Project: Feedback response & Ontology of the Ball Mill

I- Information about the ball mil

A **Ball Mill** is a type of grinder used to grind and blend Materials. You can check the principle of functioning here : https://www.youtube.com/watch?v=5eGJKOS8gTU&t=58s

The ball: Inside the mill, there are usually steel or ceramic balls. These balls are used to crush and grind the raw material into smaller, finer particles through a rotating drum motion.

What we mill: In my case, the focus is on artisanal mining. This involves grinding gold ore or other minerals to extract valuable metals. The ore is added to the ball mill along with the grinding media (balls), and the rotating motion of the mill crushes the ore into a fine powder, facilitating the extraction process.

II- Figures and Diagrams

1- 3D model

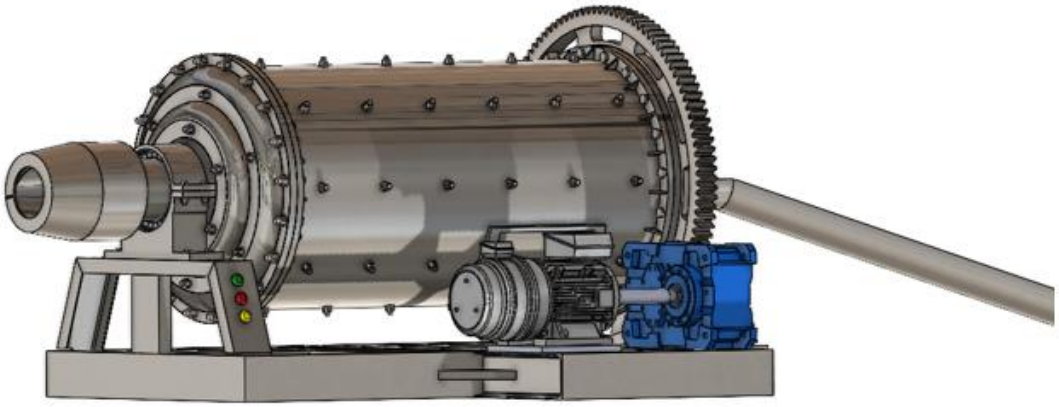

Figure 1: 3D Design of my Ball Mill

2- Components of the ball mill

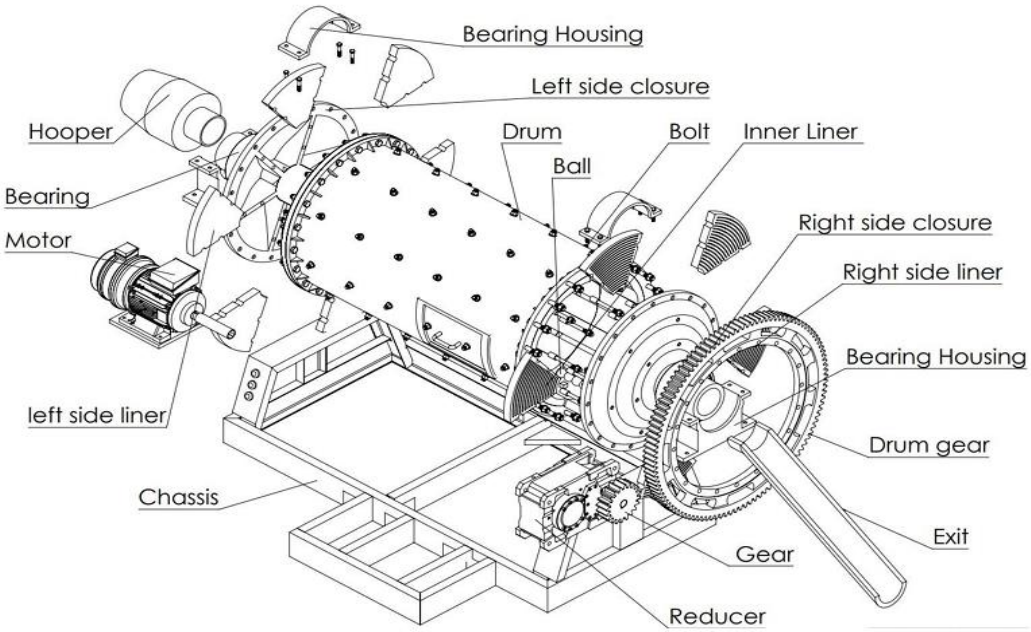

Figure 2: Components of my ball mill

3- Horned beast Diagram

A visual representation of the primary needs and expectations related to the design of the ball mill. This diagram will assist in identifying user requirements, including capacity, speed, and durability.

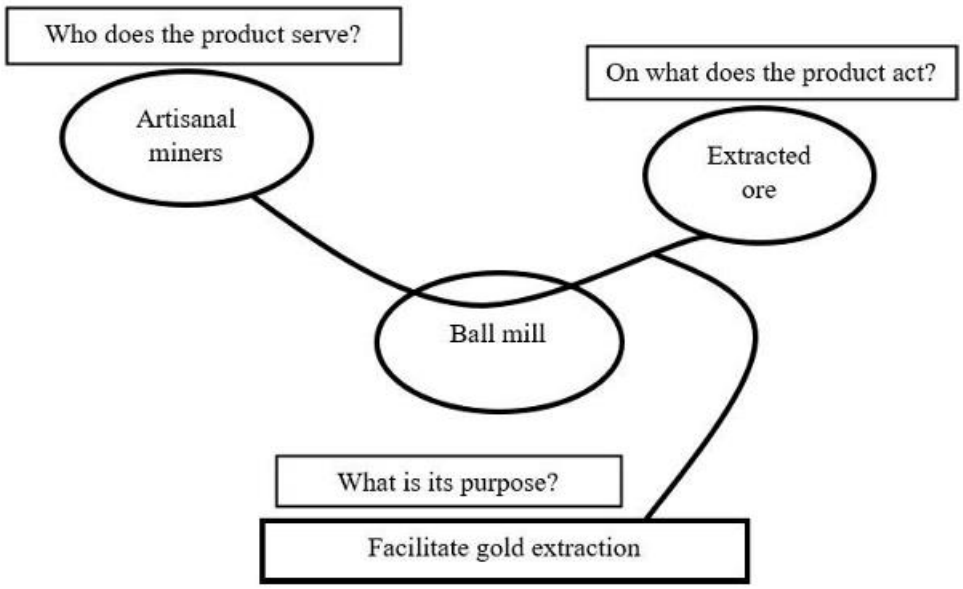

Figure 3: Horned Beast Diagram

4- Octopus Diagram

It permits to identify the service functions of the ball mill and highlights the interactions between it and the various elements of the environment and the product.

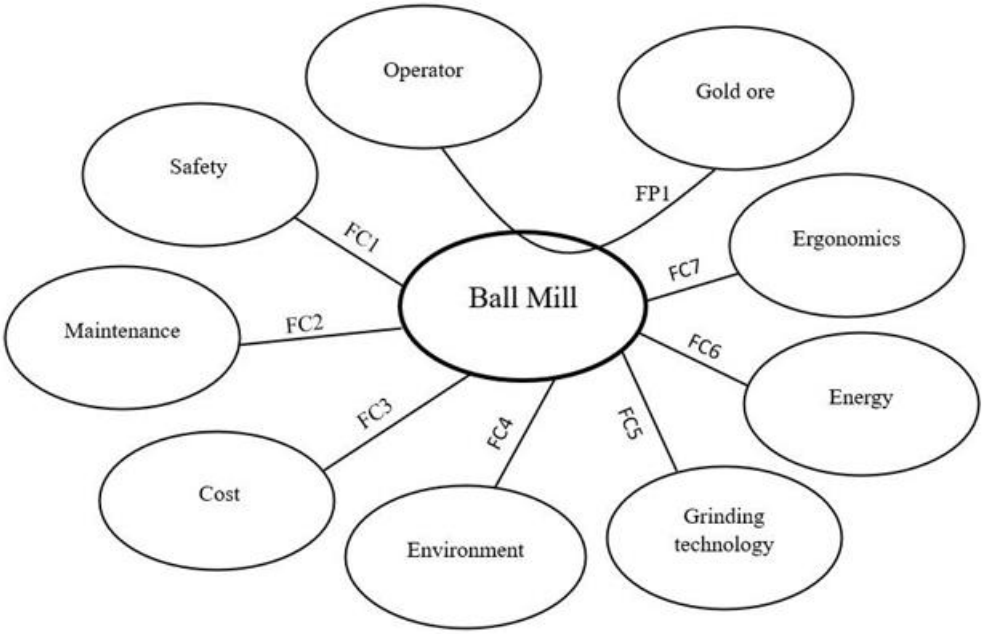

Figure 4: Octopus Diagram

Table1: List of service fonctions.

FP1	Grinding gold ore
FC1	Do not present any harm to the operator and his environment
FC2	Have easy and affordable maintenance
FC3	Have an affordable cost
FC4	Respect environmental conditions
FC5	Be efficient, reliable and durable
FC6	Be optimal and save energy
FC7	Allow easy and adequate use

5- System semantic

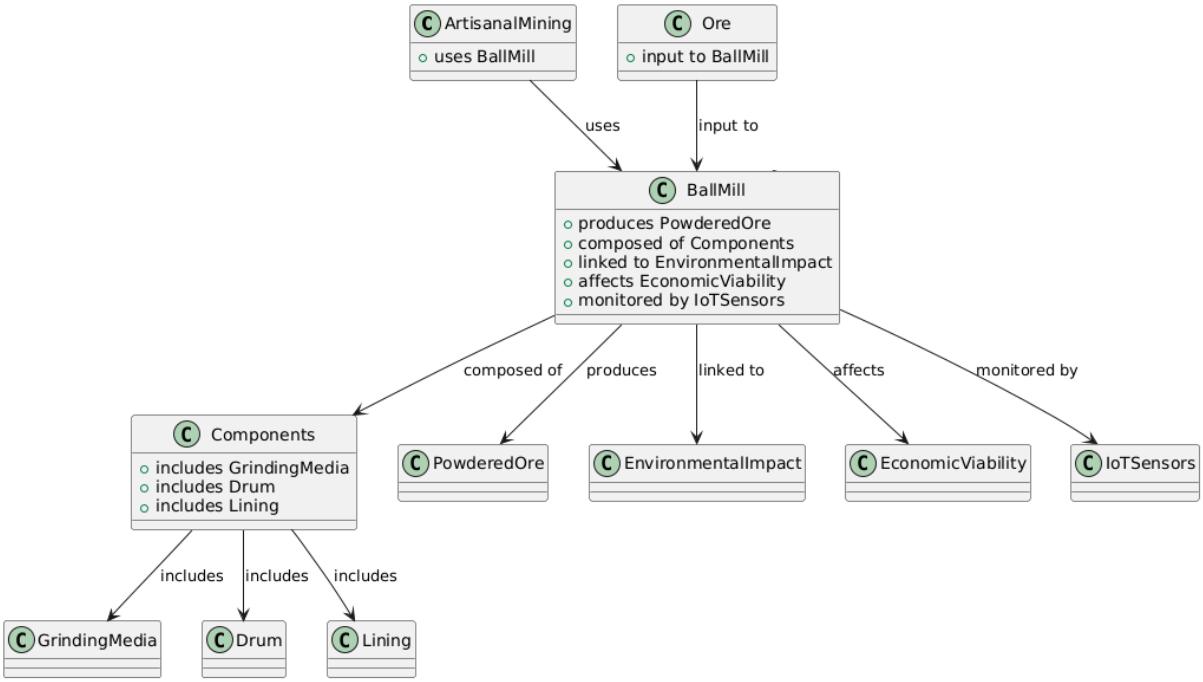

Figure 5: System Semantic

6- Data semantic

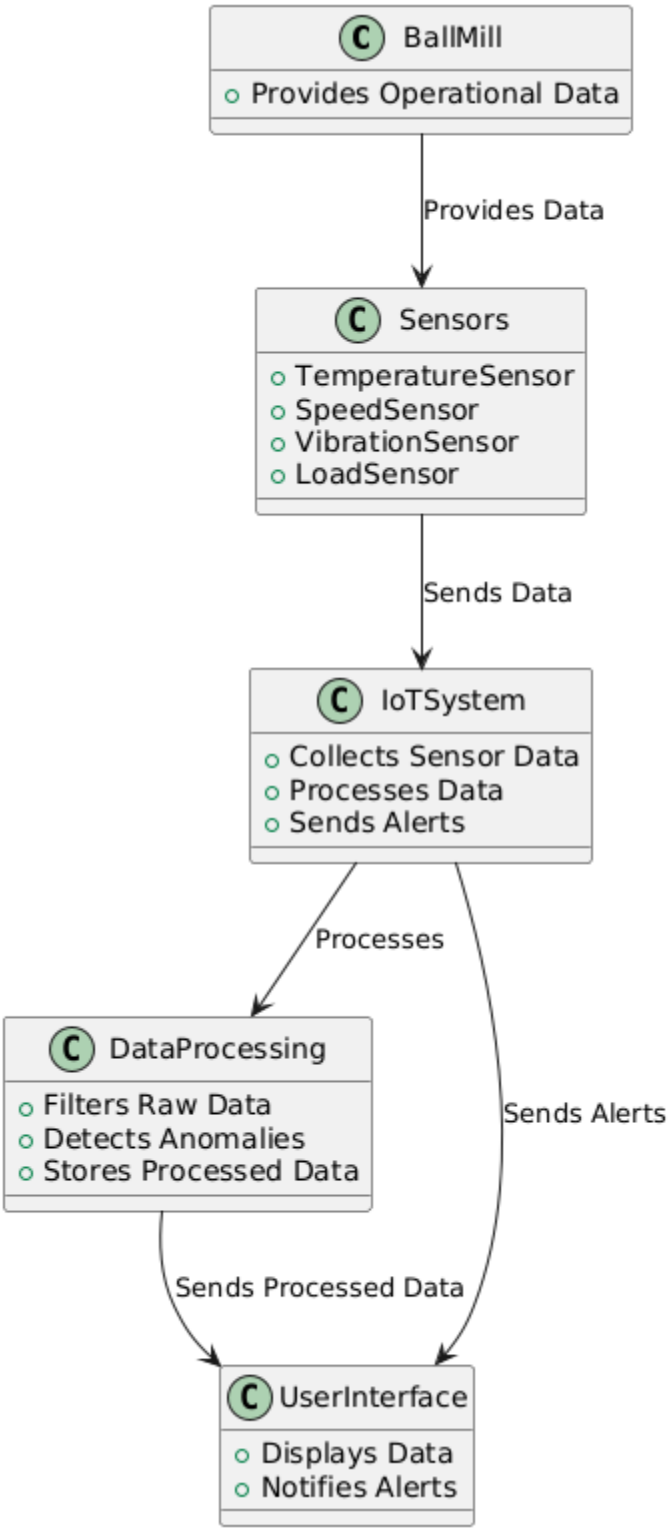

Figure 6: Data Semantic