



**Final Year Project Showcase Batch 2018  
Year 2022**

<b>Department: Economics and Management Sciences</b>		
<b>Programme: Management Sciences</b>		
<b>1</b>	<b>Project Idea</b>	<b>End To End Optimization of Supply Chain Process Using CPFR and Industry 4.0:</b> The study used to configure the problems arise in planning and forecasting against critical shipments and action against changing Estimated Time Dispatch (ETD) and Estimated Time Arrival (ETA) and provide solution of major problem.
<b>2</b>	<b>Process</b>	This study includes both qualitative and quantitative data. Primary qualitative data were collected through meetings with middle management which were used to develop IDEF model which is helpful to develop questionnaire, while primary quantitative data were collected through questionnaire and company's internal files. IDEF model is used to understand the current condition of Dawlance. Questionnaire is developed to identify major problems that should be focused first then fishbone diagram is used to visualize the sub causes of major problems. As a result, an integrated and consolidated excel file is developed which work as a base for Microsoft power BI dashboard.
<b>3</b>	<b>Outcome</b>	VBA enabled excel file developed to automate the plan working against critical shipments and a Microsoft Power BI dashboard developed to give at a glance view of visualize data. This helps Dawlance to improve their working plan against critical shipments and increase their information flow, visibility and decision making.
<b>4</b>	<b>Evidence (Theoretical Basis)</b>	<ul style="list-style-type: none"> <li>➤ Collaborative Planning Forecasting and Replenishment (CPFR)</li> <li>➤ Industry 4.0</li> </ul>
<b>5</b>	<b>Impact on Sustainability of Urban Regions or SDG-11 "Sustainable Cities and Communities"</b>	Karachi is a huge mega city which have been facing several environmental issues. It has been ranked among the world's most unlivable cities, according to an annual index released by The Economist Intelligence Unit. The unit's global livability index for the year 2022 ranks Karachi 168th in terms of livability among a total of 172 countries The study is based on IT driven Technologies and indirectly impact environment by reducing electricity consumption through reducing task completion time which leads this study towards sustainability.
<b>6</b>	<b>Competitive Advantage or Unique Selling Proposition</b> (Cost Reduction, Process improvement, Attainment of any SDG 9 (Industry Innovation & Infrastructure). Companies using MS Excel and hire employees for manually managing different sheets, this study focuses on integration of departments through automation of VBA enabled files which indirectly reduce cost and Power BI dashboard provide a glance view and helps to predict the critical items and shipments of upcoming months on the basis of net requirements and available stocks. This help company in improving their information flow, visibility and decision making.	
<b>a</b>	<b>Attainment of any SDG (e.g., How it is achieved and why it is necessary for the region)</b>	<b>SDG#9: Industry Innovation &amp; Infrastructure</b> This study uses the concept of Industry 4.0. After post covid most of the companies shifting towards cloud computing and IT driven technologies therefore our study resolves the

		problem by integrating supply chain departments with the help of Microsoft Power BI Dashboard.
<b>b</b>	<b>Environmental Aspect</b> (e.g. carbon reduction, energy-efficient, etc.)	Indirectly effecting environmental sustainability as this study uses IT driven technologies which reduces electricity consumption and electronic waste disposal.
<b>d</b>	<b>Process Improvement which Leads to Superior Product or Cost Reduction, Efficiency Improvement of the Whole Process</b> (e.g. What is the issue is current process and what improvement you suggests)	Before: Critical shipments identified when only 20 days left in production on the basis of Arrival dates of shipments After: With the help of automated dashboard, we get information of critical shipments of upcoming months 50 days before on the basis of net requirement and stock availability.
<b>7</b>	<b>Target Market</b> (Industries, Groups, Individuals, Families, Students, etc) Please provide some detail about the end-user of the product, process, or service	Industries who are using Microsoft Excel files and want to automate their manual working as well as improve their decision making against critical shipments.
<b>8</b>	<b>Team Members</b> (Names along with email address)	Madheea Afroz ( <a href="mailto:Madheea.afroz834@gmail.com">Madheea.afroz834@gmail.com</a> ) Rooma Faheem ( <a href="mailto:roomafaheem512@gmail.com">roomafaheem512@gmail.com</a> ) Aqsa Hareem ( <a href="mailto:aqsahareem2000@gmail.com">aqsahareem2000@gmail.com</a> ) Dua Ashraf ( <a href="mailto:dua.ashraf0403@gmail.com">dua.ashraf0403@gmail.com</a> )
<b>9</b>	<b>Supervisor</b>	Dr. Raza Ali Khan ( <a href="mailto:alikhhan.raza@gmail.com">alikhhan.raza@gmail.com</a> )
<b>10</b>	<b>Pictures</b>	<p>The diagram illustrates the supply chain process flow involving several departments: SALES DEPT, PLANNING DEPT, ORDERING DEPT, PURCHASE DEPT, CLEARANCE DEPT, SUPPLIER, AGENT, STORE, WAREHOUSE, and FINANCE. Key steps include: SALES DEPT providing FORECAST NUMBER to PLANNING DEPT; PLANNING DEPT sending REQUEST FOR SUPPLIER LIST to PURCHASE DEPT; PURCHASE DEPT sending SEND SUPPLIER LIST to ORDERING DEPT; ORDERING DEPT sending REQUEST FOR AGENT to CLEARANCE DEPT; CLEARANCE DEPT sending AGENT ASSIGNED to AGENT; AGENT sending MATERIAL DELIVERED to STORE; STORE sending FG DELIVERED to WAREHOUSE; and AGENT sending DELIVER MATERIAL to SUPPLIER. SUPPLIER sends RFQ, PO, LC NO, and PACKING LIST to ORDERING DEPT. ORDERING DEPT sends SEND PO AND PI to FINANCE. FINANCE generates LC NUMBER. Below the diagram are screenshots of a Microsoft Power BI dashboard showing various charts and tables, including a KEY STATEMENT, PO STATUS, NET REQUIREMENT WITH RESPECT TO PO, VENDORS, and RELATION BETWEEN CATEGORIES &amp; NET REQUIREMENT.</p>