

# Plato 2.5 Release Notes

Plato 2.5 is focused on workflow usability improvements and features 1) an overhaul of the Plato input deck syntax to provide a more consistent and general approach to defining problems involving different physics codes/problem types and 2) a corresponding automatic input file generator that supports both the Sierra/SD and Plato Analyze physics codes consistently either through GUI or command-line executions.

## **Plato Input Deck Syntax**

Plato aims to provide a framework that is very general and can accommodate optimization problems that involve multiple aspects and sometimes complex combinations of capabilities. To this end we have generalized some of the concepts in the input deck to make the components more modularized and reusable. This has also facilitated a more consistent input deck when using different physics codes such as Sierra/SD and Plato Analyze. Finally, this also makes Plato more extensible as different problem types are added to the capability suite. There is a new input deck reference manual that documents the input deck components and options.

## **Automatic Input File Generator**

Plato leverages an automatic input file generator behind the scenes to convert the Plato input deck into the set of configuration/input files needed to run Plato optimization problems in an efficient and parallel manner. The input file generator was updated to support the new Plato input deck syntax. It was also updated to support a wider range of the upcoming capabilities being provided through the Plato Analyze physics code. The input file generator is used in all GUI runs and can also be used from the Linux command line. There is better support now for the user to simply define the problem in the Plato input deck and let the input file generator do all of the work to generate the configuration/input files.



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