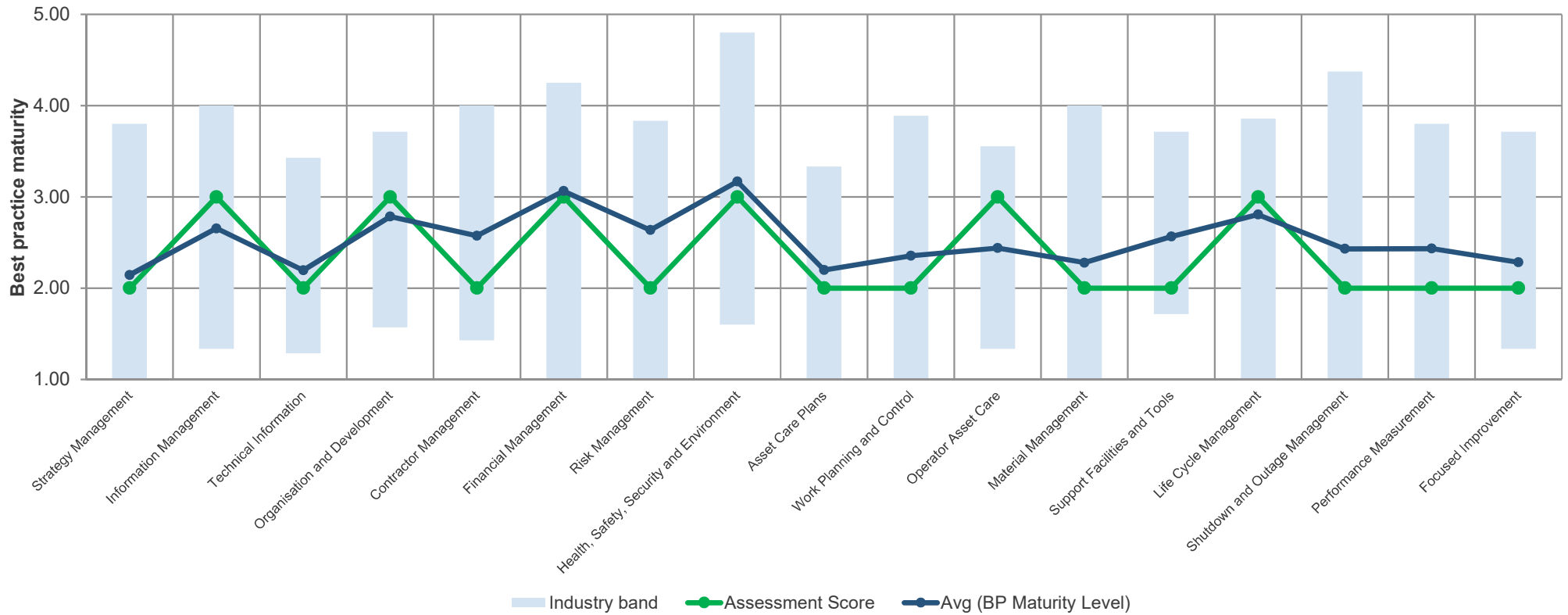


Asset Management Assessment



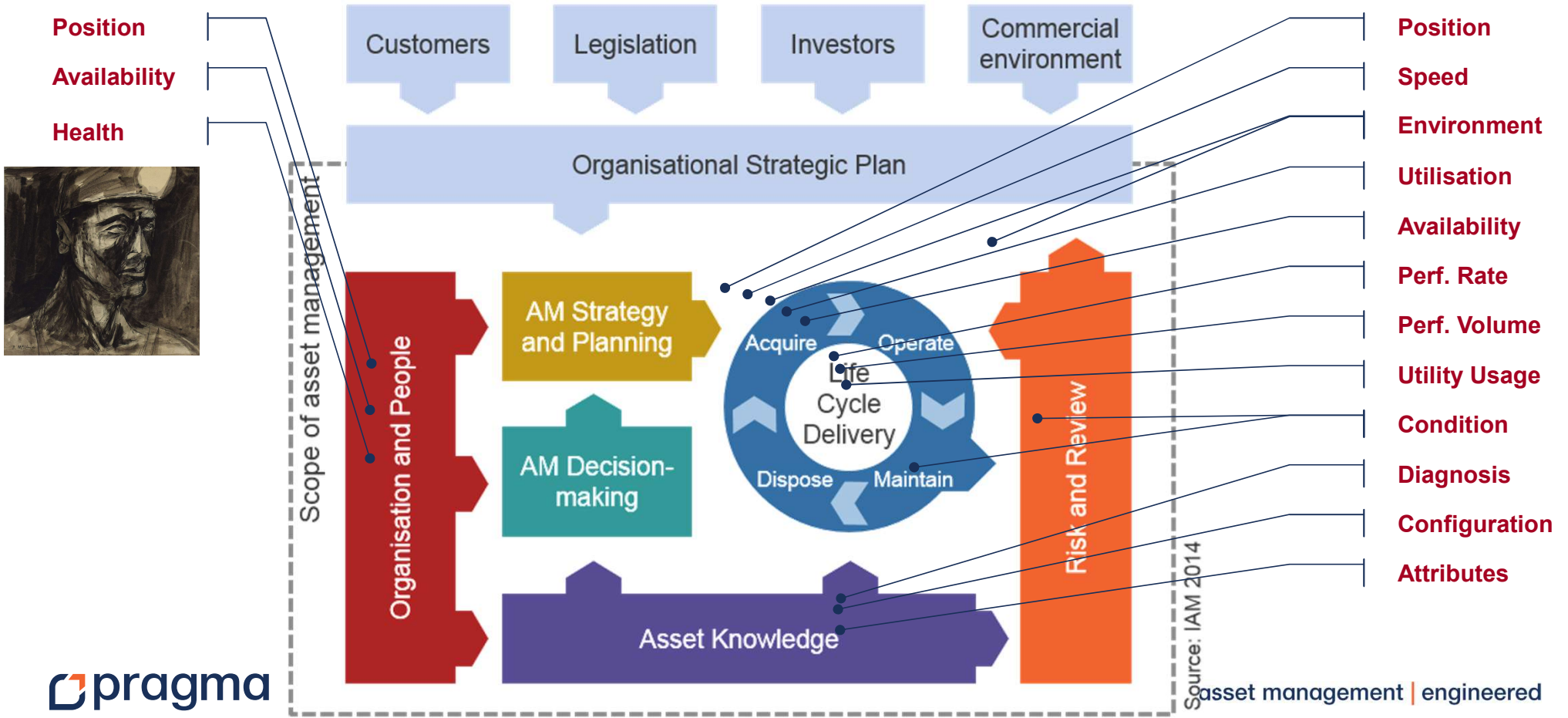
Benchmarking

Last 20-30 Assessment done in same industry



SMART ENTERPRISE ASSET MANAGEMENT CONNECTED

AMIP Seventeen KPA's aligned with ISO 55000 and the GFMAM's 39 Subjects



Health Care

Enterprise Asset Management Road Map



Start your journey here

Standards



NATIONAL HEALTH ACT, 2003 (ACT NO. 61 OF 2003)

CHAPTER 8 FACILITIES AND INFRASTRUCTURE

39. Definitions applicable to this Chapter
40. Management of buildings and grounds
41. Building engineering services
42. Communication systems
43. Security services
44. General waste management
45. Linen services
46. Food services

Supporting and enablement Standards;

- ISO 55000 (Asset Management)
- ISO 50000 (Energy Management)
- ISO 9000 (Quality Management)
- ISO14000 (Environmental Management)
- ISO 31000 (Risk Management)
- ISO 45000 (Occupational health and safety management systems) & OHSAS 18000
- ISO 41000 (Facilities Management)
- ISO/IEC 80601 Medical electrical equipment
- IEC/TR 80002 Medical device software



Characteristics of current buildings in the Public sector



Versus



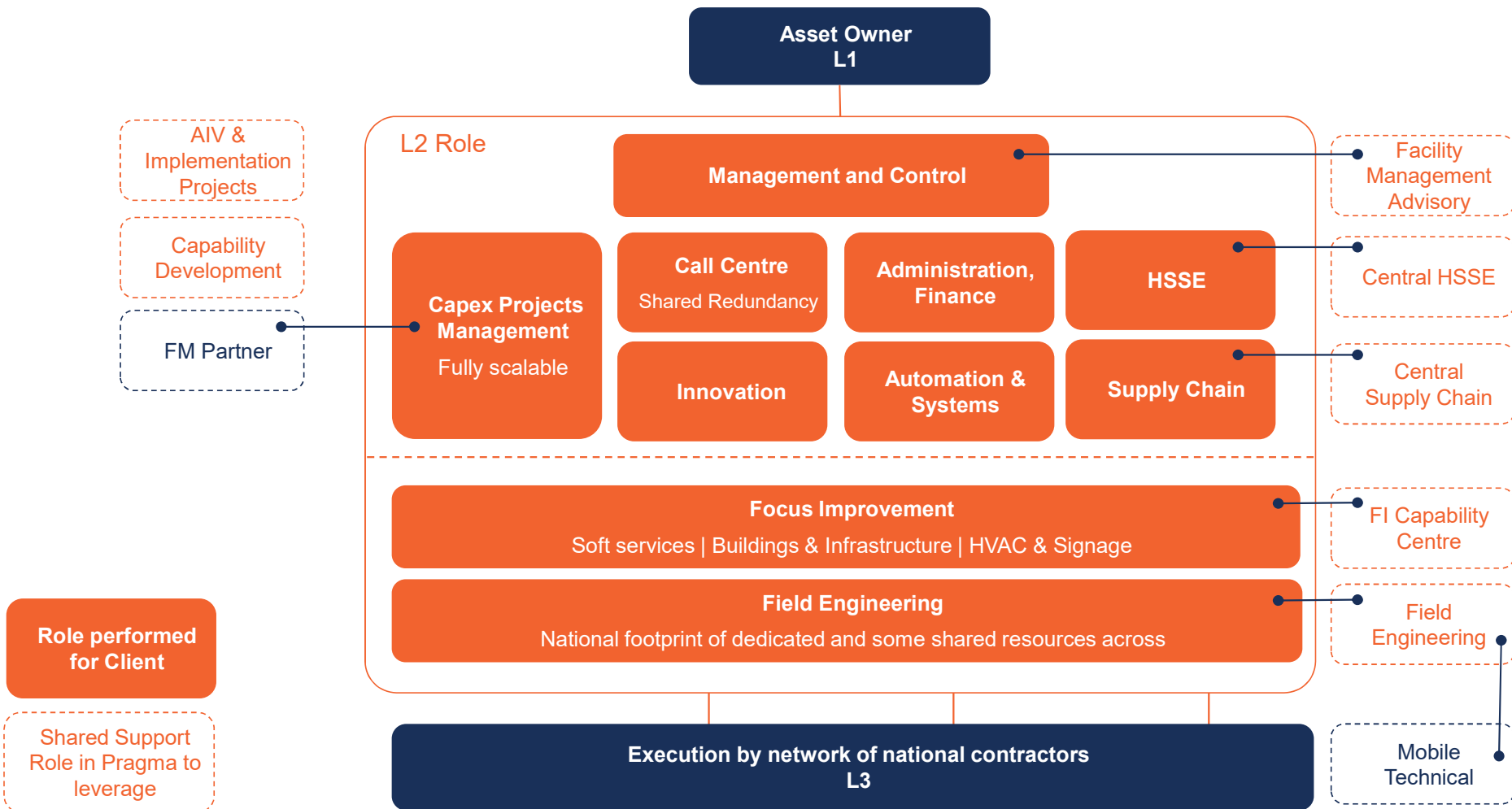
Key Focus Areas



Where to Start??

- Maturity Assessment;
- Road Map and Strategy;
- Structure for Strategy;
- Technology and Systems;
- Internet of Things and Innovations

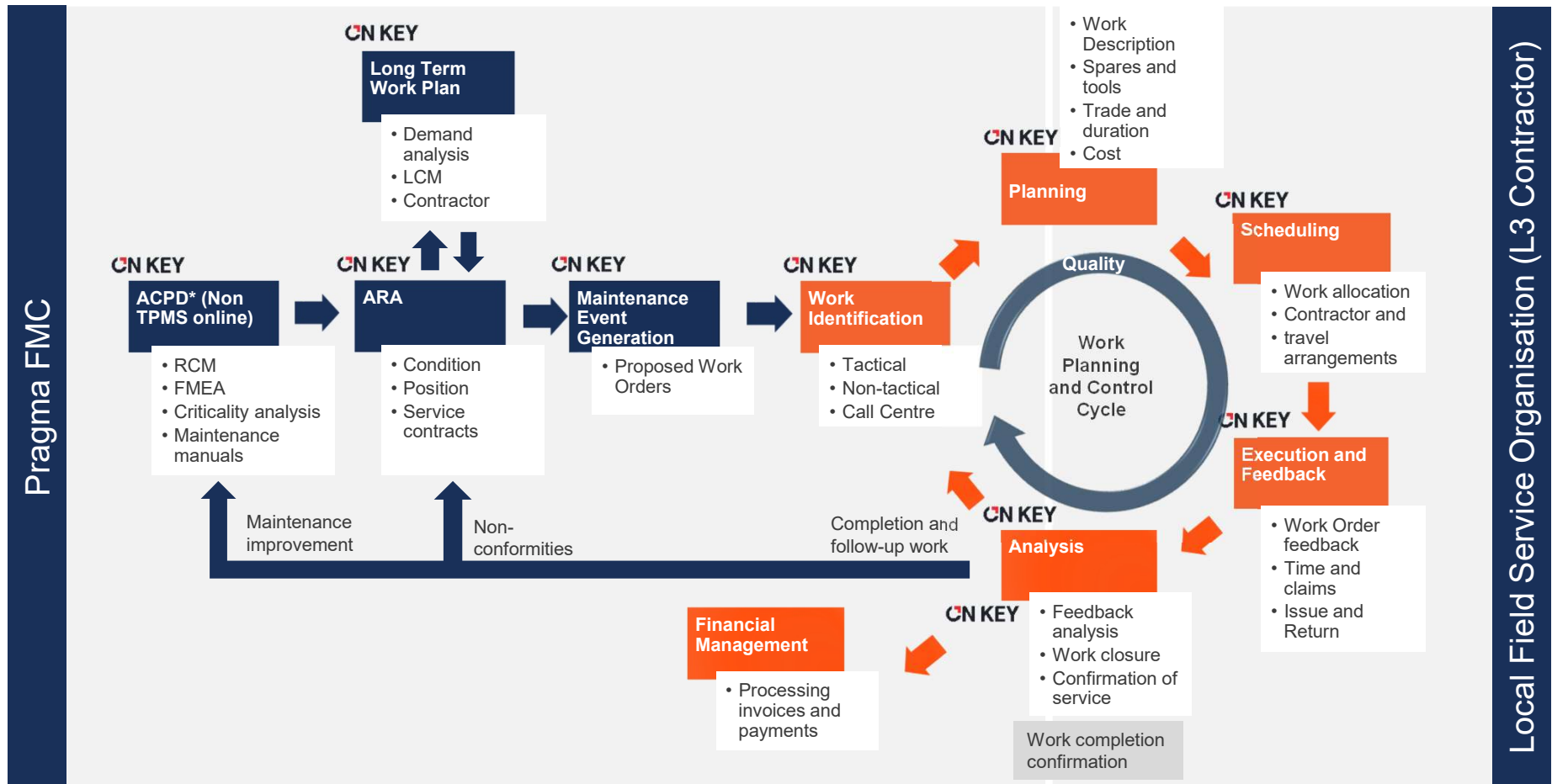
Roles of integrated FMC (Facility Management Centre) service



Pragma FMC | Our core process to manage Maintenance and Asset Care



Work Planning and Control Process for FMC and Integrated Facilities & Asset Management System



Shared resources Application (Example) Outsourced, Co-sourced OR PPP's

2/10

Shared FMC Management

1/5

2/10

1/5

Centralised HSSE Compliance & Assurance

- Comply with client's specifications
- If no system Pragma will provide of Passport (induction – duty to inform) and PTW system
- HSSE Compliance & Assurance

Shared Supply Chain Coordination

- Accreditation of L3 Contractors
- Contractor Management and Development

Shared Field Engineering

- Routine inspection
- Contractor Over Inspection & Technical Assurance
- Fault investigation

Shared 24h Call Centre

1/5

Shared Client Service Representative

2/5

Planning and Scheduling administrator

- 24h support center
- Scheduling of preventive maintenance
- Allocation of calls per SLA
- Administration and Payment processing

HSSE | Passport, PTW & HSSE Logger

- Pragma has developed a Retail & Commercial Passport system for all its Retail & Commercial FMC Clients, managed by the Pragma Academy through a dedicated Learning Management System (LMS) as e-learning
- PTW training is offered as Blended Learning, with provision for any Company specific templates to be completed
- All L3 Contractors partaking in logging of Near-Misses and Potential Incidents and Incidence through the Pragma HSSE Logger App

PERMIT TO WORK E-LEARNING

PTW | Documents
Menu | Resources | Help

WCF Scenario Question 1

This job is a risk activity. Click on the correct area in the image below.

Permit To Work System: Work Clearance Form

General Information

Date:
Person undertaking the work:
Job/Work Order Number:
Company:
Site Address:
Minimum level of PPE to be worn/used at all times. Tick for confirmation.

Tick the applicable Sasol Life Saving Behaviours for this activity

Work to be done:

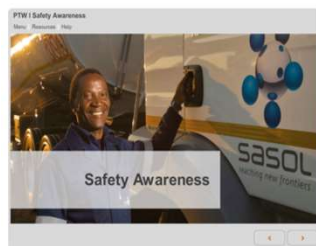
High Risk Activity (Permit + Job Hazard Analysis) Medium Risk Activity (Job Hazard Analysis) Other

Consult "Appendix 2: Retail Permit to Work Activity Table" or your supervisor for more information.

Permit No.: JHA Reference No.: JHA Review No.:

1st Blended Learning Course 28-02-18

SUBMIT



PTW | Safety Awareness

What are Sasol's Life-Saving Behaviours?

Drag and drop the icons onto the correct description on the right.

Plan to think, Lifting equipment, Ignite sources

Wear and use PPE, Confined space entry, People a danger to themselves and others

Working at height, Management of change, Excavation

SUBMIT

In use by Sasol-Pragma Team Launched Jan.18 for L3s

pragma
HSSE Logger

Quick, easy reporting of incidents, near misses and potential incidents

Start Reporting

Incident
An event that has either caused harm or loss or that has the potential to cause harm or loss.

Example
Harm (person) / Damage/loss (asset) sustained from:
• Breaking your leg from falling from a ladder

Potential Incident
The possibility of an event but nothing actually happened.

Example
NO harm (person) / NO damage/loss (asset) sustained from:
• If a worker drops a wrench from an upper deck and it hits the floor three strokes below but it's not in his way, then a near miss has taken place. If the

Near Miss
An accident that did not result in an actual loss but that has the potential to do so.

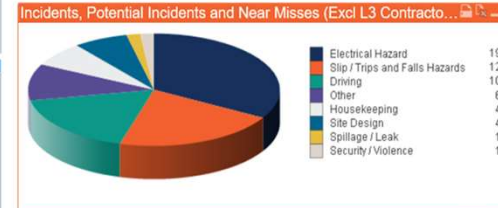
Example
NO harm (person) / NO damage/loss (asset) sustained from:
• An object is dropped from a crane but no one is hurt
• Lifting heavy objects incorrectly but no injury sustained
• A pressure relief releasing a system's pressure, preventing damage

Log Near Miss



Incidents Per Company (Excl L3 Contractors)

Business Area	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
ACC@Client 3	12	14	14	17	0	0	0	0	0	0	0	0	57



Incidents, Potential Incidents and Near Misses (Excl L3 Contractors)

Business Area	Incident	Potential Incident	Near Miss	Total
ACC@Client 3	9	37	11	57

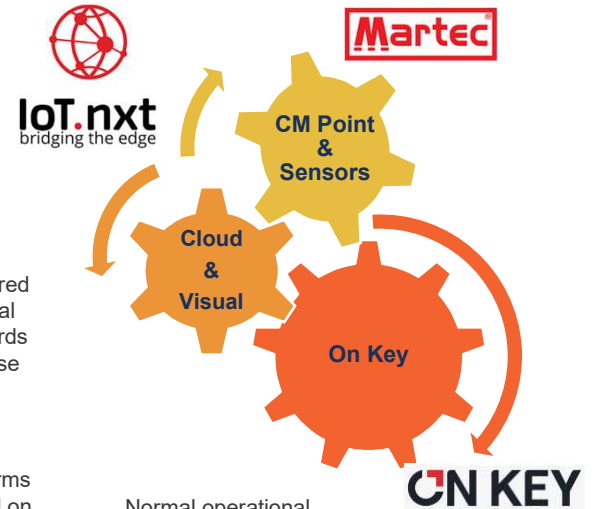
Pragma FMC | IoT as enabler for Remote Monitoring



Equipment on site generates information messages and alarms based on set parameters



Response to equipment loops back to asset for remote operations and data log (e.g. soft resets, test sequence initiation)



1

Start

2

Information is filtered on site and critical data is sent upwards into the cloud base

6

Finish

3

On Key receives alarms and measures based on pre-set parameters and required Work Orders are generated

4

Normal operational process follows except if remote diagnostics are required

Finish

5

If not resolved within normal operations



Dell 3001



Accessories

- Internal temperature and humidity
- Vibration
- Atmospheric Pressure
- General location - MAC AP tracking



Raptor

The Raptor will add to the endpoints on each machine with its internal native diagnostics.

ON KEY

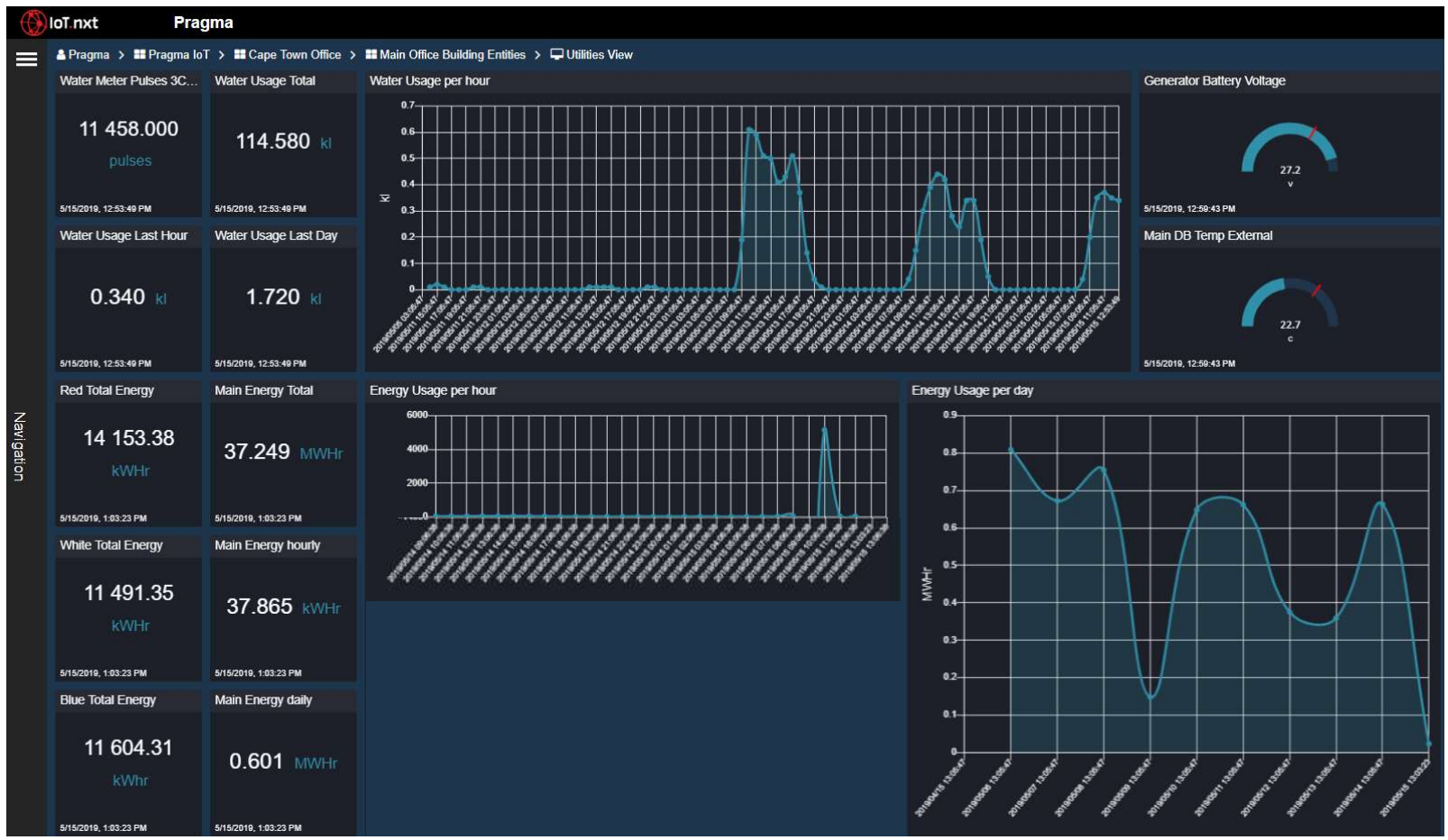
On Key Connect

Facilities Management (Facility use monitoring)



On Key Connect

Facilities Management (Water & Electricity Utility Monitoring)



On Key Connect

Condition Monitoring (Facility Electrical Infrastructure Monitoring: Transformer)

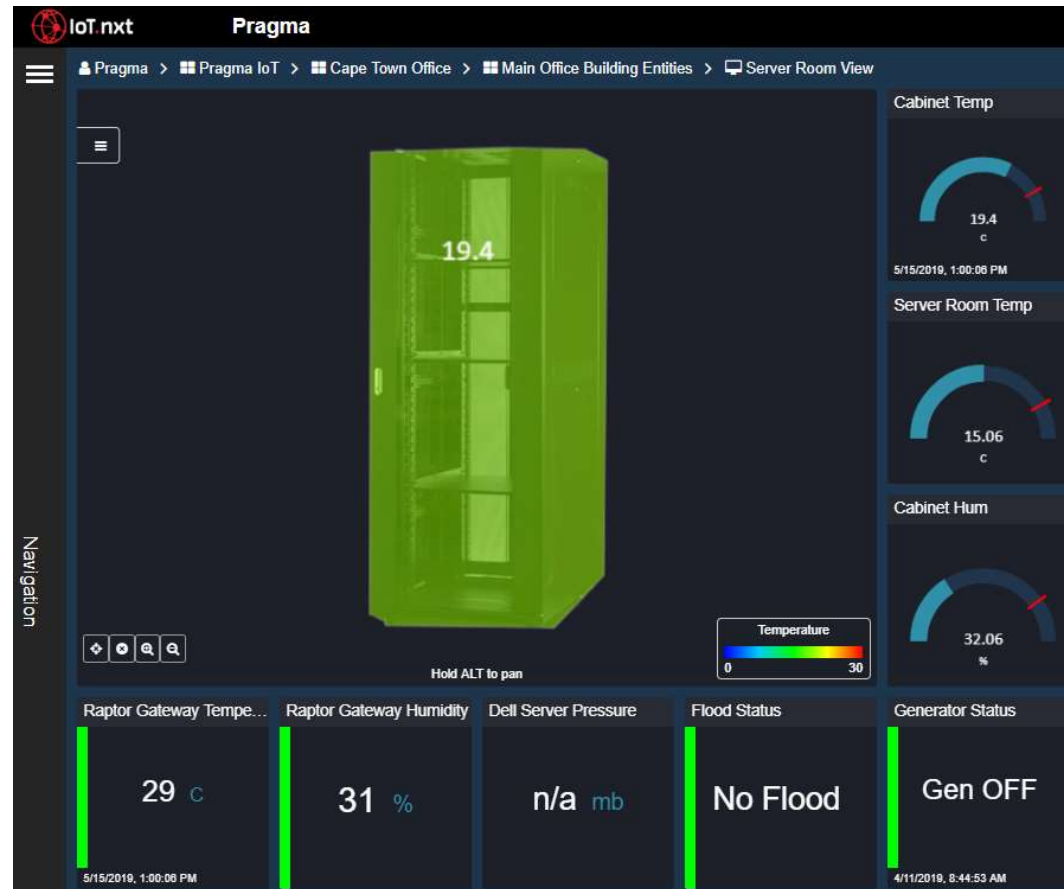


On Key Connect

Condition Monitoring (Facility Electrical Infrastructure Monitoring: Reactor)



On Key Connect Facilities Management (ICT infrastructure monitoring)



Asset Care Pack

Solid IP
Foundation



Documented Methodology

- Business processes
- Best practices
- Supporting material



Training Material and Enablement

- Enablement training material equips staff
- Attend Accredited training courses



Methodology and Tools Application

- Tools developed in support of methodology



Research and Development

- Academic workgroups
- Benchmarking
- Operational feedback
- Enhancements

Summary



Where to Start??

- Maturity Assessment;
- Road Map and Strategy;
- Budget correctly as per strategy;
- Complying with required standards;
- Structure for Strategy (Consider service partners)
- Technology and Systems;
- Internet of Things and Innovations;



Thank you



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 pragma

