

## Component and Material Lab-ARAI

ARAI – Pune is located in close proximity of automotive OEM’s, thus the main purpose of this lab at ARAI is to support OEM’s for integration of subsystem and full vehicle testing. NATRiP is in process to upgrade the some existing facilities of this lab at ARAI as well as enhancing the capability of component and material lab by establishing new equipments. The proposed lab under NATRiP up-gradation will equip with following technical capabilities:

### Component and Material Lab ARAI

Process Cycle	Description of Facility	Use of Facility
<b>DESIGN</b>	CAD/CAE	Design and Virtual structural analysis.
	<b>Prototyping</b>	
	Basic CNC Lab	Prototyping of particular component
<b>TESTING</b>	Structural Testing	Deceleration, impact and static/dynamic load test
	<b>Environmental Testing</b>	
	Climatic Chamber for full vehicle	Test Extreme environmental conditions
	corrosion chamber : sulphur dioxide	1200I, DIN50018
	Vacuum chamber for components	
	<b>Combined Structural &amp; Environmental Testing</b>	
	Electrodynamic Shakers + Climatic Chamber	Vibration + Temperature control +Solar simulation
	MAST + Climatic Chamber	
	Functionality Testing	Certification purpose
	Structural Testing	Mechanical shock, drop test
<b>ELECTRONIC COMPONENTS</b>	<b>Environmental Testing</b>	
	corrosion chamber : sulphur dioxide	
	Climatic + sun simulation + IR radiation chamber for components	
	Water test chamber for components	
	<b>Combined Structural + Environmental Testing</b>	
	Electrodynamic Shakers + Climatic Chamber	Vibration + Temperature control +Solar simulation
	MAST +Climatic Chamber	
	Electromagnetic Compatibility	