**DUNDALK INSTITUTE OF TECHNOLOGY**

**A logo with a bird and text

Description automatically generated**

**Technical Documentation On**

**WRISTBAND AIR QUALITY MONITOR**

Project Carried Out

**By**

**D00251785 PATRICK ORJIEH**

**D00244618 ROBERT NUGENT**

**D00261104 CONOR MC GINN**

**D00240060 HANNAH MC ELROY**

Under the Supervision of

**DR. JOHN LOANE**

DEPARTMENT OF COMPUTING AND MATHEMATICS

**SCHOOL OF INFORMATICS AND CREATIVE ARTS**

**DEPARTMENT OF VISUAL AND HUMAN-CENTERED COMPUTING**

**EXECUTIVE SUMMARY**

In the context of our Universal Design Project, we - the LifeSync team - embarked on an innovative journey that led to the birth of "Aerosense." Imagine a wristband that does more than tell time; it gives you a real-time snapshot of the air you breathe. With the surge of pollution in our cities, it`s high time we have something that keeps us informed. That's where Aerosense comes into play.

This isn't just about tech for the sake of tech. By leveraging the latest IoT, we've merged the handiness of everyday wearables with cutting-edge sensors that monitor air quality with finesse. It's all rooted in Universal Design's philosophy, aiming to make air quality data not just available but effortlessly integrated into our routines.

Dive into this report, and you'll discover the ins and outs of Aerosense's design, the strategies we employed, and the hurdles we overcame. For us at LifeSync, this wristband isn't just a gadget; it encapsulates our dedication to creating solutions that genuinely enrich our lives.

Table of Contents

[GLOSSARY 4](#_Toc149484332)

## **GLOSSARY**

* Aerosense: The brand name of the air quality wristband.
* IoT: Internet of Things - Refers to the network of physical objects embedded with sensors, software, and other technologies to connect and exchange data with other devices over the Internet.
* API: Application Programming Interface - A set of tools and protocols that allow different software applications to communicate with each other.