KiGG

Focused Quality Solutions

A BRITISH COMPANY WITH SUBSIDIARY IN INDIA

ISO – 9001 -2015
ISO – 14001
CMMI 5
ISO 27001

AI BASED TESTING
FOR
REVENUE PROTECTION FOR UTILITIS

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(KIGG Group - UK)

Who are we?

- KIGG is a leading British Technology House with six affiliate companies around the world AND with setting up total 15 manufacturing units around world.

- Working in Power and Energy sector for more than 2 decades

- More than 2000 Testing equipments are in operation around the world.

- First Company in the world to use I.O.T. & Big data Analytics in T&M

- Technology provider for smart meters, DTMU, FPI, RTU(Components of smart grid).

India – Activities and plans

1

Test & Measurement

- Current Business
- OPEX model
- AI based proactive testing solutions
- Tesing for Electricity meters, Gas meters, Water meters.

2

Smart Meters

- World wide expirience
- Technology provider

3

Testing Services & Platform

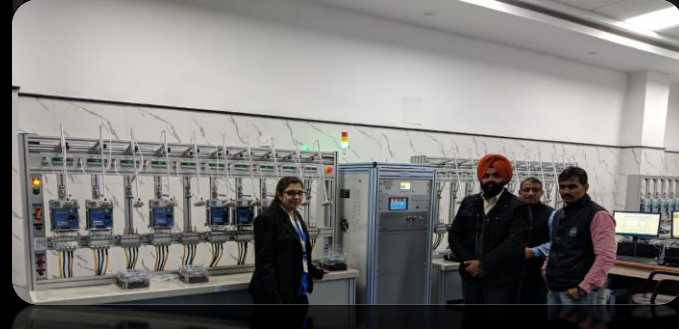- Currently started
- Plan to Create a platform for T&M

4

NABL Labs & Training ,CoE

- 25 NABL labs all over India for site, Van based testing and lab testing
- Smart grid training courses in consortium with educational Institutes

India - Projects

- Have a major role in setting up meter factories in India with known brand such as Reliance, Emco, Genus, Anchor etc.

- First truly smart meter technology & production equipment supplied to CMS Computers.

- First smart meter test bench given to Prestigious organization Tata Power in India.

- Executed India's largest order of ref. Standard meters with IoT for MSEDCL

Current Scenario of testing trends (India)

For electrical utilities

- Cost related to testing :- 20,000 Cr/year
  (This includes equipment/systems/manpower/maintance etc)

- Cost (loss of revenue) because of system or tampering could be another 30 – 40,000 Cr per year.
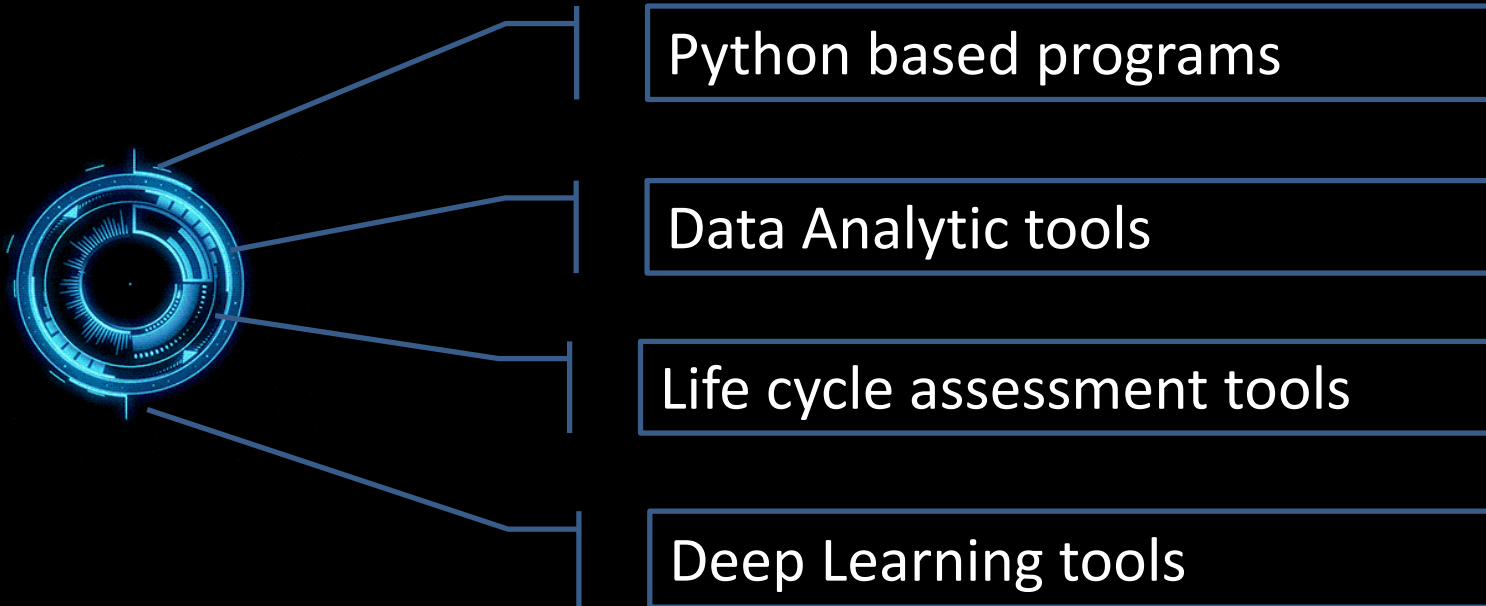
AI based Testing-Smart Testing

- Why it is required?
    1. Fail-proof operation
    2. Testing equipment/systems are capital intensive
    3. Cost of testing services is also very high
       (e.g. Simple meter cost – 1000
              Testing cost per year Rs 300 – 400
              Life of meter – 5 years
              Testing charges – Rs 1500 – 2000
       {more than the meter cost}
    4. Limited Funds :- Priority to Infra projects
    5. Required skilled manpower for testing as well as interpretation of results.
    6. Need to maintain the equipment/ calibrate it periodically.
    7. Mandatory requirements

Smart Testing

- What is it?
  AI based testing / Smart testing –

    - boundary value analysis (edge cases),
    - pattern recognition ,
    - determine code danger areas
    - Ways to avoid the danger
- Types
    - Expert System Techniques.
    - Artificial Neural Networks.
    - Fuzzy Logic Systems

KIGG - AI based testing

Python based programs

Data Analytic tools

Life cycle assessment tools

Deep Learning tools

Smart Testing

- Pros

  AI based testing / Smart testing –
  - o First, Reduction in human error
  - o Safety of human labour ,
  - o Repetition
  - o Speed of decision making
  - o Availability

- Cons
  - o The Unemployment
  - o Propagation of laziness
  - o Lack of emotional intelligence
  - o Cost
  - o Time of implementation (Lack of perfect programs)

Smart Testing And Proactive Testing

Billing/Assets
BIG data Analytics

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THANK YOU