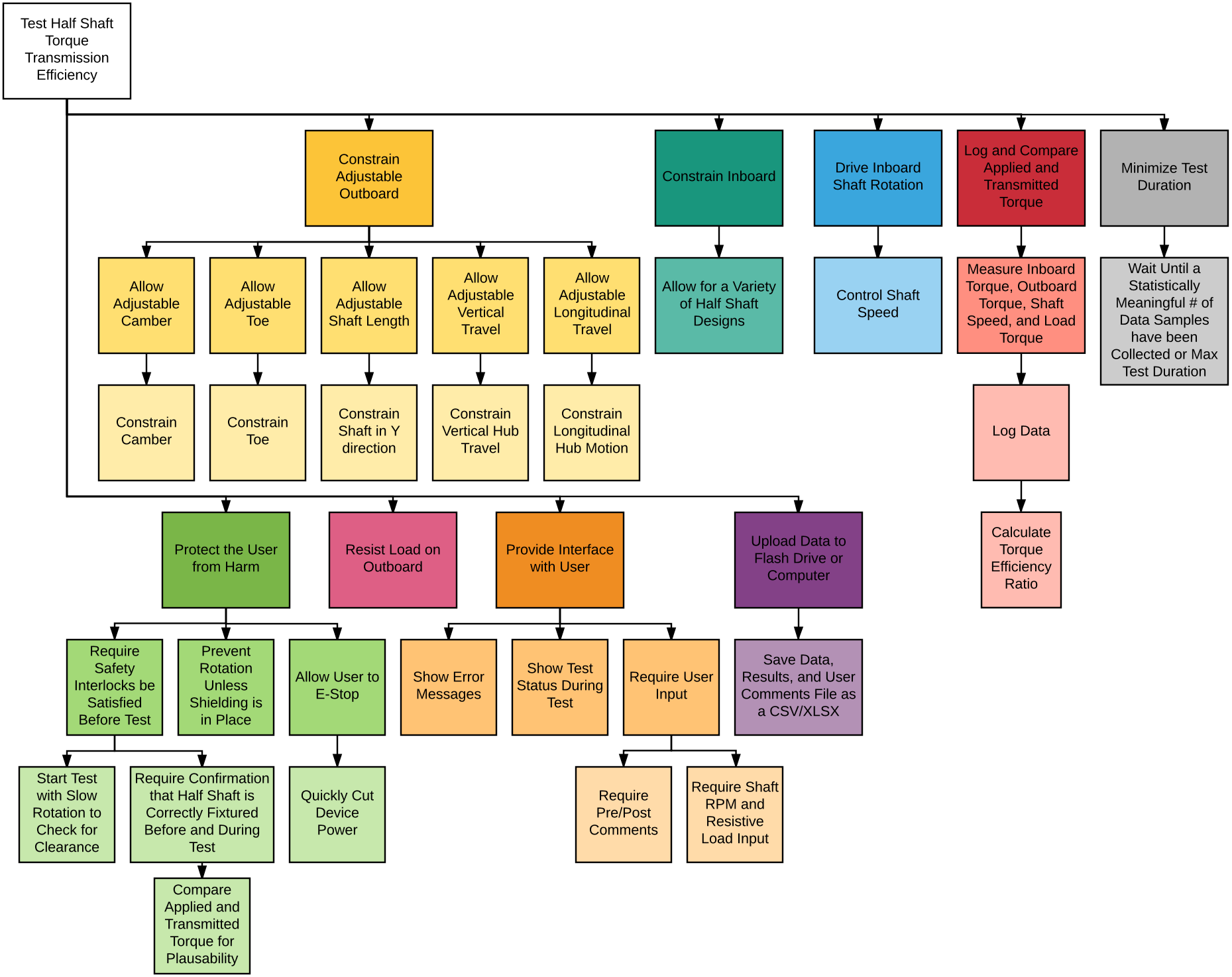
Test Half Shaft Torque Transmission Efficiency
Constrain Adjustable Outboard
Constrain Inboard
Drive Inboard Shaft Rotation
Log and Compare Applied and Transmitted Torque
Minimize Test Duration
Allow Adjustable Camber
Allow Adjustable Toe
Allow Adjustable Shaft Length
Allow Adjustable Vertical Travel
Allow Adjustable Longitudinal Travel
Allow for a Variety of Half Shaft Designs
Control Shaft Speed
Measure Inboard Torque, Outboard Torque, Shaft Speed, and Load Torque
Wait Until a Statistically Meaningful # of Data Samples have been Collected or Max Test Duration
Constrain Camber
Constrain Toe
Constrain Shaft in Y direction
Constrain Vertical Hub Travel
Constrain Longitudinal Hub Motion
Log Data
Calculate Torque Efficiency Ratio
Protect the User from Harm
Resist Load on Outboard
Provide Interface with User
Upload Data to Flash Drive or Computer
Require Safety Interlocks be Satisfied Before Test
Prevent Rotation Unless Shielding is in Place
Allow User to E-Stop
Show Error Messages
Show Test Status During Test
Require User Input
Save Data, Results, and User Comments File as a CSV/XLSX
Start Test with Slow Rotation to Check for Clearance
Require Confirmation that Half Shaft is Correctly Fixtured Before and During Test
Quickly Cut Device Power
Require Pre/Post Comments
Require Shaft RPM and Resistive Load Input
Compare Applied and Transmitted Torque for Plausability