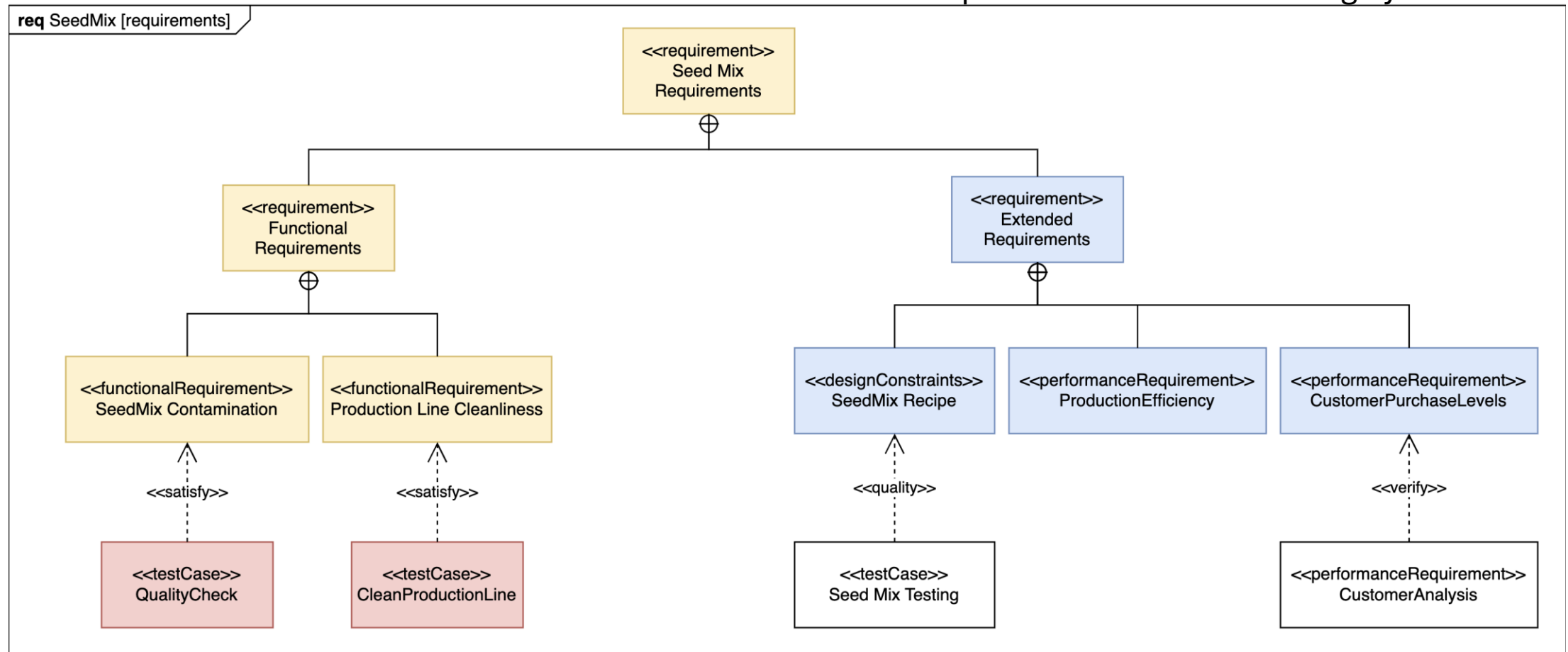# SysML2

Diagram Creation, Transcription, and Recreation

Motivation

- SysMLv2 provides extended capabilities for an already-powerful modeling language

- <u>Internal Block</u>, <u>Parametric</u>, and <u>Requirement Diagram</u> types focus on various important aspects of system design

- Exporting, sharing, and re-creating these diagrams is key
  - Saving as text allows for varied visualization, processing, and simulation from a given design
  - Allows for collaboration
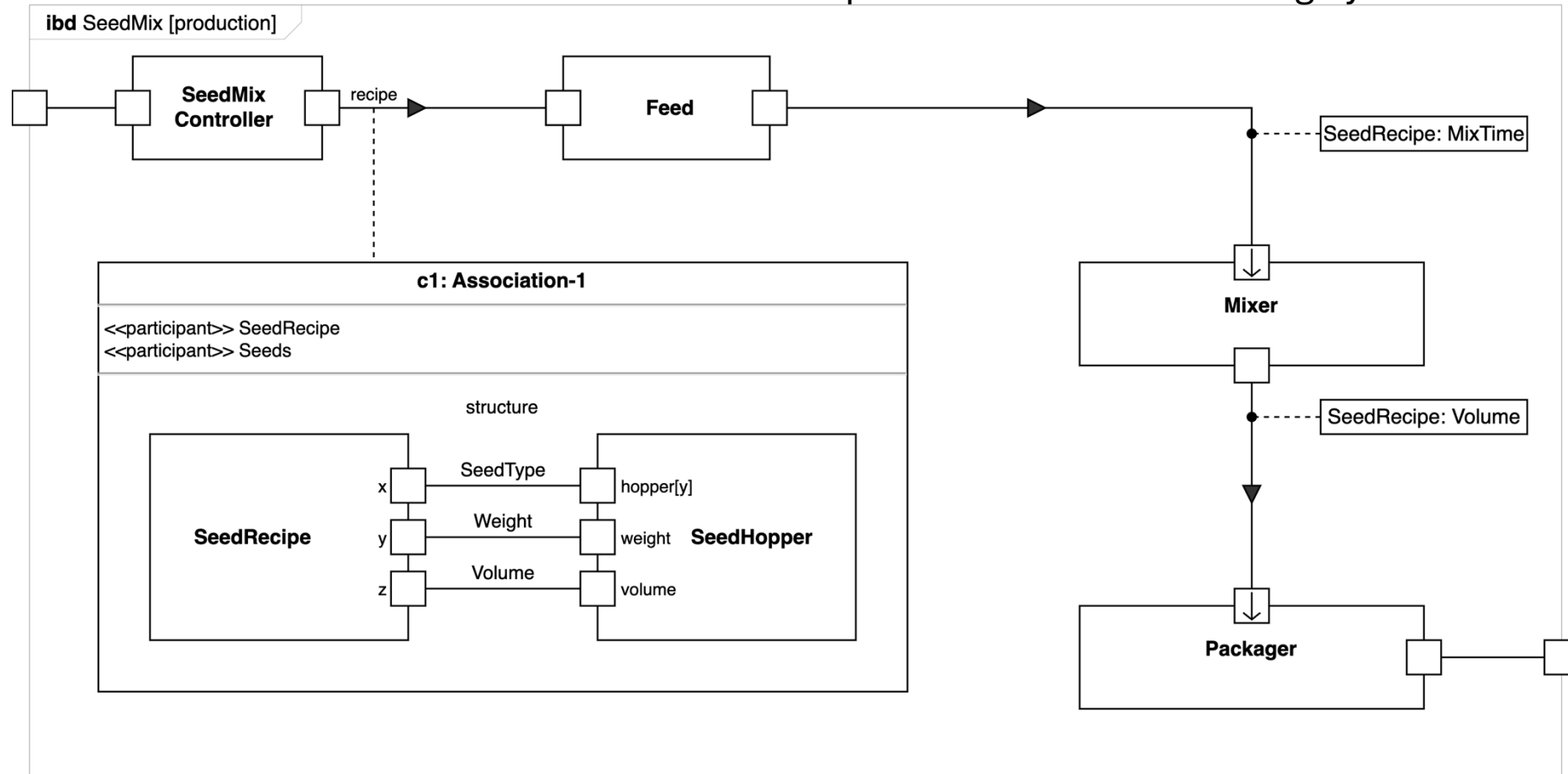
Requirements Diagram Overview

Functional Requirements (mandatory), Non-functional Requirements, Test cases
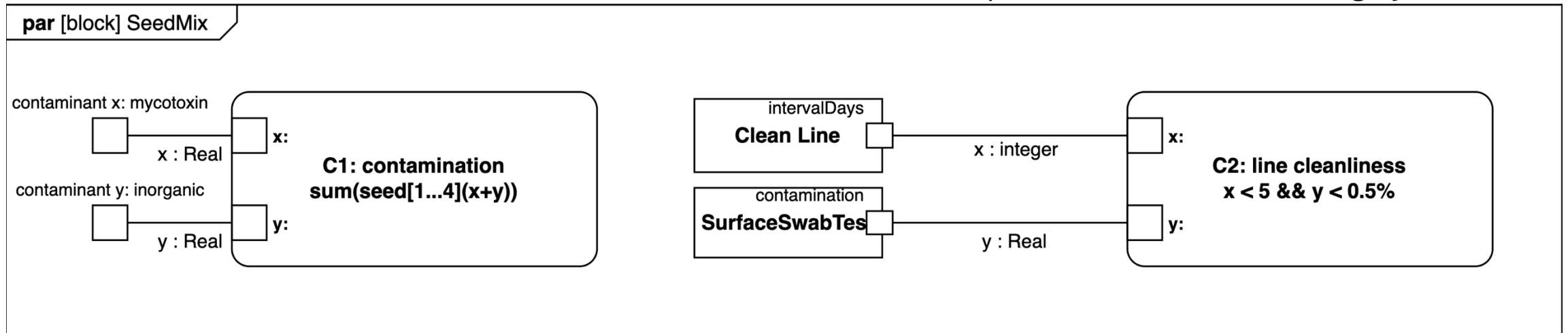
Internal Block Diagram Overview

Blocks (composable), Constraints (composable), Directed Block Connections, Ports, and Dependencies

Parametric Diagram Overview

https://www.drawio.com/blog/sysml-vs-uml

par [block] SeedMix

contaminant x: mycotoxin

x : Real

x:

contaminant y: inorganic

y : Real

y:

C1: contamination
sum(seed[1...4](x+y))

intervalDays
Clean Line

x : integer

contamination
SurfaceSwabTes

y : Real

x:

C2: line cleanliness
x < 5 && y < 0.5%

y:

Constraints, Parameters, and Variables

Ongoing Work

- Complete Internal Block Diagram recreation plugin
- Employ decorators to provide a better modeling experience