Access-To-Medicines Supply Chain Design: A Stakeholder Framework

Catherine Decouttere*, Nico Vandaele*, Stef Lemmens*, Mauro Bernuzzi**
*Research Center for Operations Management, Katholieke Universiteit Leuven; **GlaxoSmithKline

catherine.decouttere@kuleuven.be
nico.vandaele@kuleuven.be

1. Stakeholder analysis & Supply Chain definition

2. SC KPI’s and SC requirements

3. SC design, modeling & scenario generation

4. Scenario ranking

5. Group decision & scenario implementation

Supply chain definition involves the proper definition of the flow system borders as they serve as the application area for the Key Performance Indicators. Both resources and flows of the supply chain are identified.

Stakeholder analysis delivers all relevant stakeholders. They are grouped into both internal and external stakeholders relative to the supply chain system.

Another important split is the split into supply related and demand-related stakeholders. Additionally, the most important financial, experience and decision making interactions are graphed.

Supply chain designs are generated based on the stakeholders’ needs and knowledge in a co-design setting. Designs contain decisions. Whenever possible, these decisions are optimized in a modeling step. Various scenarios are related to assemble the uncontrollable environmental elements.

Each design is combined with each scenario, constituting the list of design/scenario combinations, full factorial wise. Various scenarios are ranked on the relative robustness of the final scenario.

The scenario that will be subject for final choice and implementation, will most likely be a member of the efficient set. Various analyses can be made to reveal robustness and sensitivity of the final scenario.