



Long-term grid planning is needed for the economic growth of India

Organizing Partner



Implemented by
giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



**DISTRIBUTION
UTILITY MEET
DUM2022**

MODEL ASSET MANAGEMENT GUIDELINES FOR INDIAN DISCOMs

Global Asset Management Experience

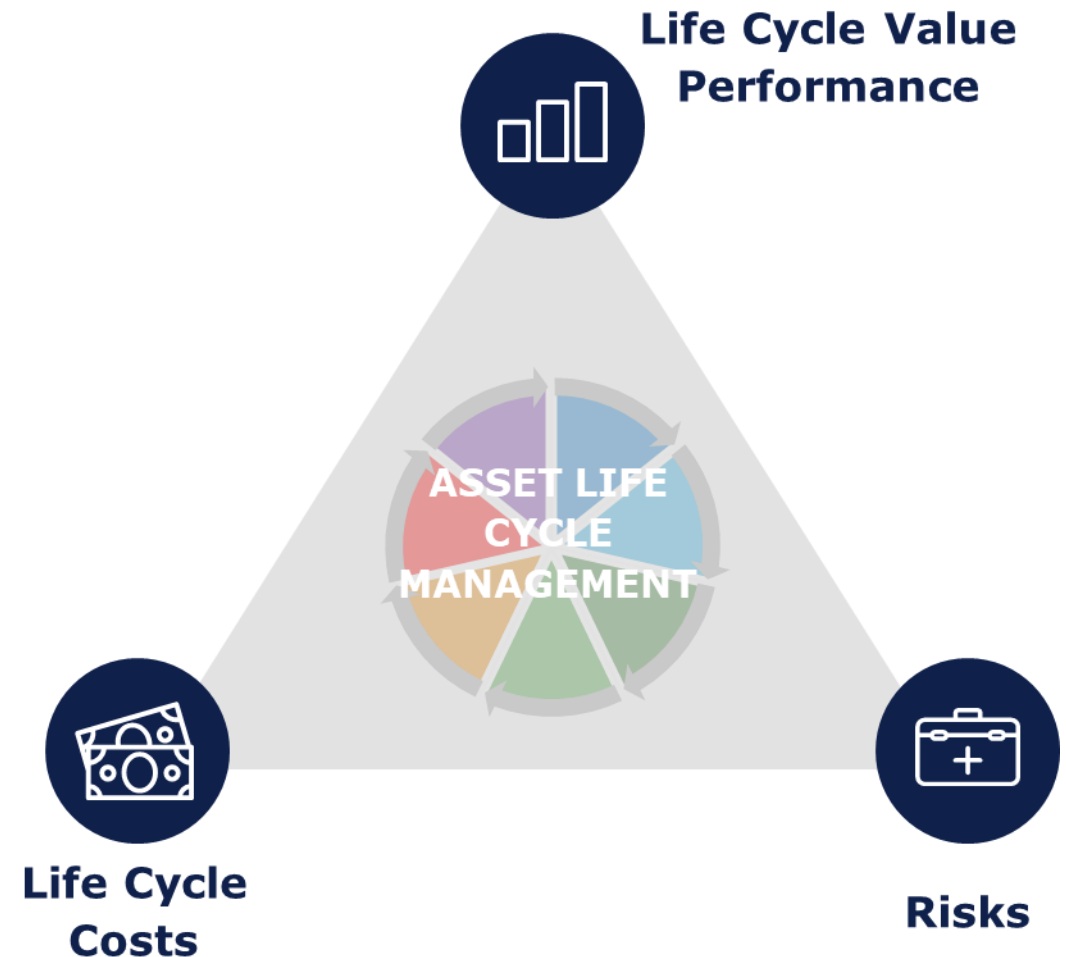
Presented By

Tiran Fernando

ISO55k TC251 WG6 | Manager Strategic Asset Management



1. Key drivers of implementing Asset Management in utilities globally
2. How is ISO55k series evolving
3. Examples of how utilities globally used Asset Management for grid planning



Asset Management vs Managing Assets



DISTRIBUTION
UTILITY MEET
DUM2022

ISGF
India Smart Grid Forum

Managing Assets

Systematic response to problems

Application of technical solutions

Pro-active planning of maintenance & replacement

Managing people, skills, and work management

Siloed approach



Asset Management

Comprehensive organisational strategy to meet top-line challenges and goals

Holistic approach to different funding streams. i.e. OPEX and CAPEX

Determine how assets **create optimal value** for the organisation

Balancing **risk, cost and performance** at grid level

Collaborative behaviours internally and with the supply chain

Asset Management' is
"the coordinated
activity of an
organization to realize
value from assets".



Global Drivers of Asset Management

High energy prices and energy security focus due to the war in Ukraine has a strong short-term impact, but will not slow the long-term transition

Despite urgency of action, global CO₂ emissions remain at record levels.

We forecast global warming at 2.2°C by 2100

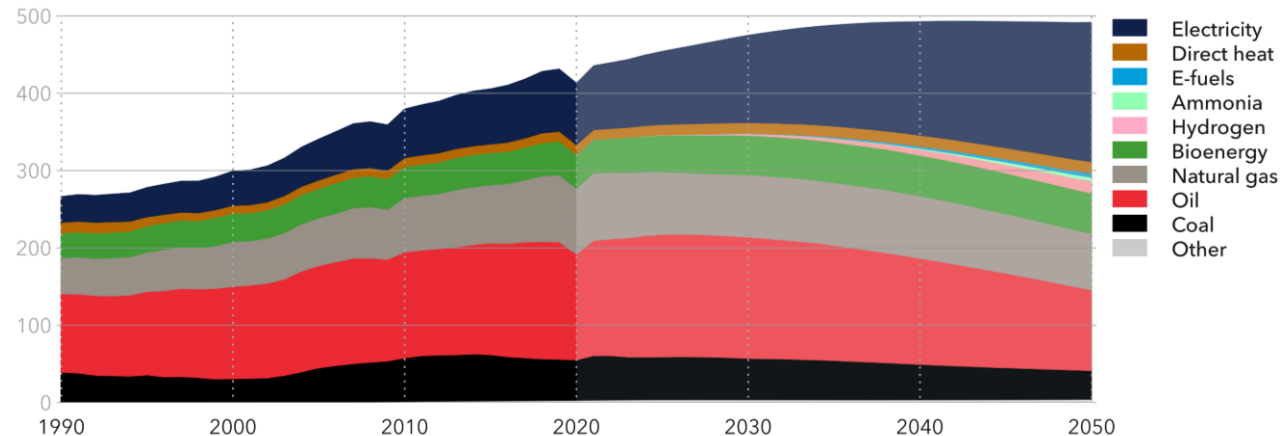
Electricity is growing and greening everywhere— reaching an 83% renewable share in 2050 electricity mix

Hydrogen reaches 5% of the 2050 global energy mix – a third of what it should be in a net zero future

The share of electricity in the final energy demand mix doubles

World final energy demand by carrier

Units: EJ/yr



- Global electricity share doubles from 19% to 36% in 2050
- Variable renewables come to dominate the power mix - solar PV and wind with a 69% combined share in 2050
- Grid infrastructure needs significant improvements - with storage, connectivity and demand-response key to integrate variable renewables

The ISO 55k TC 251 has a global gathering

6

published ISO
standards *

under the direct responsibility
of ISO/TC 251

5

ISO standards under
development *

under the direct responsibility
of ISO/TC 251

35

Participating members

- Canada
- Australia
- Netherlands
- Germany
- United Kingdom
- Norway

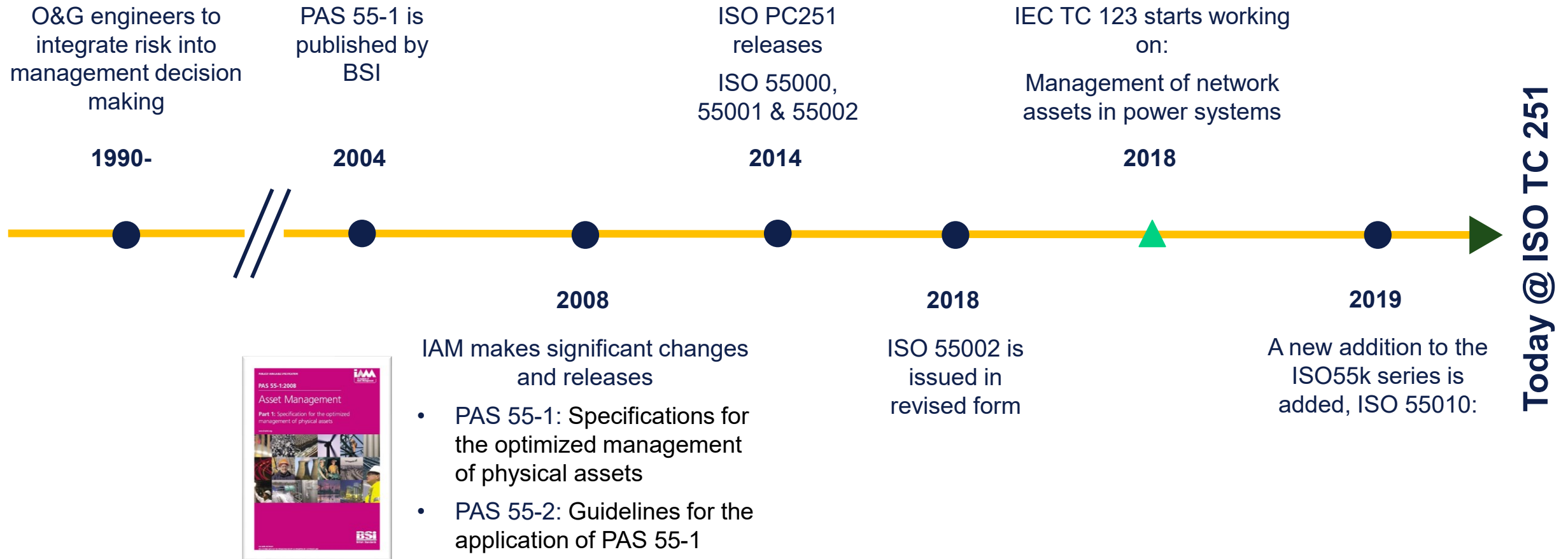
21

Observing members

- France
- Switzerland
- United States of America
- And more!

* Number includes updates

The Journey of ISO 55k series and its relation to IEC

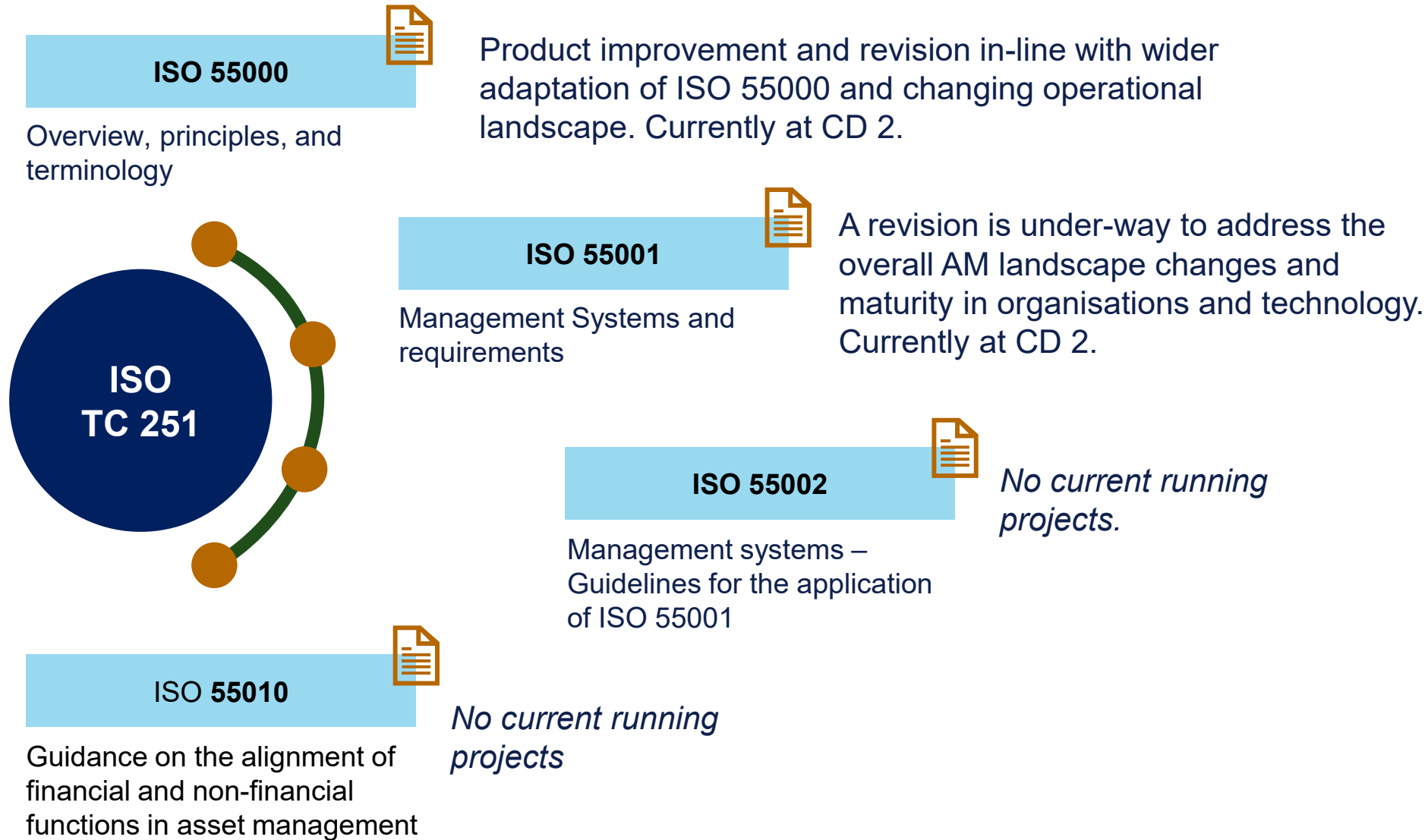


The ISO 55k details and what is to be expected



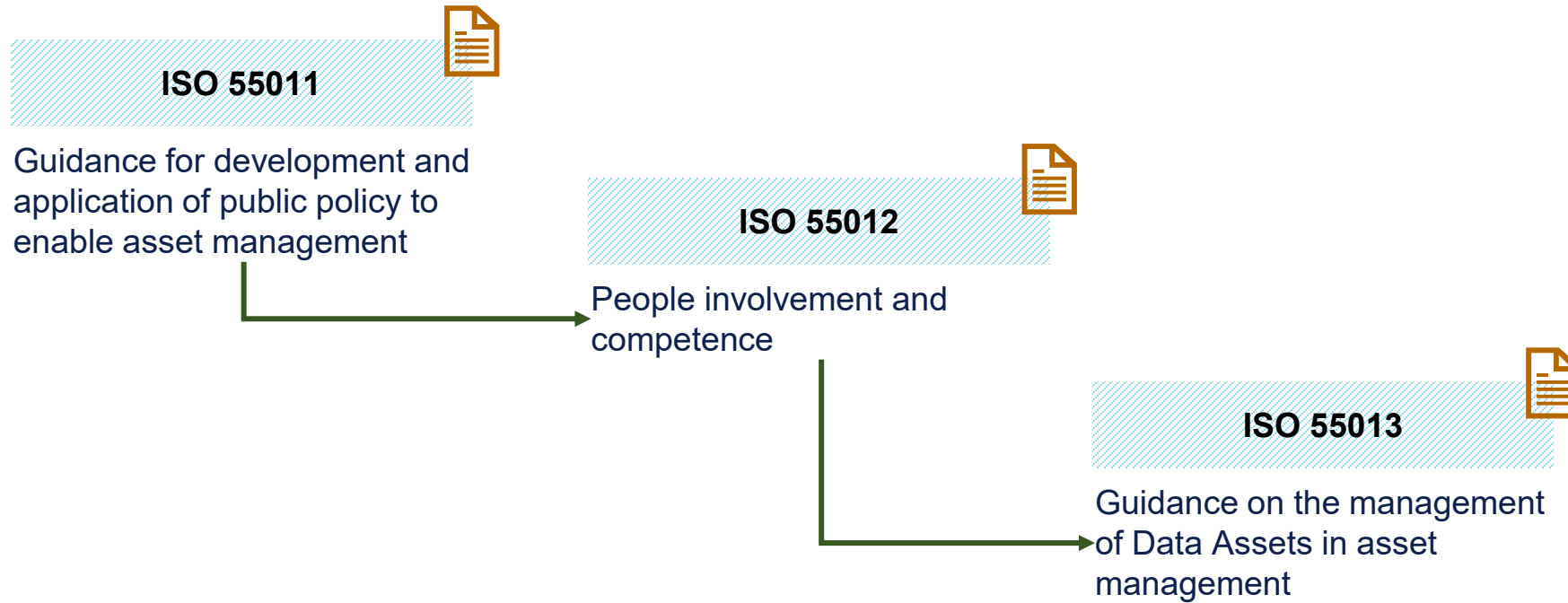
DISTRIBUTION
UTILITY MEET
DUM2022

ISGF
India Smart Grid Forum



Further developments within ISO TC 251

In-line with the adaptation of ISO 55k for various sectors including government, 3 new projects have been erected to support the continuous development and maturity in ISO 55k



TC 251 WG 3 is specifically focused on communication of Asset Management

What Questions are Asset Managers asking?



Who knows the condition of
my
old assets?



What parts of my
system is at risk?

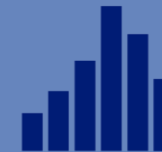


How to minimize unplanned
downtime?



How and when to use limited
resources and budget?

***Why to do *what*
intervention on *which*
assets and *when*?***



Do we face a replacement
wave?
If so, when?



What asset data do
we need to gather?
Why?



How do we make consistent
decisions?



Do we have sufficient
manpower, now and
in the future?



Where do we need
to focus, with
thousands of assets?



How can asset data support
our
decision-making?

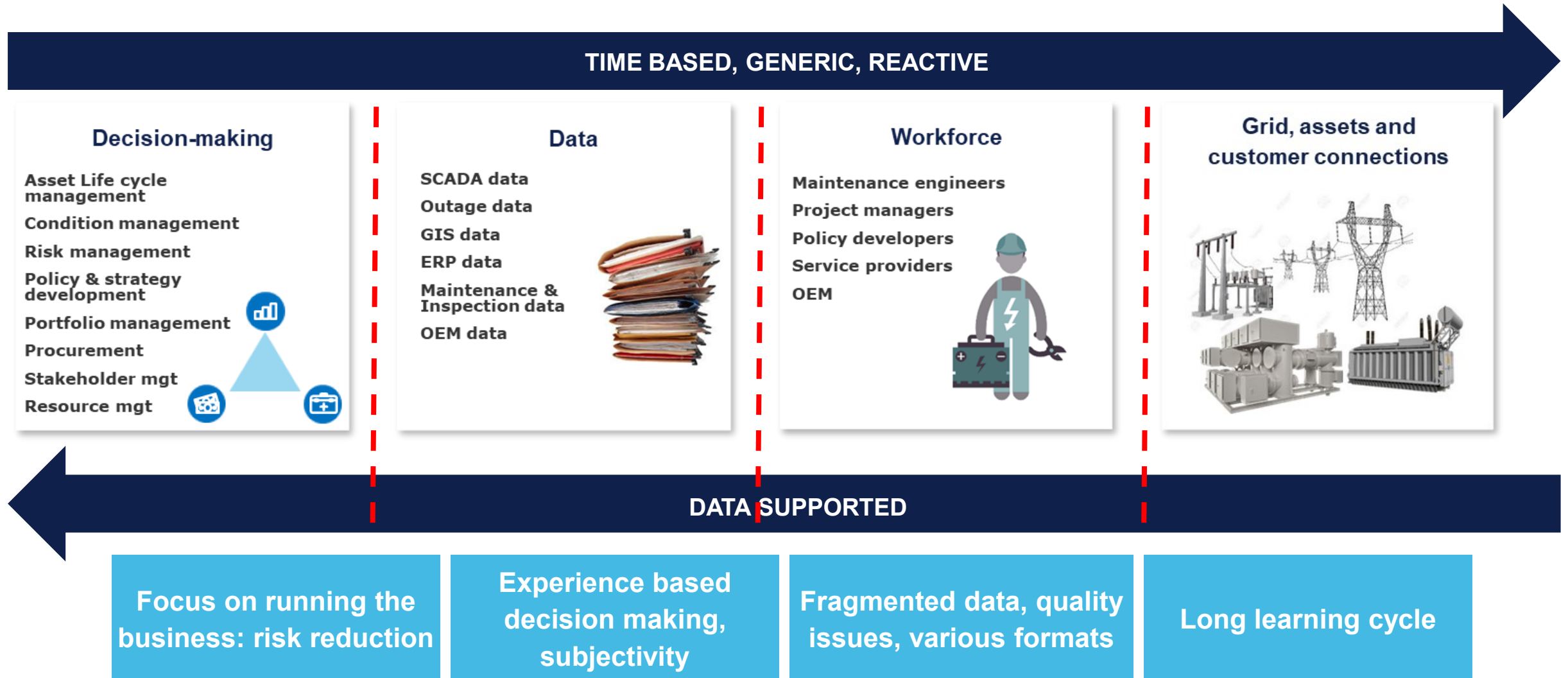
The basis of Asset Management is often “issue-driven”

Data-based where possible, often time-based and reactive



DISTRIBUTION
UTILITY MEET
DUM2022

ISGF
India Smart Grid Forum



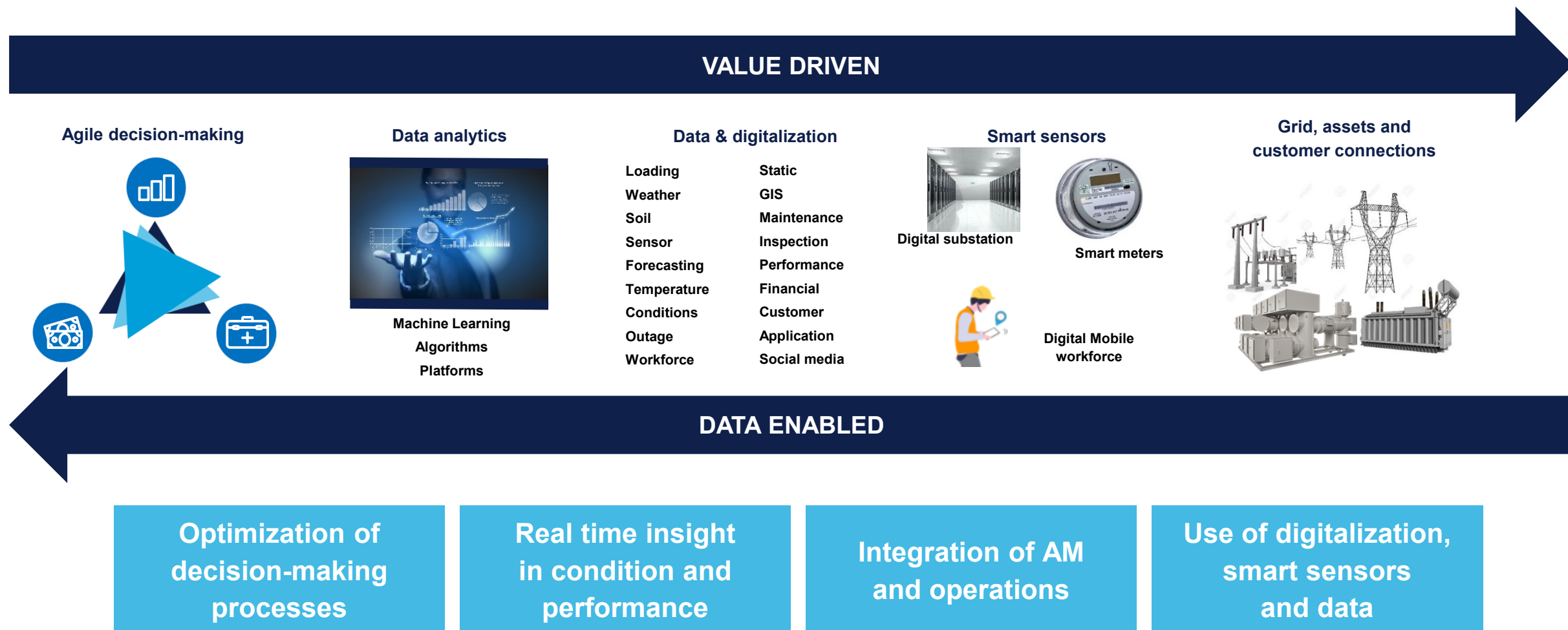
Advanced Asset Management moves towards 'value driven'



DISTRIBUTION
UTILITY MEET
DUM2022



Data enabled, making use of monitoring, digitization and data analytics



Adopting Asset Management
to support grid planning has
supported utilities globally.
We would like to hear your
thoughts and views.