CLAIMS

There is claimed:

1. A method for generating a key performance indicator (KPI) diagnostic rule in an industrial process, the method comprising:

determining a pool of available sensors based on equipment information about a plurality of sensors attached to an equipment in an industrial process;

determining a set of KPI required sensors for a target KPI, based on KPI rule configuration information;

comparing the pool of available sensors with the set of KPI required sensors to determine whether one or more sensors are able to provide KPI required parameters for the target KPI;

in response to determining that one or more sensors are able to provide the KPI required parameters, generating a KPI diagnostic rule for the target KPI based on the KPI required parameters from the one or more sensors and the KPI rule configuration information.

2. The method according to claim 1, further comprising:

calculating a KPI of the equipment using the generated KPI diagnostic rule and sensor data; and

comparing the calculated KPI with a preset threshold alert value.

3. The method according to claim 2, further comprising:

automatically diverting a flow path of the industrial process through another equipment in response to the calculated KPI exceeding the preset threshold alert value.

4. The method according to claim 1, further comprising:

mapping the one or more sensors to a parameter indicated by the KPI rule configuration information; and

determining the parameter as an operand in response to at least one of the one or more sensors matching the parameter.

5. The method according to claim 4, wherein, in response to the parameter not matching any of the one or more sensors, evaluating alternative sensors and alternative parameters with a different KPI rule.

6. The method according to claim 3, further comprising:

alerting a user if the calculated KPI exceeds the preset threshold alert value.

7. The method according to claim 1, wherein the equipment information comprises logical information regarding a hierarchical level of the equipment with respect to a plurality of equipment within the industrial process.

8. The method according to claim 2, further comprising:

automatically adjusting an input variable of the industrial process in response to the calculated KPI exceeding the preset threshold alert value in order to change the calculated KPI to within the threshold alert value.

9. A system for generating a key performance indicator (KPI) diagnostic rule in an industrial process, the system comprising:

a plurality of sensors attached to an equipment;

at least one non-transitory computer readable storage medium operable to store program code;

at least one processor operable to read said program code and operate as instructed by the program code, the program code comprising:

determine a pool of available sensors based on equipment information about a plurality of sensors attached to an equipment in an industrial process;

determine a set of KPI required sensors for a target KPI, based on KPI rule configuration information;

compare the pool of available sensors with the set of KPI required sensors to determine whether one or more sensors are able to provide KPI required parameters for the target KPI;

in response to determining that one or more sensors are able to provide the KPI required parameters, generate a KPI diagnostic rule for the target KPI based on the KPI required parameters from the one or more sensors and the KPI rule configuration information.

10. The system according to claim 9, the program code further comprising code to:

calculate a KPI of the equipment using the generated KPI diagnostic rule and sensor data; and

compare the calculated KPI with a threshold alert value.

11. The system according to claim 10, the program code further comprising code to:

automatically divert a flow path of the industrial process through another equipment in response to calculated KPI exceeding the preset threshold alert value.

12. The system according to claim 9, the program code further comprising code to:

map the one or more sensors to a parameter indicated by the KPI rule configuration information; and

determine the parameter as an operand in response to at least one of the one or more sensors matching the parameter.

13. The system according to claim 12, the program code further comprising code to:

in response to the parameter not matching any of the one or more sensors, evaluate alternative sensors and alternative parameters with a different KPI rule.

14. The system according to claim 11, the program code further comprising code to:

alert a user in response to the calculated KPI exceeding the preset threshold alert value.

15. The system according to claim 9, wherein the equipment information comprises logical information regarding a hierarchical level of the equipment with respect to a plurality of equipment within the industrial process.

16. The system according to claim 9, the program code further comprising code to:

automatically adjusting an input variable of the industrial process in response to the calculated KPI exceeding the threshold alert value to change the calculated KPI to within the threshold alert value.