Preparing for Your Kaizen Pilot

Your Kaizen pilot officially starts with the kick-off meeting. In order to hit the ground running, we request that the items below be completed before the project starts. Don't worry if you cannot obtain all the information requested, we can still start analyzing your building as soon as we receive data into Kaizen. However, the more information we have, the more accurate the analytics get!

☐ Trend logs have been created for all systems included in the pilot project. At a minimum, trend logs are created for monitoring all inputs, outputs, schedules and set points. Change of Value (COV) trend logs are preferred for binary points, and 5 minute polled trend logs are preferred for analog points. If controller memory is an issue, analog points can be logged at 15 minute intervals.

☐ The CopperCube is installed, configured, collecting and sending data to your building in Kaizen. Please contact our Customer Solutions department if you would like assistance. Recorded webinars on this topic are also available on our support site.

☐ All controls shop drawings, sequences of operations, and mechanical drawings have been provided. If there are multiple air handling systems, please indicate which terminal boxes are served by which air handler.

☐ Equipment Ratings form has been completed. Please list the rated HP and Phase/Voltage/Rated Amps for all equipment on site. This will help us create virtual meters for all equipment and help us establish an energy baseline for your building.

☐ Building details have been provided (occupancy, energy bills, and square footage).

☐ BAS remote access details have been provided.

If you have any questions regarding the above items, please do not hesitate to contact me directly. I look forward to working with your team to make this pilot a success!

Regards,

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Typical Kaizen Pilot Implementation Plan

CopperTree Analytics takes an easy-to-digest approach to Kaizen implementation. Our team starts by implementing components of Kaizen that establish performance baselines and realize immediate benefits in comfort and energy savings. Later phases focus on specific fault detection rules and in-depth analysis of sequences of operation. Throughout the duration of the pilot there will be plenty of dialogue to ensure that you understand the implementation and have opportunities to provide feedback.

Please note that this plan is a guideline and can be adjusted as per your specific project needs.

Phase	Description of Tasks
Kick-off Meeting	• Introductions and points of contact • Review scope of work • Review kick-off to do list • Review project time line • Discuss pain points/areas of focus • Determine process for implementing recommendations • Determine personnel that will require access to Kaizen software • Q&A

Phase 1: Establishing Baselines	• Create Systems
	• Add rules for virtual energy meters
	• Create Energy View
	• Validate Energy View configuration
	• Add KPI rules to the building in Kaizen
	    o Temperature, pressure, and flow for all plant, main air-handling units, and zone systems
	• Create Reports for:
	    o Top Level Energy Views
	    o Golden Standard Insights
	    o Infrastructure Insights
	    o Building Operator Reports for Outputs in Manual, Set Points in Hand
	    o Digest and Executive Charts and Reports for Performance KPIs
	• Validate Reports are complete and correct
	• Obtain a list of problem areas

Progress Meeting #1	• Review Phase 1 Implementation and Reports • Review recommended action items
Phase 2: Fault Detections and Diagnostics (Part 1)	• Add rules for hunting, cycling and runtime analysis • Create FDD Insight Reports • Validate Reports are complete and correct
Progress Meeting #2	• Review Phase 2 Implementation and Reports • Review impact of resolved action items from Phase 1 • Review any new recommended action items

Phase 3: Fault Detections and Diagnostics (Part 2)	• Add other FDD rules and Reports • Review FDD Insights and adjust parameters for site conditions to eliminate nuisance Insights
Progress Meeting #3	• Review Phase 3 Implementation and Reports • Review impact of resolved action items from Phase 2 • Review any new recommended action items
Phase 4: BAE Analysis	• Create custom rules • Monitor building for new Insights • Root cause analysis • ROI calculations
Progress Meeting #4	• Discuss locking in the Golden Standards • Review Phase 4 Implementation and Reports • Review impact of resolved action items from Phase 3 • Review any new recommended action items
Phase 5: Ongoing Monitoring	• Monitor building for new Insights • Root cause analysis • ROI calculations
Progress Meeting #5	• Review effects of resolved action items from Phase 4 • Review any new recommended action items • Discuss advanced training options
Phase 6: Ongoing Monitoring and Training	• Monitor building for new Insights • Advanced training (if in scope) • Discuss strategies and tips for integrating Kaizen into your current facilities management workflow: taking action, how to "close the loop" with Kaizen (acknowledging Insights, re-tuning rules as building operations improve)
Close-out Meeting	• Summarize results of resolved action items from all phases of the pilot • Review any new recommended action items

Kaizen Pilot Process

Pre-Pilot   **Pilot Phase**   **On-going Services**

Pilot Kickoff

Pilot Closeout

Continuous and consistent client engagement

Pre-Pilot
- Gather documents: shop drawings, sequences of operations, motor ratings, etc.
- Create all trend logs
- Install CopperCube and connect to Kaizen
- Establish process for implementing recommended action items found during the pilot

Pilot Phase
- Kaizen Implementation in three phases
- Root cause analysis by our application engineers
- Review findings and recommended actions
- Monthly progress meetings
- Basic training: acknowledging insights, understanding reports
- Client/Kaizen workflow integration

On-going Services
- Implementation of all systems in your building
- Implement other buildings in your portfolio
- Advanced training
- Feedback on your Implementation
- Managed services

← **6 months** →