

# Smart noise sistem untuk area pemukiman di sekitar Bandar Udara Internasional Soekarno Hatta = Smart noise solution for measurement and monitoring in urban area around the Airport

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## Abstrak

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Merealisasikan Bandar udara masa depan sebagai aerotropolis dan memenuhi kriteria sebagai bandara berkelanjutan atau sustainable tidak hanya demi meningkatkan kebutuhan akan transportasi yang baik dan aman, akan tetapi juga untuk mengurangi dampak lingkungan yang terjadi akibat aktifitas di bandara. Polusi suara sebagai salah satu dampak lingkungan, selalu menjadi salah satu isu yang penting untuk diselesaikan di kawasan sekitar bandara. Menentukan area yang terpapar oleh polusi suara yang diakibatkan oleh pesawat udara membutuhkan aircraft's noise modelling yang akan memetakan area polusi suara di sekitar bandara dengan menggunakan program computer seperti misalnya Integrated Noise Modelling. Dimana program ini membutuhkan masukan data berupa infrastruktur bandara, trayek lalu lintas di udara, kondisi cuaca, dan bentuk permukaan tanah atau topography di sekitar bandara. Peta yang diproduksi akan bermanfaat dalam penerapan system untuk pengukuran dan pengawasan terhadap kebisingan sebagai salah satu solusi dalam melindungi masyarakat dari dampak yang berlebihan dari kebisingan pesawat udara. Implementasi dari system yang terintegrasi seperti Sentinelle dan VITRAIL (VIvisualisation des Trajectoires et des Informations en Ligne) di Perancis telah dipelajari dalam tesis ini dalam hal metode dan bagaimana cara untuk dapat diterapkan di bandar udara di masa mendatang.

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### **ABSTRACT**

Actualize the future airport as an aerotropolis and meet sustainable criteria not only for improving the needs of a good quality and safety transportation, but also minimize the environmental impact of airport activities. Noise pollution as one of this impact always becomes the most important issue to solve around the urban area in the vicinity of aerodrome. Defining the exposed area by nuisance needs aircraft's noise modelling which will produce the noise map zone with software such as Integrated Noise Modelling required input of airport's infrastructure, traffics, trajectories, weather report, and topography surround the aerodrome. The map produced will be an effort for implementing Smart noise solution as one best solution to protect the community from the impact of aircraft's noise. The implementation of one integrated system of smart noise measurement and monitoring such as Sentinelle and VITRAIL (VIvisualisation des Trajectoires et des Informations en Ligne) in France has been studied in this report in order to learn about how its work and implement them in the future airport.; Actualize the future airport as an aerotropolis and meet sustainable criteria not only for improving the needs of a good quality and safety transportation, but also minimize the environmental impact of airport activities. Noise pollution as one of this impact always becomes the most important issue to solve around the urban area in the vicinity of aerodrome. Defining the exposed area by nuisance needs aircraft's noise modelling which will produce the noise map zone with software such as Integrated Noise Modelling required input of airport's infrastructure, traffics, trajectories, weather report, and topography surround the aerodrome. The map produced will be an effort for implementing Smart noise

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