**DUNDALK INSTITUTE OF TECHNOLOGY**

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**Beta Release Technical Documentation On**

**AEROSENSE – SMART HUB FOR AIR QUALITY MONITORING**

Project Carried Out

**By**

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**EXECUTIVE SUMMARY**

The Beta release of the Aerosense project shows an advancement from our Alpha prototype, showing good progress in the Smart Indoor Air Quality Hub's development. This release includes the successful integration of an additional USB-to-UART converter, enhancing the PMS7003 sensor's functionality within the system. Also, the inclusion of the L76K GPS (new GPS sensor) module.

A significant difference between the alpha release and beta release in this phase is the transition to the PubNub Access Manager, making our system's security framework stronger. This upgrade ensures a more controlled communication environment between the IoT devices and our cloud infrastructure the AWS server.

With these enhancements, the Beta release strengthens the core attributes of Aerosense. It demonstrates our system's capability to support asthma patients effectively by providing vital, real-time insights into air quality dynamics. This Beta Release documentation will detail these improvements.

In conclusion, the Beta release signifies more about the final product, showing a position improvement from the Alpha release and the effect of the feedback received from the lecturers. It is a good step to our ongoing project to enhancing indoor air quality management, especially for individuals with severe asthma.