

**DIGITAL TWIN TECHNOLOGY: THE POTENTIAL IMPLEMENTATION IN FACTORY SERVICES**  
**DEPARTMENT OF PT. PUPUK KALIMANTAN TIMUR**

**THESIS**

**SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF**  
**BACHELOR OF ECONOMICS**



**BY:**

**OLIVIA BERLINDA MAYATIKA**

**NIM. 041511333273**

**ACCOUNTING STUDY PROGRAM**  
**FACULTY OF ECONOMICS AND BUSINESS**  
**UNIVERSITAS AIRLANGGA**  
**SURABAYA**  
**2020**

**TEKNOLOGI DIGITAL TWIN: POTENSI APLIKASI PADA DEPARTEMEN JASA PELAYANAN  
PABRIK PT. PUPUK KALIMANTAN TIMUR  
SKRIPSI**

**DIAJUKAN UNTUK MEMENUHI SEBAGIAN PERSYARATAN DALAM MEMPEROLEH GELAR  
SARJANA EKONOMI**



**OLEH:  
OLIVIA BERLINDA MAYATIKA  
NIM. 041511333272**

**PROGRAM STUDI S1 AKUNTANSI  
FAKULTAS EKONOMI DAN BISNIS  
UNIVERSITAS AIRLANGGA  
SURABAYA  
2020**

**SKRIPSI**

**TEKNOLOGI DIGITAL TWIN: POTENSI APLIKASI PADA DEPARTEMEN JASA PELAYANAN  
PABRIK PT. PUPUK KALIMANTAN TIMUR**

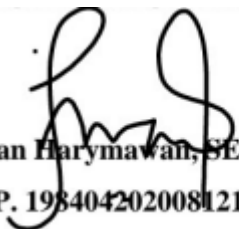
**DIAJUKAN OLEH:**

**OLIVIA BERLINDA MAYATIKA**

**NIM: 041511333273**

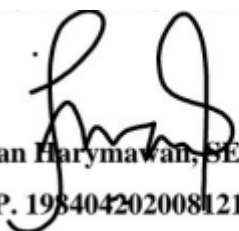
**TELAH DISETUJUI DAN DITERIMA DENGAN BAIK OLEH**

**DOSEN PEMBIMBING,**

  
Iman Harymawan, SE., MBA., Ph.D.  
NIP. 198404202008121005

**29 Oktober 2020**

**KOORDINATOR PROGRAM STUDI,**

  
Iman Harymawan, SE., MBA., Ph.D.  
NIP. 198404202008121005

**29 Oktober 2020**

## DECLARATION OF AUTHORSHIP

I, (Olivia Berlinda Mayatika, 041511333273), declare that:

1. My thesis is genuine and truly my own creation, and is not another's person work made under my name, nor a piracy or plagiarism. This thesis has never been submitted to obtain an academic degree in Universitas Airlangga or in any other Universities/Colleges.
2. This thesis does not contain any work or opinion written or published by anyone, unless clearly acknowledged or referred to by quoting the author's name and stated in the references.
3. This statement is true; if on the future this statement is proven to be fraud and dishonest, I agree to receive an academic sanction in the form of removal of the degree obtained through this thesis, and other sanctions in accordance with the prevailing norms and regulations in Universitas Airlangga.

Surabaya, 27 Oktober 2020

Declared by,



Olivia Berlinda Mayatika

NIM. 041511333273



## **SURAT KETERANGAN TES KESAMAAN (*SIMILARITY*)**

Kami melakukan tes kesamaan (*similarity*) terhadap **Skripsi/Tesis/Disertasi/Artikel/Buku** atas nama pengarang dibawah ini:

**Olivia Berlinda Mayatika**  
**NIM / 463414**

dengan ini menerangkan bahwa judul **Skripsi/Tesis/Disertasi/Artikel/Buku** :

**DIGITAL TWIN TECHNOLOGY: THE POTENTIAL IMPLEMENTATION  
IN FACTORY SERVICES DEPARTMENT OF PT. PUPUK KALIMANTAN  
TIMUR**

Paper ID : 1424003102  
Class ID : 23179058  
Date : 23-Oct-2020  
Hasil menunjukkan SIMILARITY INDEX : 10%

Surat keterangan ini kami lampirkan hasil tes sebagai bukti telah dilakukan tes kesamaan (*similarity*) menggunakan Program Turnitin.

Demikian surat pernyataan ini kami buat untuk dipergunakan sebagaimana mestinya.

Surabaya, 23 Oktober 2020

Kap. Ruang Baca,



**ABDUL MUNIR**  
NIP 196701261990041001

**DIGITAL TWIN TECHNOLOGY: THE POTENTIAL IMPLEMENTATION IN FACTORY SERVICES**  
**DEPARTMENT OF PT. PUPUK KALIMANTAN TIMUR**

**OLIVIA BERLINDA MAYATIKA**

**ABSTRACT**

The popularity of Digital Twin technology implementation has been increasing over the past several years. In respect of Digital Twin implementation in Indonesia, there are still few companies that already applied this technology, although there are abundant options of Digital Twin providers to be chosen. Therefore, this paper aims to provide insight regarding digital twin options to one of the manufacturing company in Indonesia which is PT. Pupuk Kaltim. Focused on the factory service division of the company, information regarding options, process implementation, benefits, and challenges are served in this research. Literature review and internal data from company are used to be further processed and analyzed. All findings presented purpose to enhance the effectiveness and efficiency of the manufacturing process in factory service division of PT. Pupuk Kaltim.

Keywords: Digital twin technology, effectiveness, efficiency, manufacturing process, benefits, challenges, options, factory service division, implementation.