MOTIVATIONS AND OBJECTIVES

To meet the needs in time and in full is the key role of a good supply chain, but as soon as we think about production efficiency, production lead-time, transit lead-time, forecast accuracy, products obsolescence, inventory costs, and so on, it is also its most difficult challenge. The supply chain in scope in this project will be the one supplying Nicotinell® gums – medicated chewing gums for smoking cessation – for Novartis.

Motivations:
- Nicotinell® gums are sold by Novartis. If the market is Out Of Stock, Novartis will be responsible.
- Each beginning of the month, every supply chain coordinator is spending a lot of time in net requirements calculation for their suppliers.
- Purchase Orders are placed every beginning of the month and their follow up according to forecast changes are quite difficult.

Objectives:
- Capacity review in the packaging factory:
  - To have a quick overview of the capacity in the packaging plant versus demand loading.
  - Blister requirements management:
    - To automotive net requirements calculation.
    - To implement and document a new process for PO management.

CAPACITY REVIEW

The main parameters which will help us to compare capacity versus demand loading are the following:

- Capacity calculation:
  - Calendar per production line
  - Changeover per production line
- Demand loading calculation:
  - Production line per product
  - Production rate per product
  - Family type per product

Input: Markets’ demand on Finish Goods

Output: Capacity versus Demand loading

Process for Purchase Order management:

Considering the fact that we have now an automatic calculation of net requirements on blisters, we would like to put in place a new process for PO management, that is to say:

- PO placement
- PO rescheduling

This new process will allow us to follow on a weekly basis the stock available for Blisters versus demand loading. Based upon the coverage of this stock, it will allow us to see if a new PO need to be placed or if an open PO need to be rescheduled.

If the changes are conclusive, then the documentation of this process will allow us to put in place this process for the other suppliers.

Improvements:
- Time saving
- Stock on hand at the packaging plant close to the needs
  - If the stock is too important, we will consume unnecessarily the Shelf Life of the product what will increase stock at risk.
  - If the stock is not enough, we could have some delay in the packaging of blisters into Finish Goods.

Considering that for each open PO on Finish Goods, we should have the corresponding blisters in stock at the packaging plant, we can introduce the following KPI: 

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\text{KPI} = \frac{\text{OH}}{\text{Open POs}}
\]

This KPI should be equal to 1 once PO managed with this new process will be receipt according to LT.

BLISTER REQUIREMENTS

Net requirements calculation:

The current situation is the following:

- Extraction of the forecast on Finish Goods
- Conversion of this forecast into forecast on blisters
- Calculation of an extra quantity based upon stock OH at the packaging plant and open PO on Blisters versus open PO on Finish Goods.

The idea is there to analyze the current process and to implement SAP in order to convert automatically the forecast on Finish Goods into net requirements on Blister.

Improvements:
- Allows to have a quick overview of capacity versus demand loading.