### Data Driven Simulation Framework

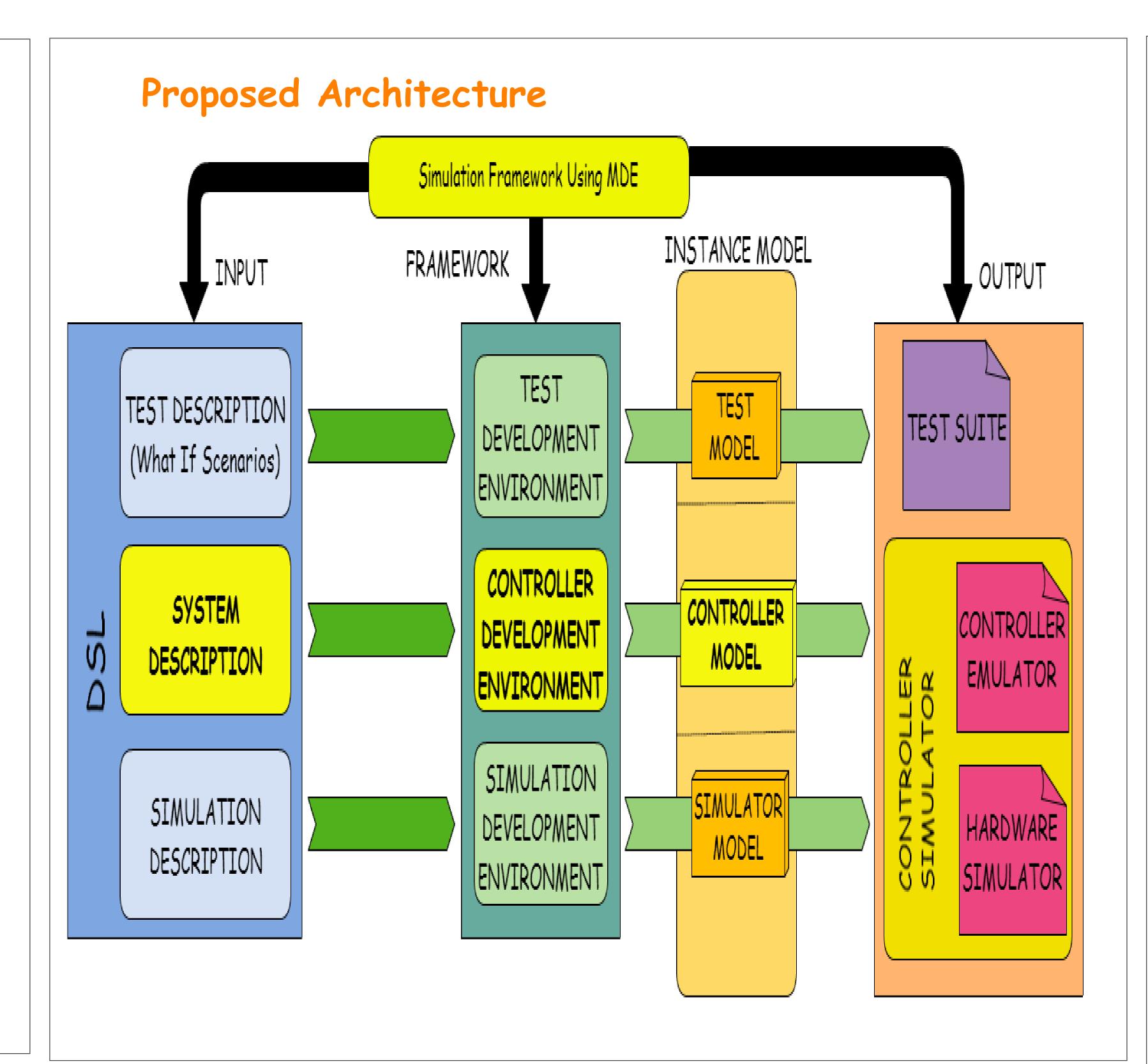
Amar Banerjee, Subhrojyoti R C, Puneet Patwari (Tata Research Development & Design Center, Pune, India)

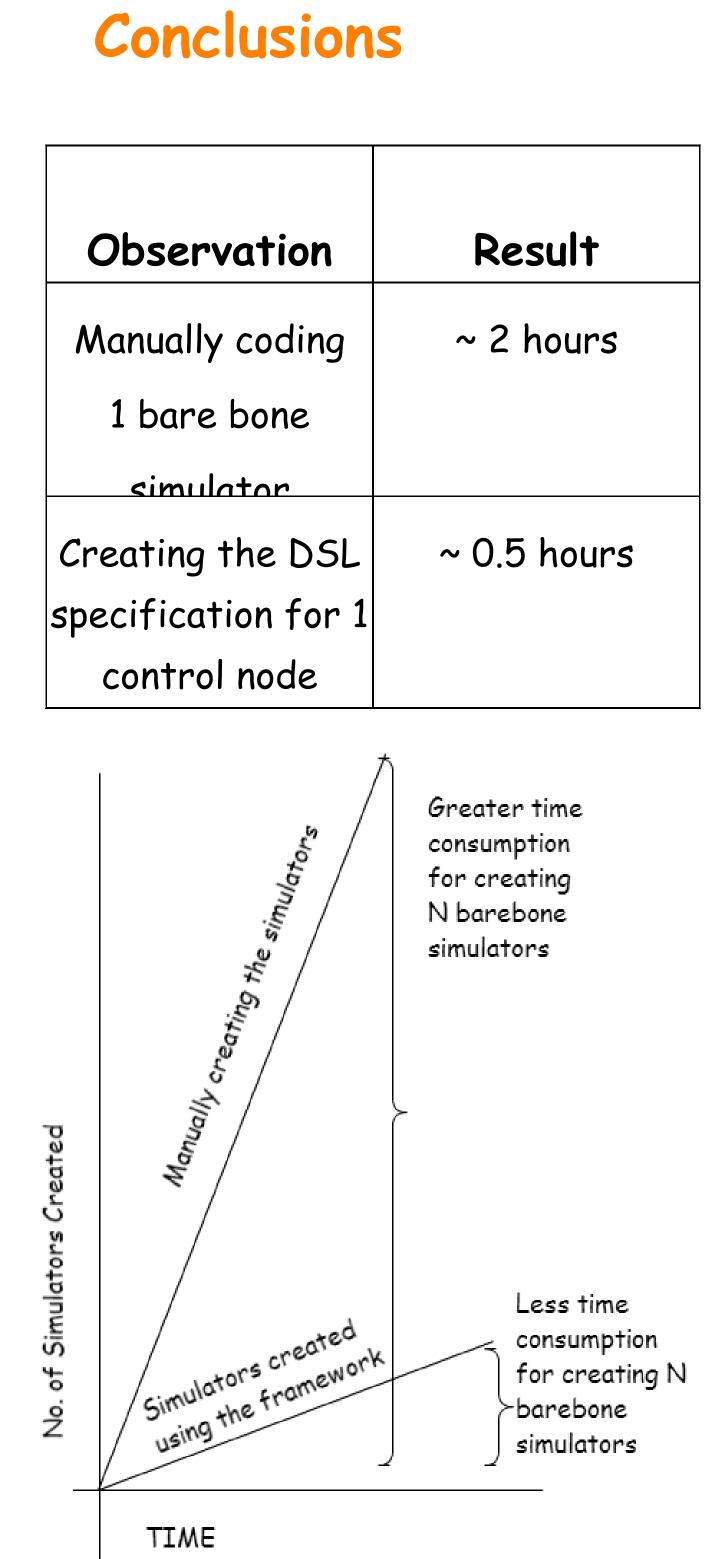
Lize van den Heever (SKA South Africa, Cape Town)

# Motivation Challenges in Testing monitoring and control systems for large projects like SKA. T = M \* N

- T = Total number of testable functionalities
- M = Total number of Control Nodes
- N = Number of testable functionalities per node
- Unit testing not enough need dynamic behavior testing.
- Huge manual effort to implement individual simulators.

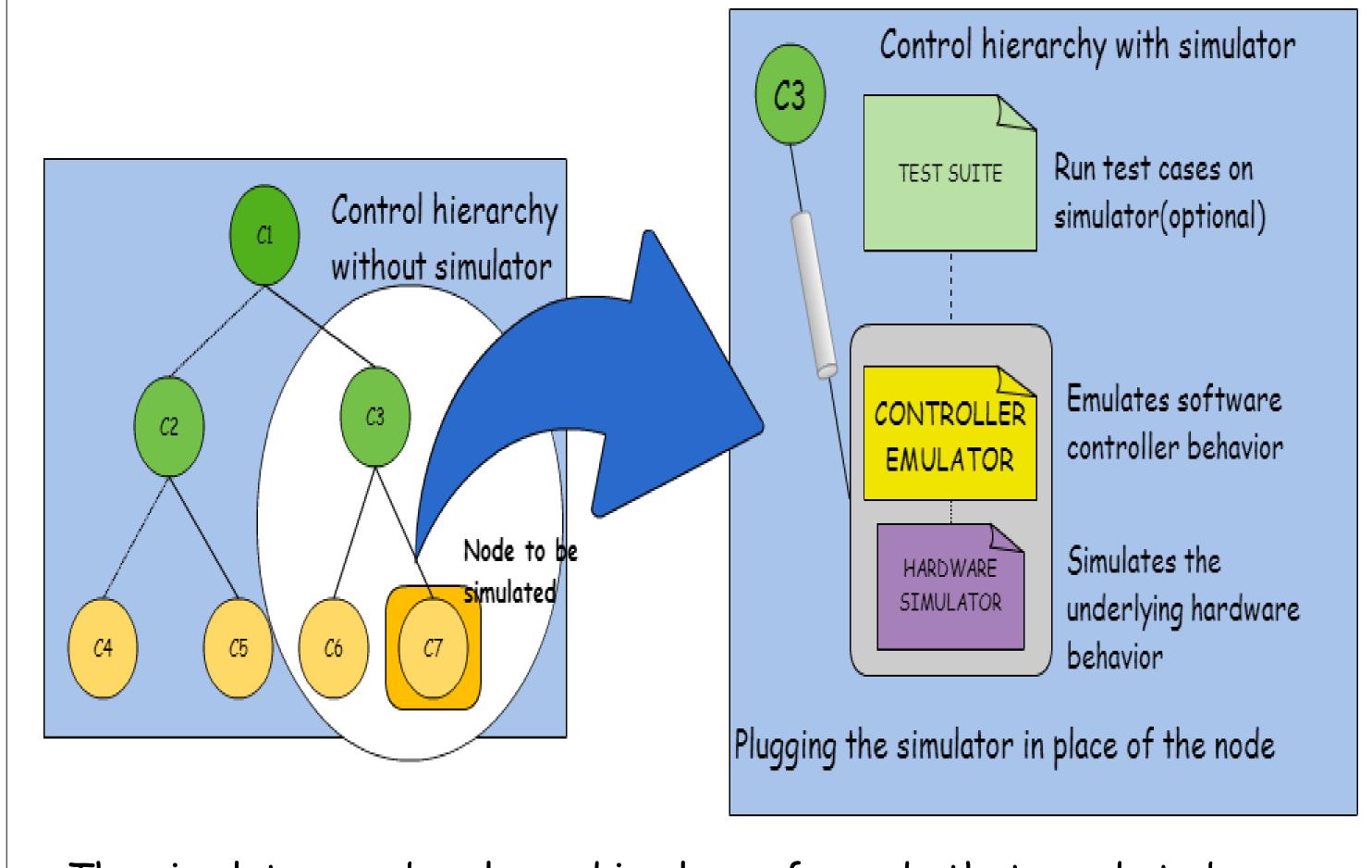
Solution cost optimized by the auto generation of simulators through simulation framework.





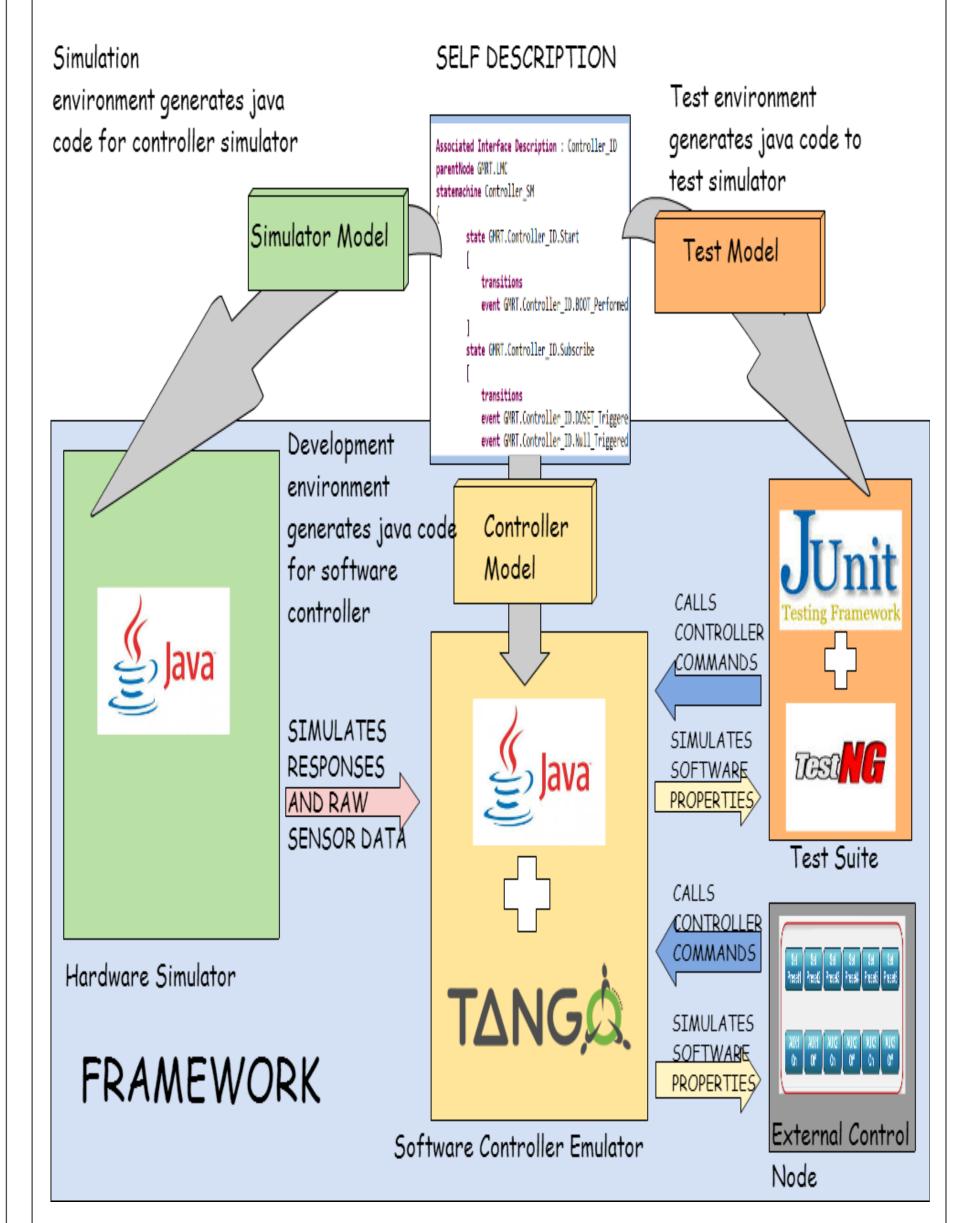
## Internal Details & Usage of Generated Simulator

A model driven engineering approach could be used to generate bare-bone simulators



- The simulator can be plugged in place of a node that needs to be simulated
- Test suite can also be generated to test the simulator

# Technology Stack and Configuration Data



### As a result we can conclude that

- More effort is required to create "N" simulators manually.
- Less effort required through simulation framework.

