

<p><u>Review Period:</u> 2000 – 2003</p>	<p><u>Date:</u> February 2000 CLUSTER SHEET</p>
<p>01/01/2000 – 31/12/2003</p>	<p><u>Title:</u> DIESEL EXHAUST AFTERTREATMENT (DEXA)</p>
<p><u>Partners:</u></p> <ol style="list-style-type: none"> <li>1 FORTH/CPERI [R] Greece,</li> <li>2 FEV [I] Germany,</li> <li>3 AVL LIST GmbH [I] Austria,</li> <li>4 CRF[I] Italy,</li> <li>5 Johnson Matthey [I] United Kingdom,</li> <li>6 WIZARD ZAHORANSKY KG [I] Germany,</li> <li>7 OBERNOSTERER [I] Austria,</li> <li>8 ZEUNA STARKER [I] Germany,</li> <li>9 RENAULT [I] France,</li> <li>10 CDL-ACT [U] Austria,</li> <li>11 CUTEC-INSTITUT GmbH [R] Germany,</li> <li>12 CNR.IM [R] Italy,</li> <li>13 POLITECNICO TORINO [U] Italy,</li> <li>14 DIP. ING. UNIV.NAPOLI [U] Italy</li> <li>15 JRC EC DGXII [R] Netherlands</li> </ol>	<p><u>Cluster targets:</u></p> <p>The present cluster goal is to provide a complete and integrated approach at the European level, for diesel exhaust aftertreatment, with emphasis on particulate matter, focusing on three aspects:</p> <ul style="list-style-type: none"> <li>• the component technology integration aspect (project ART-DEXA)</li> <li>• the system design aspect (project SYLOC-DEXA)</li> <li>• the quality assessment/measurements aspect (project PSICO-DEXA)</li> </ul> <p><u>Strategic objectives (relating to the network):</u></p> <p>The cluster is focusing on demonstrating the potential for complying with the 2008 CO<sub>2</sub> reduction target through increased “dieselization” of the passenger car fleet. This requires the development of critical technologies for diesel exhaust particulate aftertreatment, without adverse effects on NO<sub>x</sub> emissions and maintaining the fuel economy advantages of the diesel engine towards the EURO IV emission standards horizon and beyond. A flow chart of the cluster projects and their interrelations is shown in Fig. 1.</p> <p>The diagram illustrates the DEXA cluster structure. At the top, a box labeled 'PREMTECH THEMATIC NETWORK, MARKET, OTHER PROJECTS, LITERATURE, CONTACTS' has arrows pointing down to three main project boxes: PSICO-DEXA, ART-DEXA, and SYLOC-DEXA. PSICO-DEXA focuses on 'Particle Size &amp; Composition' and includes tasks like 'Assessment and benchmarking of methods', 'Assessment of engine management effects', and 'Assessment of aftertreatment technologies effects'. ART-DEXA focuses on 'Advanced Regeneration Technologies' and includes 'Basic trap selection and materials screening', 'Active regeneration measures screening', 'Trap and control system manufacturing', 'Bench performance testing-integration with DeNox technology', and 'Vehicle performance testing'. SYLOC-DEXA focuses on 'System Level Optimization and Control' and includes 'Sub-module development', 'Validation data for sub-modules', 'Simulator development', 'Simulator validation and system optimization', and 'Optimized demonstrator design'. Each project box lists its 'DELIVERABLE'. Arrows show interrelations between these projects. Below these three boxes is a box for 'Cluster of Critical Technologies: Diesel Exhaust Aftertreatment (DEXA)'. This box is connected to 'OTHER PROJECTS' and 'OTHER CLUSTERS'. At the bottom, a box for 'Technology Platform 1: New Land Transport Vehicle Concepts' (ADVENT) is shown, which is supported by the DEXA cluster.</p>
<p><u>Cluster coordinator:</u> Dr. A. G. Konstandopoulos, FORTH/CPERI, 6<sup>th</sup> km. Themi-Charilaou rd., 57001 Themi, Thessaloniki, Greece</p> <p>Tel. +30 31 498 192, 498 193 Fax: +30 31 498 190 E-mail: <a href="mailto:agk@alexandros.cperi.forth.gr">agk@alexandros.cperi.forth.gr</a></p>	<p><u>Planned actions for the next period (2000):</u></p> <p>The cluster kick-off meeting took place on February 1-2, 2000. It was agreed that the cluster projects will have active involvement in the PREMTECH network and will share information through a dedicated web site, to be operational in the first 3 months of the projects</p>