

The logo for GadgEon, with 'Gadg' in blue and 'Eon' in orange.

Engineering Smartness

# **OBSOLESCENCE MANAGEMENT FOR AN IOT HOME SECURITY DEVICE**

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# Obsolescence Management for an IoT Home Security Solution



One of the leading Smart Home device company in the USA, wanted to replace end-of-life parts on the board of their gateway, a critical system in their home security solution. Moreover, the client was also worried about the limited RF range of the gateway that was affecting its performance.

## Solution Description

- Gadgeon executed redesign and development of a new gateway and replaced the obsolete components
- Resolved the RF range issue
  - Performed a thorough analysis and the reason for the limited RF range was identified.
  - Corrective action was taken that reduced the noise level and hence obtained a substantial improvement in the RF range

## Outcome and Benefits Delivered

- Fast turnaround time with the redesign, allowed the customer to reduce overall time-to-market
- RF range was increased by over 30%, enabling the end-customers to have lower number of gateways per installation
- Improved the overall performance of solution and at the same time reduced the size of the gateway
- Our Customer improved their CSAT scores from their existing customers
- Recorded an improvement in new sales over 40%



# The Business Context and Challenges of the Customer

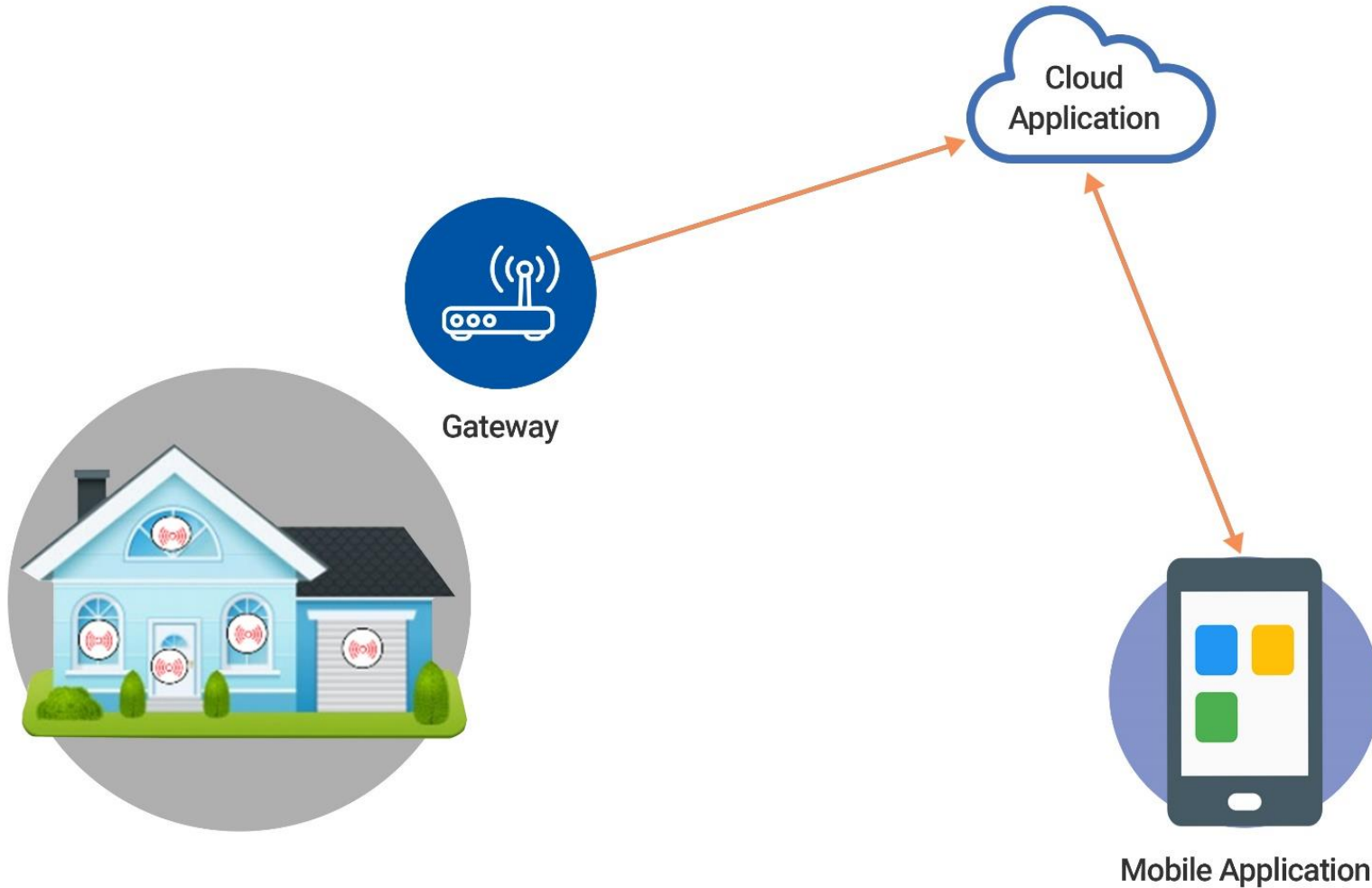
- In this era of rapidly evolving technology, the electronic components are becoming obsolete at a faster pace, creating a need for effective obsolescence management. Lack of understanding of its importance can have a negative impact on companies of all sizes and sectors. Delay in updating the product could result in potential loss of sales and customer confidence (lower CAST scores)
- One of the home automation companies in North America had developed an IoT solution for premium customers. They have developed sensor technology which is embedded in their home smart furniture, that can report the status of them and even control their operations using RF links. The gateway was having few end-of-life parts on the board which are to be replaced for the sustenance of the product in the market.
- The gateway had a functional challenge of lower range for its RF links. The lower range was affecting the overall performance of their solution leading to increased number of customer complaints.
- More than a sheer technical team, the client was looking for a trusted engineering partner who always goes the extra mile to overcome the challenges encountered.



# The Solution / System Description

- Redesigned and developed the new gateway by replacing the obsolete components
  - Identified obsolete components on the gateway and the alternative with the right specification to replace
  - Replaced the EOL component with the alternative and redesigned the PCB
  - Updated the firmware BSP as per the component changes
  - Review the performance of radio and antenna in the schematics and layout and corrected issues identified
- Resolved the RF range issue.
  - On analysis, the real reason for the limited range was identified as the noise sources on gateway hardware.
  - Corrective action was taken to reduce the noise level which resulted in substantial improvement of RF Range
- Initial bring-up of the redesigned board with new components and improved RF range
- RF tuning & Integration testing for checking the overall performance of the newly designed gateway

# ▶ System / Architecture Description



# THANK YOU



For More Details, Let's Connect



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