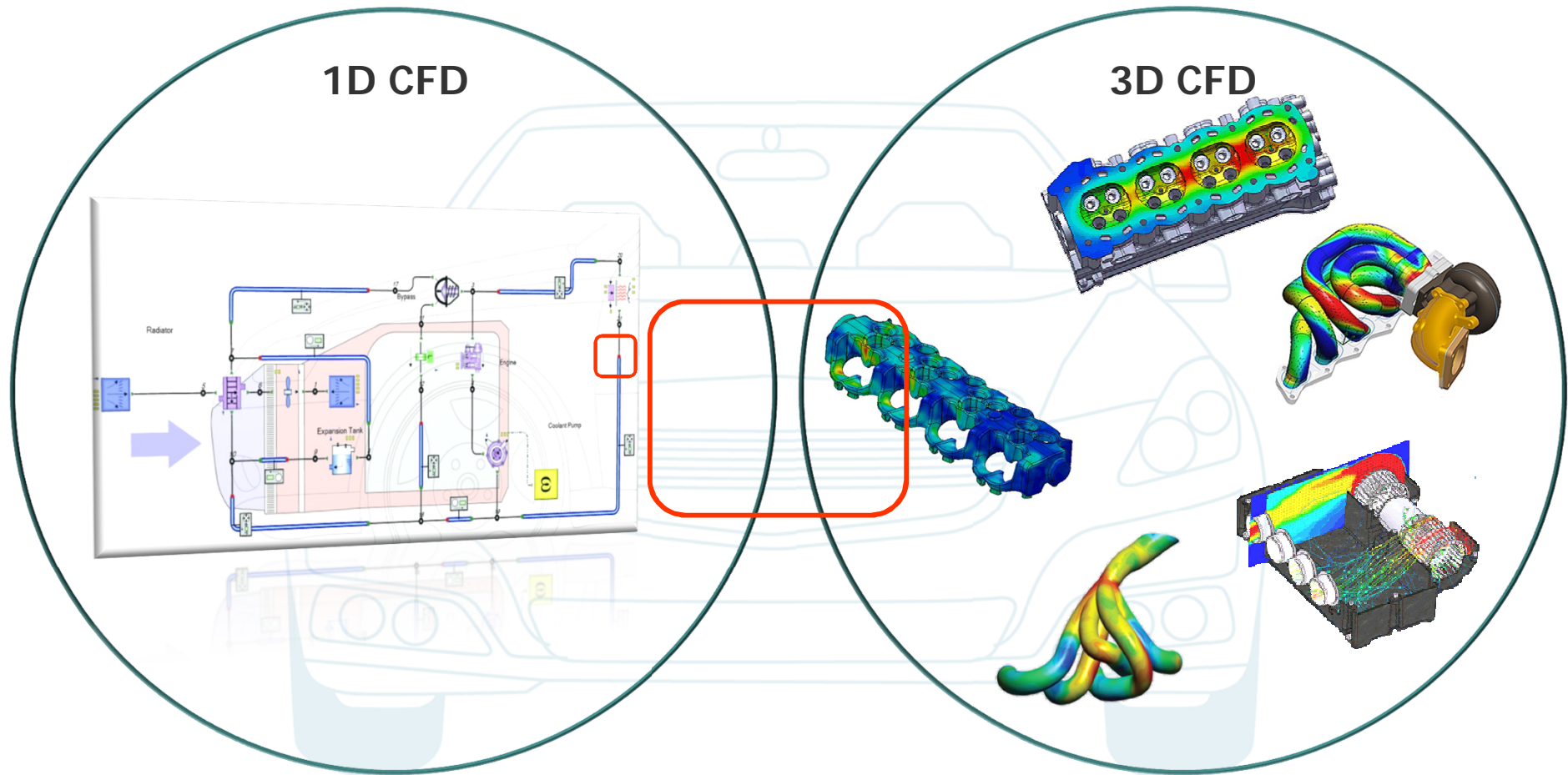
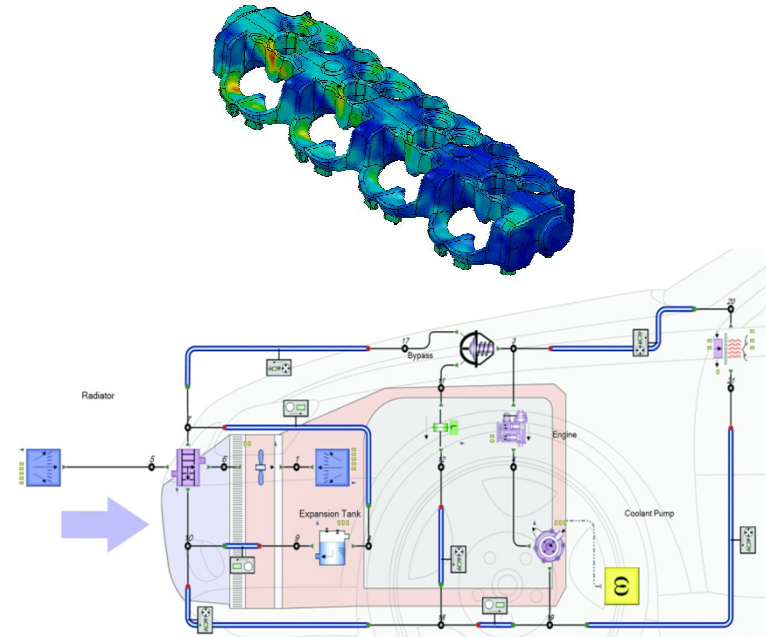


# Industry's *First Ever* Commercially Available General Purpose 1D-3D Native CFD Solution



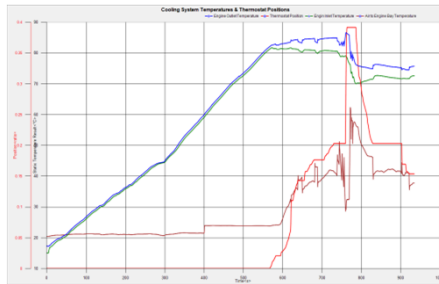
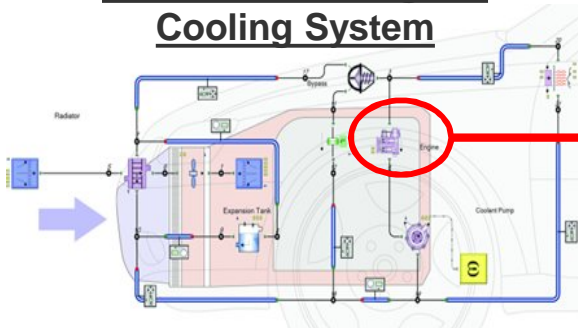
# Facilitating Upfront Engineering

- FloEFD Concurrent CFD
  - Truly embedded in major MCAD packages
  - Always in tune with design
- Integrated 1D-3D Native Solution
  - No third party middleware
  - No configuration or customization
  - No compatibility issues
- Reusable
  - Characterization securely stored in Flowmaster's relational database
  - Can be reused in future models

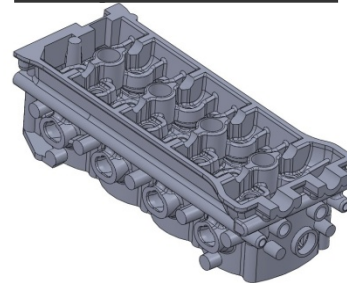


# Powerful Upfront 1D-3D CFD Solution Enables Rapid Accuracy Improvements

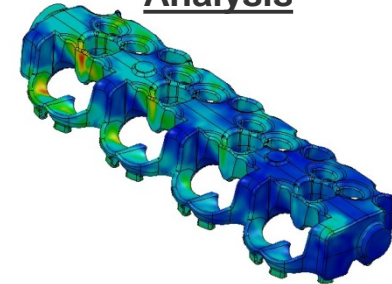
## Flowmaster Design of Cooling System



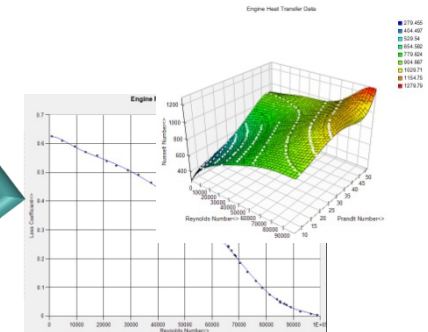
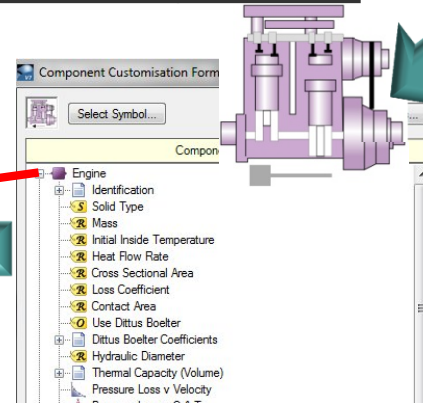
## 3D Water Jacket Component Model



## FloEFD Component Analysis

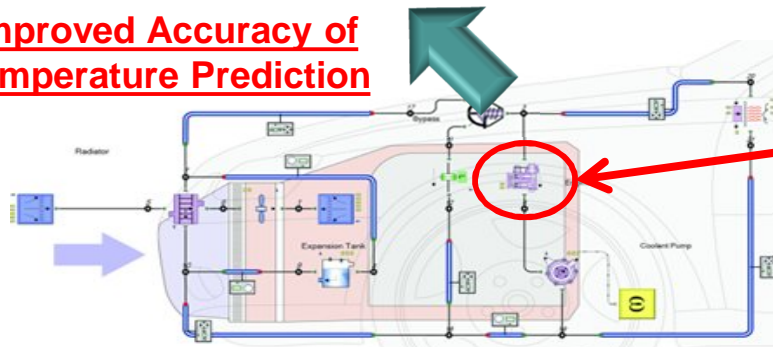


## FloEFD Performance Based Engine Model



## Characterization Results for System Analysis

## Improved Accuracy of Temperature Prediction



## Flowmaster Cooling System Analysis