

POLITECNICO DI TORINO

杜林理工大學

ANALYSIS OF THE ODOO SOFTWARE CAPABILITIES REGARDING

關於 ODOO 軟體在產品生命週期管理

PRODUCT LIFECYCLE MANAGEMENT, MANUFACTURING

產品生命周期管理，製造

EXECUTION SYSTEMS AND THEIR INTEGRATION

執行系統及其整合



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ABSTRACT

摘要

ANALYSIS OF THE ODOO SOFTWARE CAPABILITIES REGARDING PRODUCT LIFE-CYCLE MANAGEMENT, MANUFACTURING EXECUTION SYSTEMS AND THEIR INTEGRATION 對於產品生命週期管理、製造執行系統及其整合方面的 Odoo 軟件能力分析

The second half of the 20th century had been marked for the advancements of computer technology in all aspects of production. 20 世紀下半葉以電腦技術在生產的各個方面的進步而著稱。

The key feature of that statement is the undeniable truth that alongside the increased complexity allowed by computing power comes an ever increasing production of overwhelming amounts of information. 該陳述的關鍵特點是，隨著計算能力的提高，帶來的複雜性增加，同時也帶來了越來越多龐大的信息產生。

From separate perspectives of the industrial landscape, several systems were brewed by that sheer necessity for organization, automation and waste reduction focusing on that pool of useful data. 從工業景觀的不同角度來看，由於對組織、自動化和減少浪費的純粹需求，出現了幾個系統，著重於利用這一大量有用數據的集合。

ERP (from a managerial perspective), MES (from a production perspective) and more recently PLM (from a strategic development/redevelopment perspective) emerged as information solutions tackling this problem from different angles. These solutions, however effective, are always plagued by the fundamental incompatibility between the tools that implement those systems. 從管理角度來看，ERP（企業資源規劃）、從生產角度來看，MES（製造執行系統），以及最近從戰略發展/重建的角度來看，PLM（產品生命週期管理）成為了解決這一問題的信息解決方案。然而，這些解決方案雖然有效，卻始終受到實施這些系統的工具之間根本不相容的困擾。

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ERP Enterprise Resource Planning 企業資源規劃

MES Manufacturing Execution System 製造執行系統

PLM Product Lifecycle Management 產品生命周期管理

MRP Material resource planning 物料資源規劃

WO Work Order 工作訂單

BOM Bill of Materials 物料清單

MO Manufacturing Order 製造訂單

ECO Engineering Change Order 工程變更訂單

CPS Cyber Physical System 智能物理系統

IoT Internet of things 物聯網

DT Digital Twin 數字孿生

GUI Graphical User Interface 圖形用戶界面 CNC

Computer Numerical Control 數控加工

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