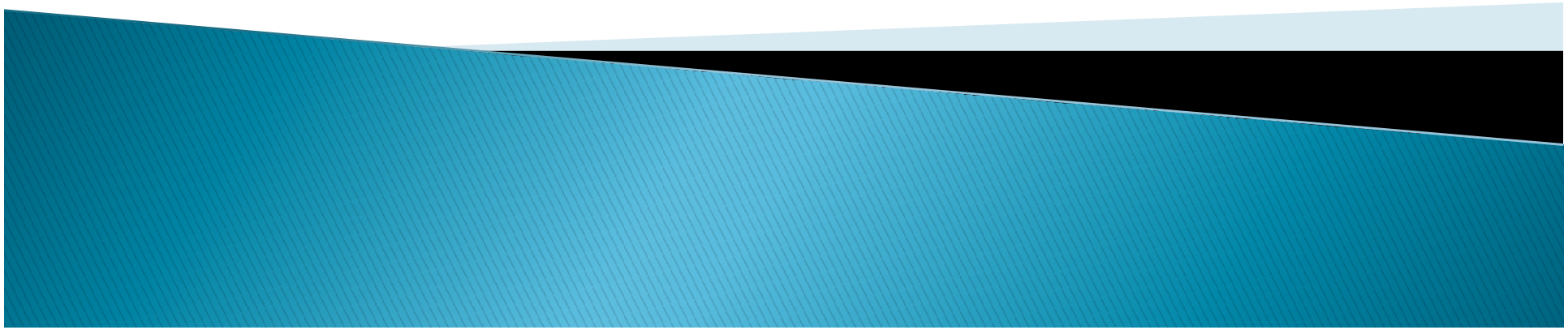
UML vs. SysML



General

Unified Modeling Language	System Modeling Language
Used to visualize software systems.	Extension of UML designed for use in systems engineering applications.
Helps to map the design an structure of complex software systems.	Helps to map a broad range of systems, including hardware, software, information and processes.
Enables an easy understandable visualization of complex software structures.	Enables an easy understandable visualization of complex software structures and improve communication in teams.

- SysML reduces some of the software-centric restrictions in UML.
- SysML is more flexible and expressive than UML.
- UML is designed for software development while SysML captures a wider range of systems.

Lucidchart (N.D.)

Diagram types

UML diagram types	SysML diagram types
•Structure Diagrams: ➢Class Diagram ➢Component Diagram ➢Deployment Diagram ➢Object Diagram ➢Package Diagram ➢Profile Diagram ➢Composite Structure Diagram •Behavioural Diagrams: ➢Use Case Diagram ➢Activity Diagram ➢State Machine diagram ➢Sequence Diagram ➢Communication Diagram ➢Interaction Overview Diagram ➢Timing Diagram	➢Requirements diagram ➢Parametric diagram ➢Block definition diagram ➢Internal block diagram ➢Package diagram ➢Use case diagram ➢Activity diagram ➢Sequence diagram ➢State diagram

Lucidchart (N.D.), Reggio et al. (2013)

References

- Lucidchart (N.D.) UML diagrams vs. SysML diagrams. Available from: https://www.lucidchart.com/blog/uml-diagrams-vs-sysml-diagrams [Accessed 24 May 2022].

- Reggio, G., Loetta, M., Ricca, F. & Clerissi, D. (2013) Whate are the used UML diagrams? A Preliminary Survey. EESSMOD MoDELS. 1078(10). Available from: http://ceur-ws.org/Vol-1078/paper1.pdf [Accessed 24 May 2022].