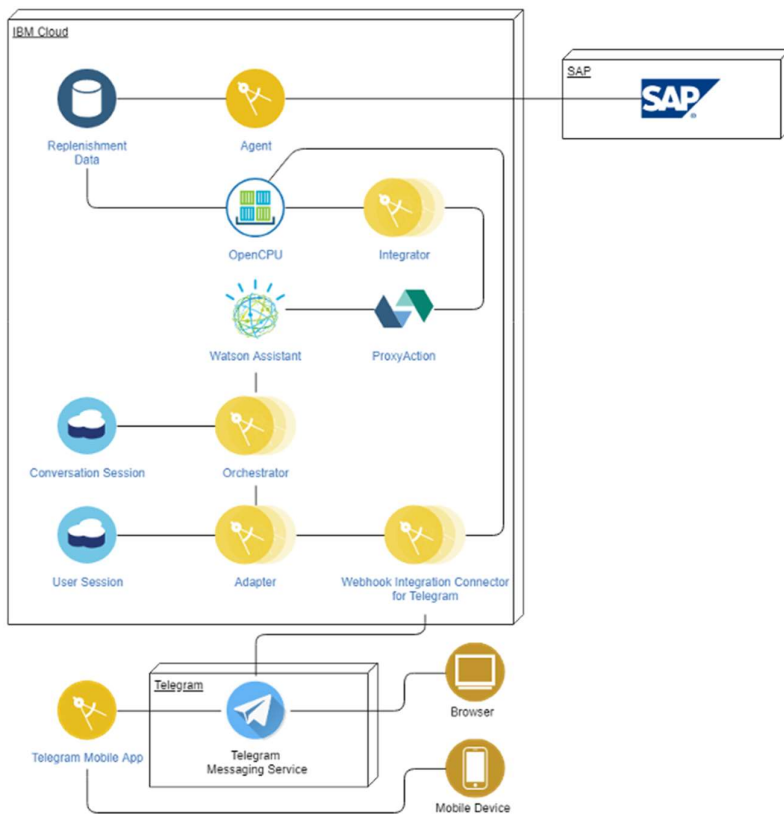# Cognitive Replenishment Advisor

Introduction

The Cognitive Replenishment Advisor is a proof of concept asset (PoC) with IBM® Watson® technology to explore how AI and machine learning can support smarter inventory decisions, helping to ensure that products arrive in the right place at the right time.

A regional planner has in average to plan 180 products every month - some of them weekly, some only monthly - nevertheless there is not much time to decide which amount of products will shipped around the world from production plant to regional warehouses.

Overview

AI as a potential step change solution to drive innovation in replenishment planning. The company's planners had to comb through a number of systems and reports to get the facts and figures they needed to make informed replenishment decisions, but cognitive technologies would allow them to integrate, analyze and visualize data from multiple sources to make the decision-making process quicker, easier and smarter. The tool is based on cognitive Watson™ solutions. The goal of the asset is to evaluate how cognitive technology based on AI and machine learning could be used to build a more powerful Replenishment Advisor tool. The new Replenishment Advisor tool will use the latest operational data, such as forecast and actual sales opportunities, and shipping schedules, to provide planners with guidance on replenishment timing and quantity. The tool will rely on machine learning and feedback from experienced planners to offer increasingly intelligent recommendations for highly efficient inventory decisions. The Replenishment Advisor tool could be built quickly using IBM Cloud™ and IBM Watson AI services, a robust integration platform that allows expert users to connect structured and unstructured data from disparate systems to deliver a unified overview of supply chain operations.

Benefits

With the Cognitive Replenishment Advisor the machine learning cycle can learn from a full loop - from planning, to shipping to distribution - system data will tell, if the planning was sufficient to fulfill all open orders in a certain region. A full cycle can have a duration of 10 - 12 week - depending of the distance between production and regional warehouse, distribution time etc - but nevertheless the machine learning algorithms will learn from the result and improve recommendations made by the Cognitive Replenishment Advisor. This will help regional and global planners to improve overall product availability and customer satisfaction.

Contacts

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