Condition Base Maintenance

Automating the maintenance of today
for a better tomorrow!

Healthcare Edition

Goal and Objective

To provide our patients with the best care possible by implementing a condition base maintenance (CBM)

- Reduce maintenance cost
- Improve patient experience
- Increase system reliability
- Monitor asset conditions to ensure compliance
- Forecasting based on historical data generated

Agenda

- Review how we do maintenance today

- What are the opportunities available

- CBM models implementation

- Example CBM Application

Traditional Maintenance

- Over the years traditional maintenance models includes
  - Run to fail (Where a machine is operated till the end of it life)
  - Frequency based model (Regulatory assets)
    - Corrective Maintenance (Generated from frequency based maintenance)

Pros

- Frequency maintenance is scheduled maintenance
- Predictable seasonality's easily available
- Manpower and resource allocation made easier

Cons

- Costly maintenance program
- Unpredictable downtime
- Potential Regulatory Compliance Issues
- And much more…

Where do we go from here?

Frequency based maintenance

- Keeping this traditional model is not a bad idea, however it does not address the concern regarding system condition.

- We can always determine how much work will be scheduled each month

- Based on the failures we can see our failure rate per month

Condition based maintenance

- Generate maintenance when its really needed

- Monitor system condition 24/7/365 days per year

- Apply maintenance rules at any interval

- Combine maintenance rules with other tags to implement complex monitoring alforithms

- Email alert for scheduling, and service ticket generation

- Fully customizable to fit in facility needs

- Expandability based on the industry requirement

CBM Software Architecture
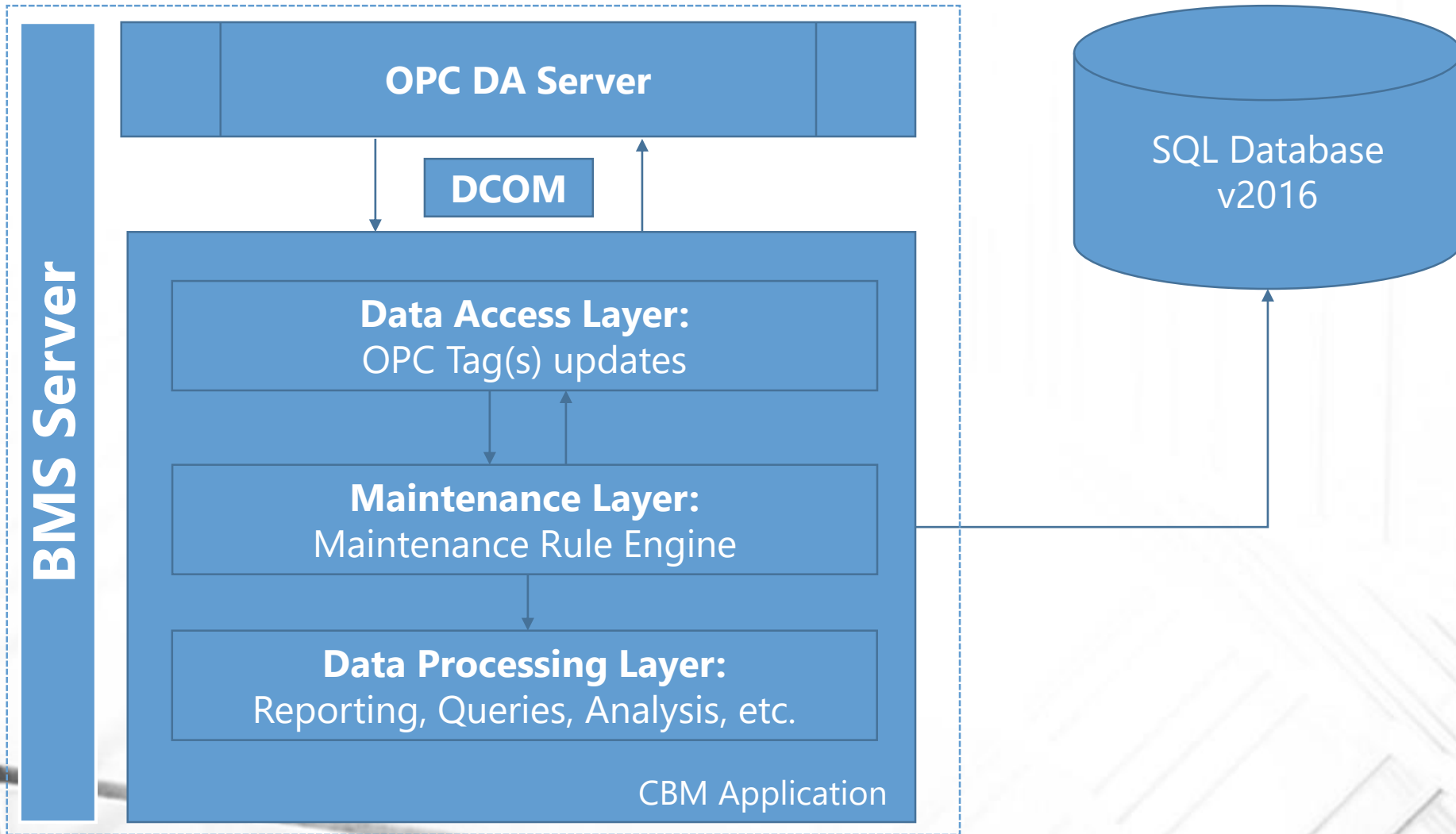
CBM Maintenance Logic
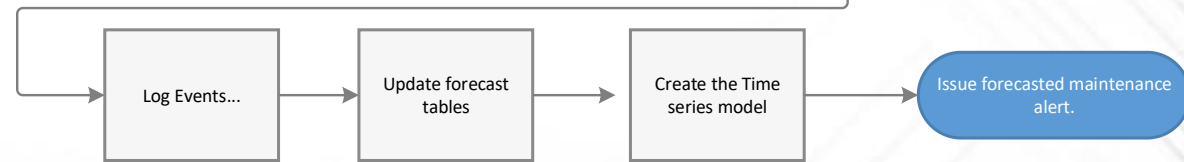
Reporting

Easily generate system condition report for analysis. Some of the available reports are below but not limited to.

1. Time to acknowledge
2. Asset maintenance event by quarter
3. Asset maintenance event in alarm
4. Asset meantime between failures
5. Asset condition trending
6. Asset runtime report
7. Etc.

Email Alerts

Notify staff in Realtime with email notification alert that provide description of the asset condition
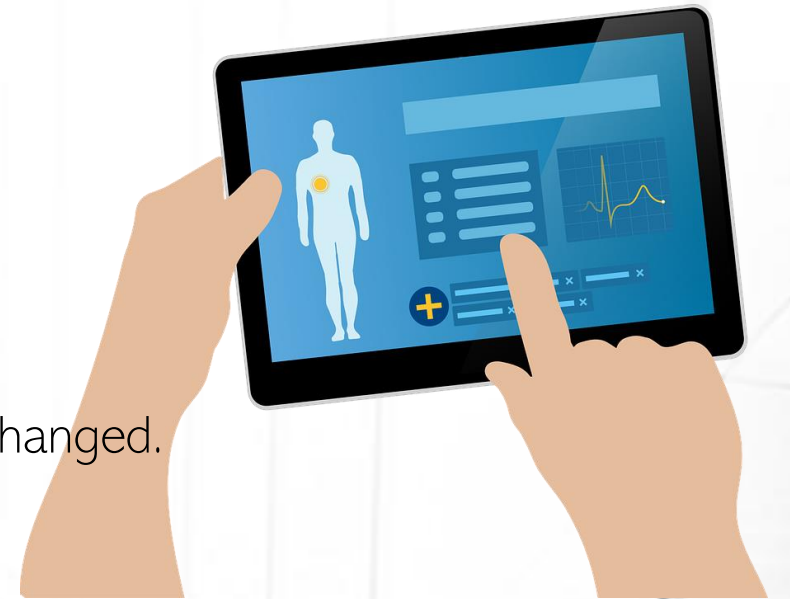
1. Better email description
2. Customizable templates
3. SMS capability
4. Actual point name rather than system name
5. Etc.

Where can we use this Technology?

This technology can be easily expanded to improve patient experience. As shown below but not limited to.

1. Allow patients to change their room temperature
2. Allow patients to request service
3. Allow patients to see the status of their request
4. Allow patients to know why the room temperature can't be changed.

Live Demo
CBM Maintenance Manager 1.0

- Let's run the demo!
- Web Interface
- Windows Config

Any questions?

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