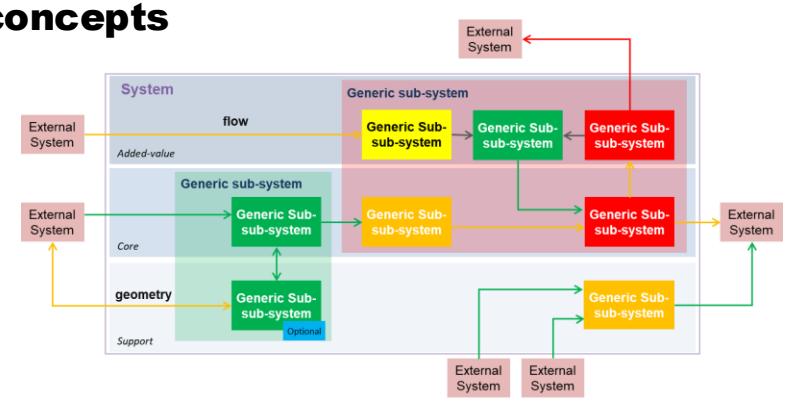
Product Line

Take Away

Purpose Identify variabilities (propagating from external reasons, of related to internal reasons of the enterprise), and optimize them in order to be more efficient when generating products variants.

Key concepts

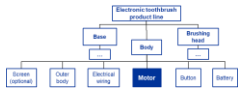


A Product line describes a group of similar products that share common functions and components and satisfy a variety of different uses, markets & environments.

Deliverables

Product line scope

Reference deliverables

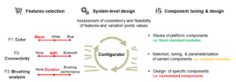


Standardization principals

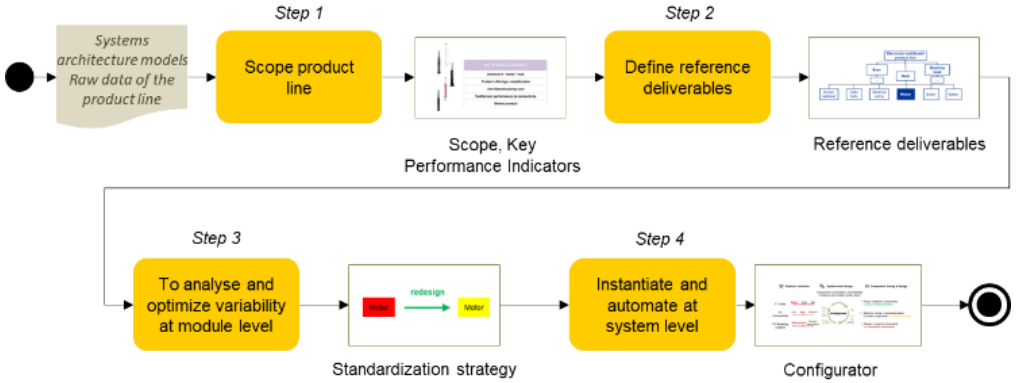
Key Performance Indicators

Variability matrix

Configurator



Process



Key points

- 4 key principles: **decoupling**, **standardization**, **modular architecture**, and **automation of predictable activities**
- **Agreeing on the scope** at first prevents misunderstanding when analysing the variability
- The **Key Performance Indicators** (RC, NRC, TTM, variability) are useful to **prioritize** the product line development activities
- **Robust systems architectures** of product variants facilitate the identification of the product line architecture and the standardization strategy
- The variability levels: **Standard**, **Variant discrete, Variant continuous, Customized**
- **Variant drivers** express the root causes of the variability of a component.
- **Variability optimization actions** may rely on **(re)design** or **market analysis**
- **Pre-established modules** must be linked with **features** to create a product configurator and automate the product line instantiation.