



# **GeneAuto** **at Rockwell Collins France**

Further development and improvement

***Rockwell***  
***Collins***

Proprietary Information

## Future of GeneAuto at Rockwell Collins

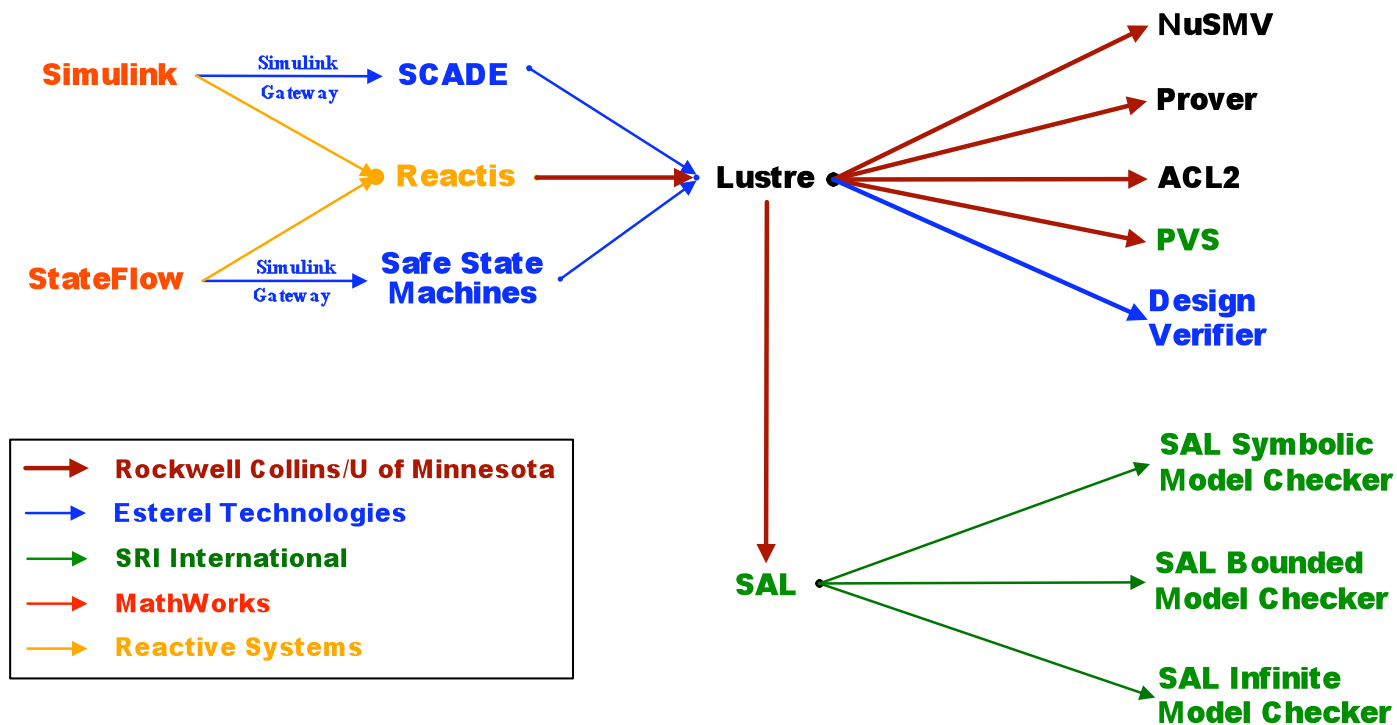
- Improvement and adaptation to our current processes
  - From the improvement areas detected during the evaluation
  - To better fit our MBD blocks
- Building a coherent set of tools
  - Integration with our Gryphon framework
- Tool qualification
  - Participation/sharing of qualification effort

## Improvement of the current version

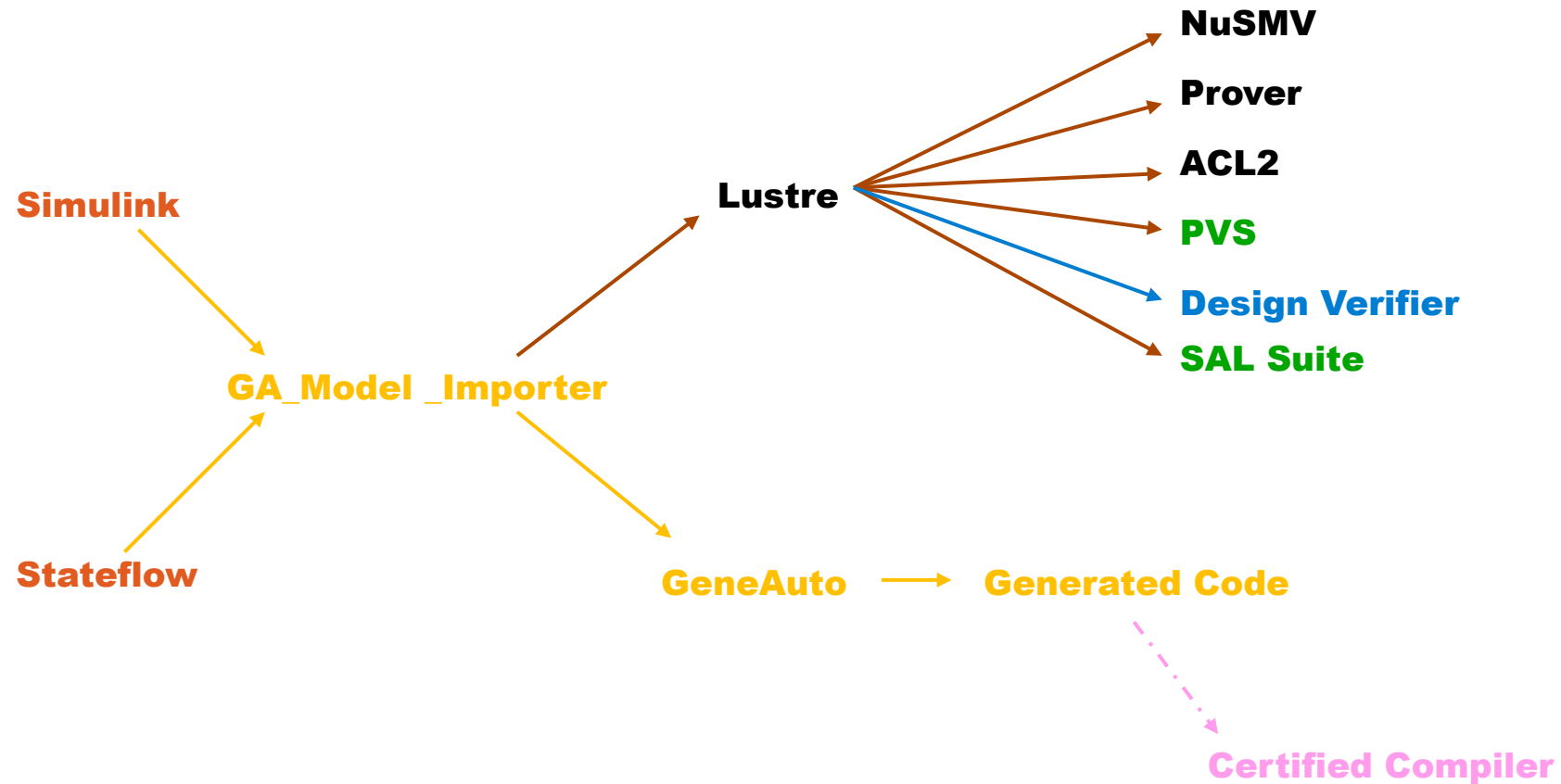
- Code improvement and additional options (not limited)
  - **Code Size / Memory Size**
    - Gene-Auto code is inlined, which requires much space in ROM. No option to generate reusable functions.
    - Many temporary variables are created. This is reduced by using the CodeOptimizer tool.
  - **Code protection against division by zero**
  - **Data type propagation** in Data Type Conversion block
  - **Remove 'strange' code**: For loops starting with 0 ending and excluding 1
- Improve interfacing with manual or generated code
- Extend block library to cover our MDN library
  - 30 blocks not yet covered

## Integration in our tools set

- The Gryphon framework:
  - We have an in-house formal model verification framework:



## Building a coherent set of tools



## Tool qualification

- How can we organize to share qualification efforts?
  - Participation in qualification documents?
  - Participation in a generic tool implementation document?
  - Any other?