

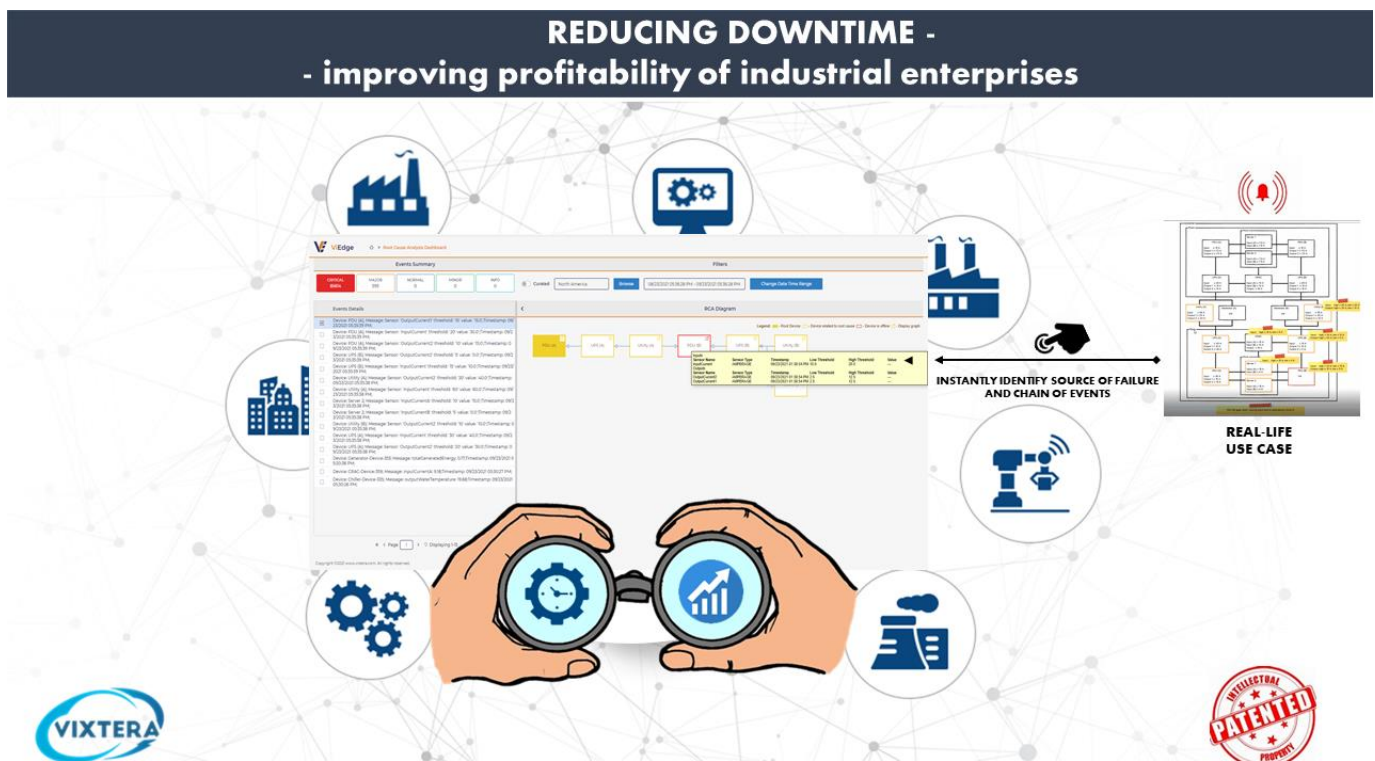
# VIXTERA TECHNOLOGY INNOVATION

## IMPROVING HIGH AVAILABILITY, UPTIME AND MAINTENANCE COST OF INDUSTRIAL ENTERPRISES

They say that maintenance is easily managed in a logbook. But, you're in no man's land when sudden failure has occurred overwhelming you with flood of alarms, and dragging you down with severe disruption of operation and services, and loss of profitability. The issue gets worse when system is connected. Thus, you won't be able to determine real cause of the problem unless you have means and capabilities to assess the logical context (a chain of events) in which that failure has occurred.

Vixtera developed an application and received a patent for a methodology helping to instantly identify a source of failure and a chain of events that's leading to a problem, setting out the opportunity for rapid detection and prevention of potential problems. The innovative algorithm takes holistic approach to gauge inputs and outputs of connected devices while using correlation-based analysis, rules and priorities to parse-out actionable interconnected events.

The breakthrough technique helps to prevent a problem in the first place by analyzing event data for abnormalities and alert the system about anomalous events and data patterns.

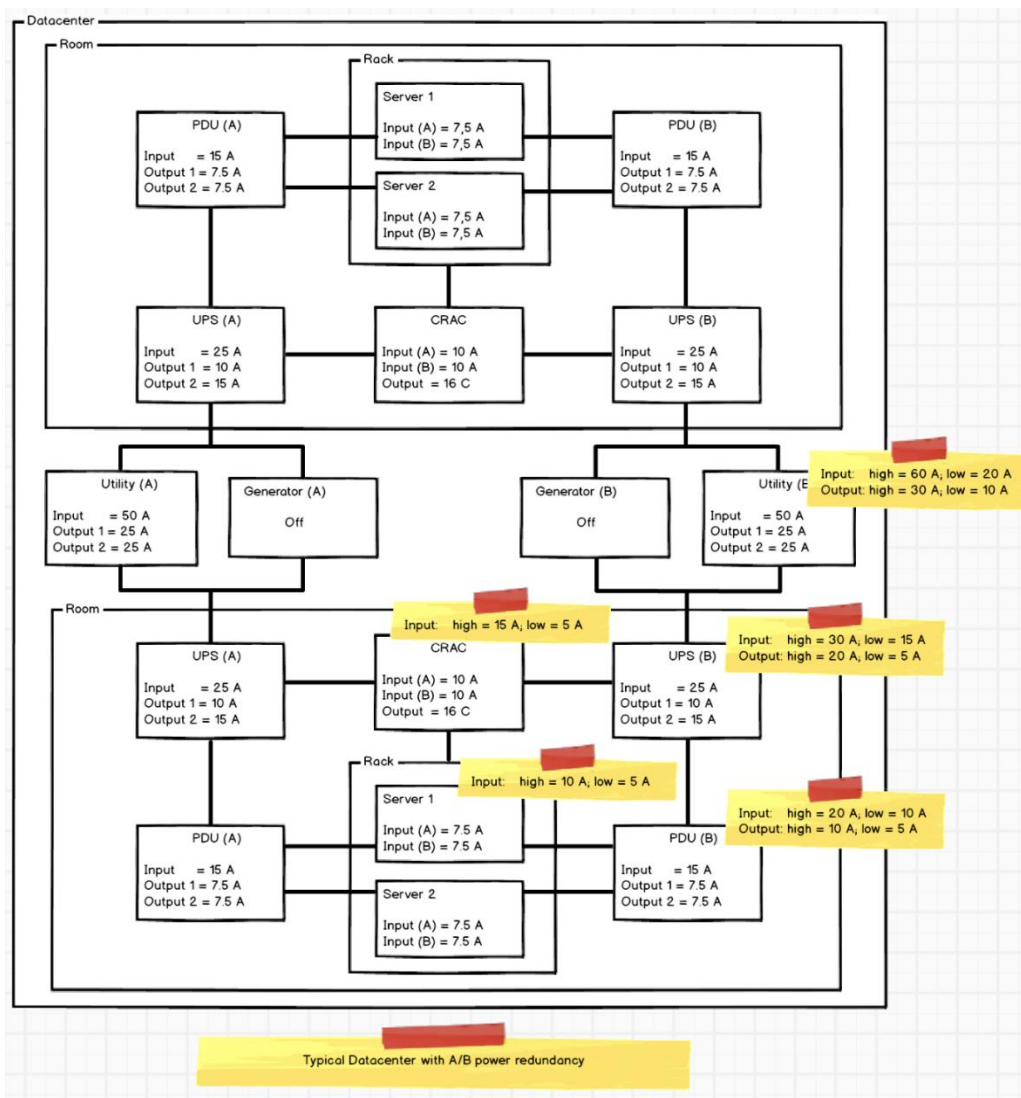


## VIXTERA TECHNOLOGY INNOVATION

According to Uptime Institute, power management and usage effectiveness (PUE) is widely used to define data center efficiency. Despite recent improvements, it does require new and innovative product and technological approaches.

Vixtera's patented algorithm and technique transforms the IIoT operation helping to instantly detect irregularities in a system of connected devices while pinpointing a source of failure in real time. Additionally, to alleviate the existing nuisance with AI/DL labeling, a machine-generated source of failure can be used as a reliable "etalon", a label, for accurate predictive analysis.

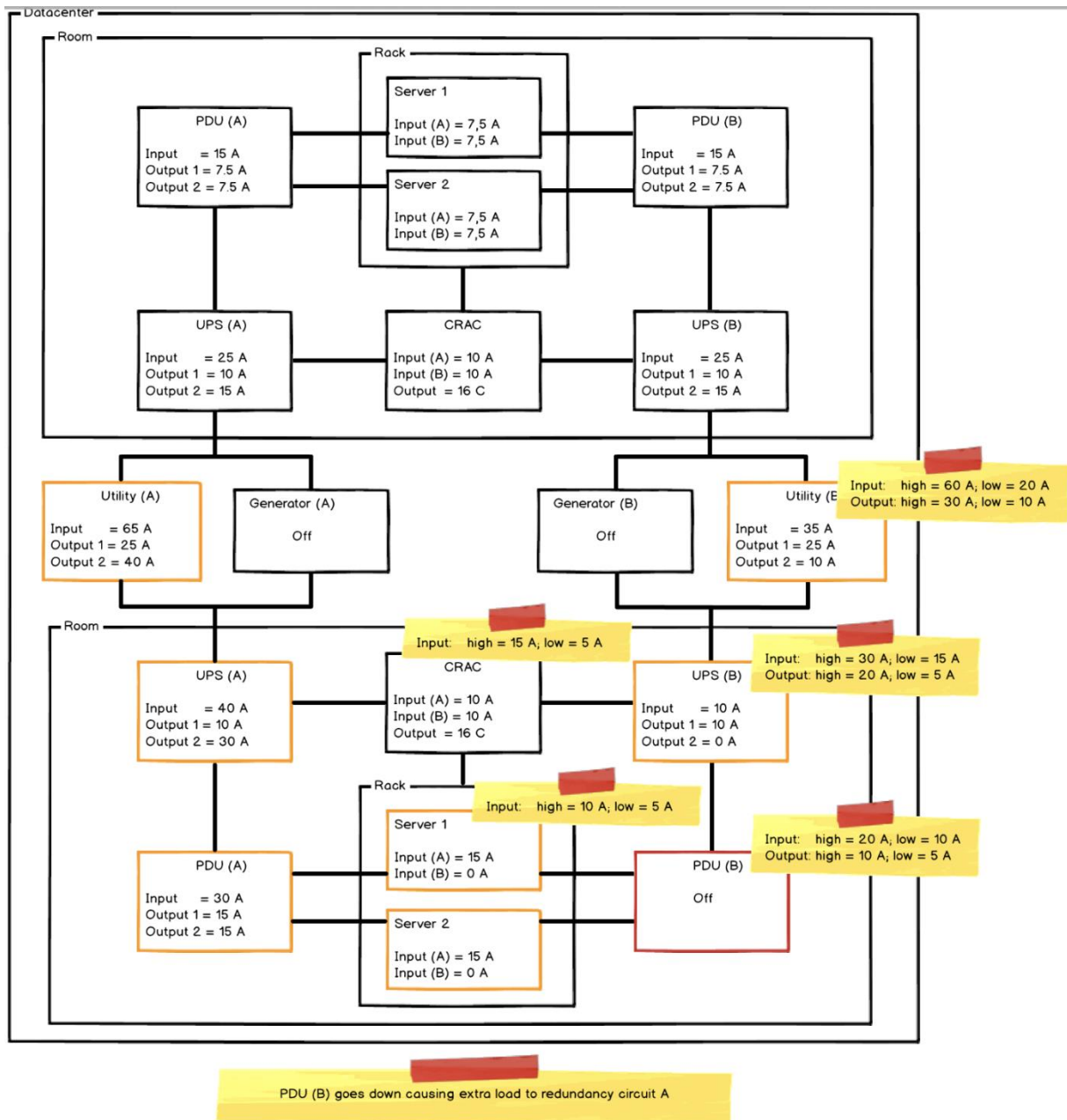
Considering that over 90% of unplanned downtime happens due to sudden asset failure, the aforementioned technological innovation offers industrial enterprises and manufacturers powerful tool improving high visibility, uptime and time to repair boosting operational maturity, efficiency and profitability.



**Diagram 1.**  
Power distribution layout across Data Center  
(Input/Output thresholds highlighted in yellow)

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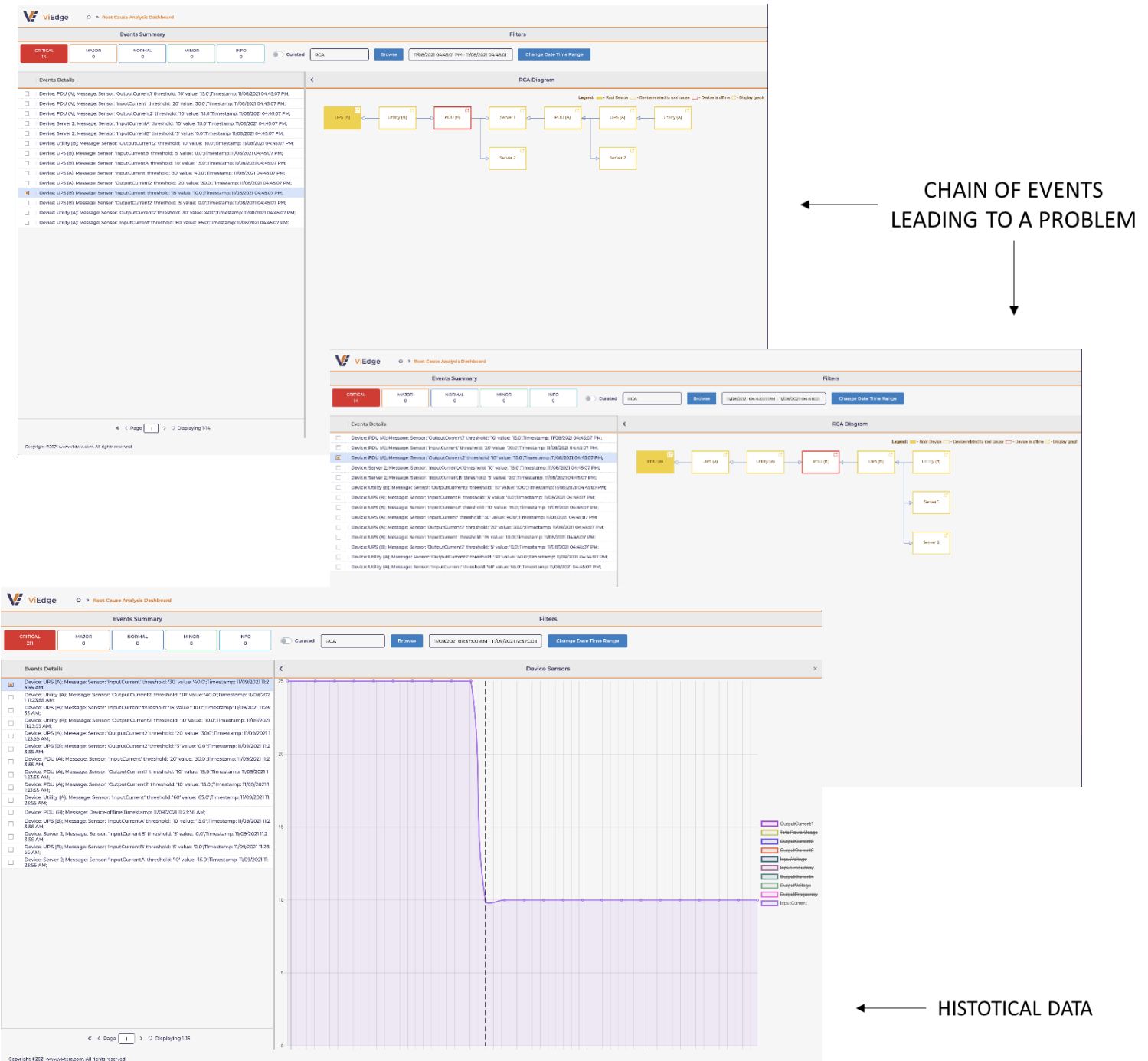
**Use Case #1:** Intermittent malfunctions of multiple devices, sudden failure of unknown device causes extra load to redundancy circuit A and flood of alerts that are overwhelming management system



**Diagram 2.**  
Source of failure, PDU B, highlighted in red  
Affected devices highlighted in yellow

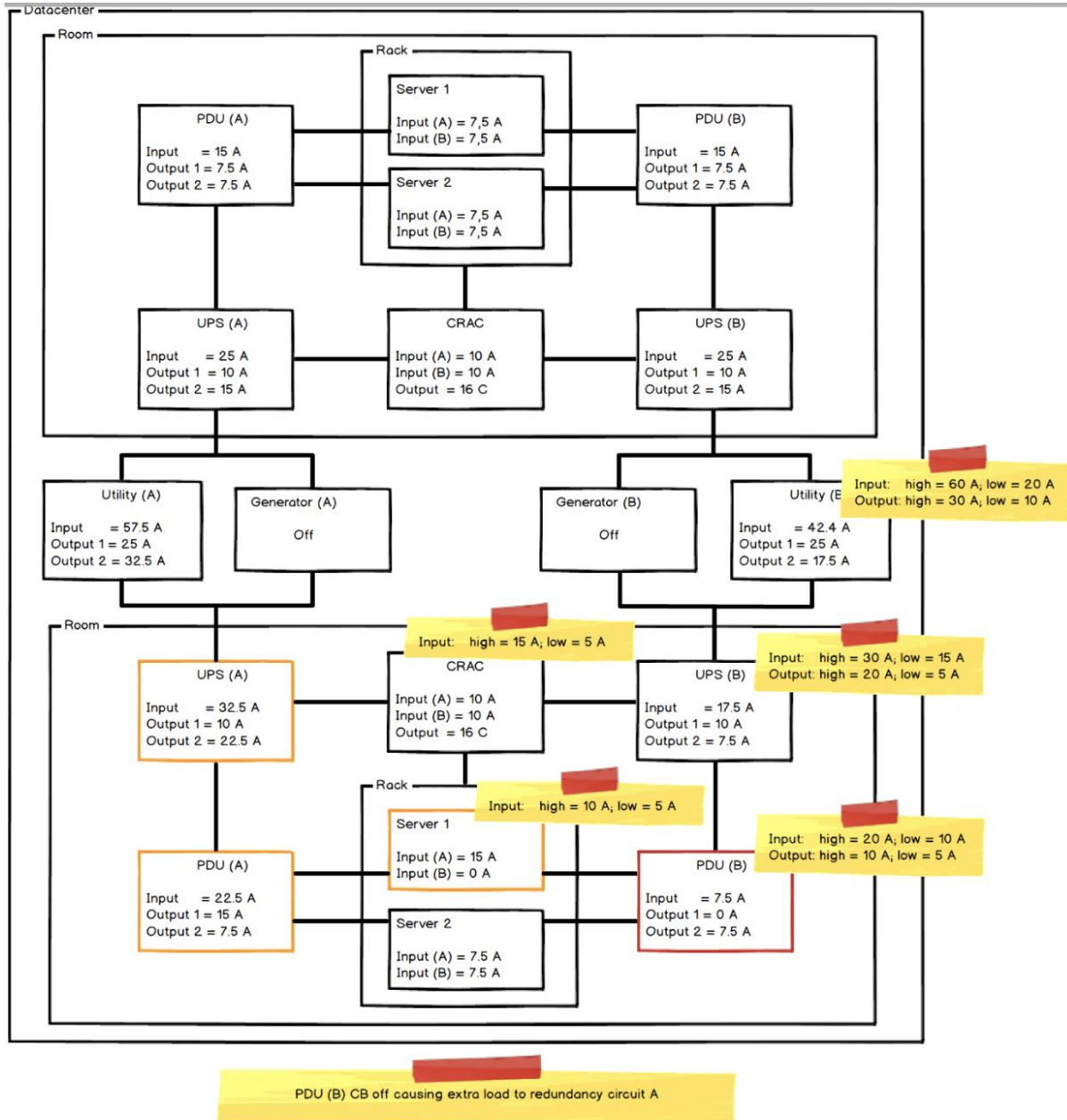
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Vixtera RCA algorithm and technique instantly identifies PDU B as a root source of the problem and a cause of the faulty chain of events that leads to extra load of redundant circuit A and malfunction of multiple connected devices. While quickly detecting a root source and cause of the outage, a system provides detailed real-time and historical data from any device or sensor in the chain associated with this failure.



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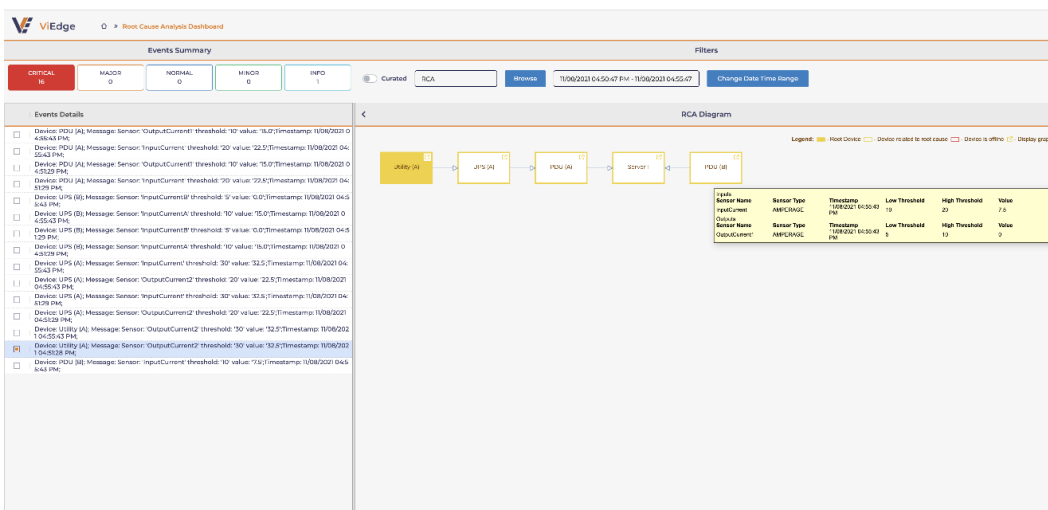
**Use Case #2:** One of the servers has exceed projected power consumption generating a system spike for a short amount of time triggering circuit breaker protection and extra load of redundancy circuit A



**Diagram 3.**  
Malfunctioning PDU B highlighted in red  
Affected devices highlighted in yellow

# VIXTERA TECHNOLOGY INNOVATION

Vixtera RCA algorithm and technique has instantly identified that PDU B input/output parameters are out of boundaries causing extra load to redundancy circuit A and malfunction of a number of servers and power devices. Any detailed information is instantly available to operator to mitigate, fix and, in many cases, prevent the problem in the first place by analyzing real-time event data for abnormalities and alert the system ahead of time about anomalous events and data patterns.



← REAL-TIME DATA

