COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (CSIR)

VALUE OFFERING TO THE AUTOMOTIVE INDUSTRY

ACCELERATE INNOVATION

CSIR's expertise in product development and localisation helps align your products with local preferences and requirements, ensuring a stronger market presence.

OPTIMISE EFFICIENCY

Transform your factory operations with the CSIR's state-of-the-art digital solutions, optimising resources and time, ensuring maximum productivity and profitability.

IMPROVE QUALITY

Ensure supreme product quality and performance through the CSIR's testing and quality assurance services and cutting-edge facilities and equipment.

EMPOWER WORKFORCE

Invest in your workforce's skills and capabilities, positioning your business at the forefront of industry growth and the benefits of the fourth industrial revolution (4IR).

EMBRACE SUSTAINABILITY

Transition towards eco-friendly practices with the CSIR's support, contributing to cleaner and more sustainable production.

SECURE FUTURE

Safeguard your digital infrastructure and operations against cyber threats with CSIR support in information security and cybersecurity.

science, technology & innovation
Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA

CSIR
Touching lives through innovation

ABOUT THE CSIR

The CSIR is South Africa's leading scientific and industrial research and development organisation.

The organisation has played an instrumental role in advancing scientific research and technological innovation over decades in various sectors. As the automotive sector holds immense importance for South Africa's economy, industrial growth, employment levels and export revenues, the CSIR places a focus on supporting its technological transformation, skills base and ability to navigate the challenges and opportunities presented by the 4IR.

SERVICES, CAPABILITIES, INFRASTRUCTURE

Strategy development and 4IR readiness assessment

The CSIR assists the automotive sector in developing strategies to navigate the challenges and opportunities presented by the 4IR. This involves assessing the industry's readiness for digital transformation, adopting 'disruptive' modern technology and recommending strategies for integrating improvements in its operations.

Feasibility studies and capability analysis

The CSIR conducts feasibility studies to evaluate the viability of new projects, technologies and initiatives within the automotive industry. Capability analysis helps to identify areas in which the industry can enhance its competencies to remain globally competitive. This includes production processes, systems and skills.

Technology roadmaps and cleaner production assessments

The CSIR collaborates with stakeholders to develop technology roadmaps that outline the future trajectory of the automotive industry. Additionally, the organisation supports cleaner production initiatives, promoting sustainable manufacturing practices that reduce adverse environmental impact and support the circular economy.

Product development and localisation

The CSIR plays a critical role in driving product development and localisation efforts. This includes creating new automotive products and solutions, as well as adapting global products for the local market. Adding to local competitiveness in production and reducing dependency on importation. Digitisation and lifecycle management ensure efficient product development processes.

Factory efficiency and optimisation

The organisation contributes to enhancing factory efficiency by offering solutions such as digital factory layout planning, manufacturing execution systems and simulation tools. These technologies optimise production processes and resource allocation – increasing productivity and reducing wastages.

Production technologies

The CSIR's expertise covers a range of production technologies, including robotics, mechatronics, quality control and assurance. The organisation houses capabilities and facilities for advanced manufacturing processes, including additive manufacturing, metal injection moulding, laser engineering and casting technologies, using a range of materials – conventional or novel – to suit a specific requirement.

Future skills development

Recognising the importance of skilled human capital, the CSIR supports the development of future skills within the automotive sector. Initiatives such as the Learning Factory create a modular, customisable training and education platform to nurture a workforce prepared for industry demands – now and for the future.

Industry services

The CSIR offers specialised industry services such as cleaner production support, onsite component manufacture, prototyping, mechanical testing, non-destructive testing, battery testing, accreditation support and cybersecurity robustness. These services ensure product quality, safety and compliance with industry standards.

For more information:

e-Micromobility Industry Development

The CSIR is supporting the local production of electric two-, three-, and micro four-wheeled vehicles through specially developed technologies. This will strengthen local industry's manufacturing, vehicle customisation, and after-sales service capabilities while enabling scale through standardised components. The initiative aims to develop a fit-for-purpose, competitive micromobility ecosystem for South Africa and the continent.– now and for the future.

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