The Applied Innovation Center at DRI is focused on innovation in applied data visualization and computational analysis. The AIC translates scientific ideas into practical, market-based solutions.

Evolved from decades of data intensive pursuits at DRI, the Applied Innovation Center is leading the Institutes’ technology-based research and commercialization efforts in four key research areas and emerging platforms - Life Sciences and Informatics; Climate, Weather and Energy; Internet-of-Things (IoT) and Remote Sensing; and Engineering and Design.

The AIC is an enabling platform for DRI scientists, integrating advanced technologies, specialized instrumentation, digital infrastructure, and intellectual capital. Custom solutions and results are meant for the emerging innovation-based, knowledge-driven economy. We collaborate with a diverse community of partners, including academic research centers, government institutions, entrepreneurial startups, regional and global industry.
The AIC portfolio couples subject matter expertise, computational capacity, visualization assets, and data science to generate market-based solutions across our 4 domains.

**CLIMATE | ENERGY**

The WINDSTM platform is an immersive and interactive weather intelligence and numerical decision support engine. Weather forecasting is dynamically “pulled to the ground” allowing commercial partners the ability to gauge the impact of weather on their assets, critical operations and business continuity. For example, WINDSTM modeling enables the energy and agricultural industries to gain insight into how the near-term weather will drive critical resource allocation, such as electricity and water consumption. This forecast platform allows our partners to move from weather prediction to weather prescription.

**ENGINEERING | DESIGN**

Our computational capacity coupled with the DRI Virtual Environment (DRIVE™) 3D virtual reality platforms establish a design and engineering continuum. With the ability to support our partners from concept to prototype to commercial ready product, we provide design tools and visualization capabilities that manifest in a virtual innovation canvas. In-silico design positively impacts the critical project performance variables of risk reduction, spend containment, and efficient exploration of “the possible”. Our current partners are architecting industrial facilities, designing new vehicles, and seeking insight within large-scale models of flow dynamics.

**IOT | REMOTE SENSING**

The AIC is working with partners in water use, logistics, transportation, and climate/weather analysis to deploy remote sensing and IoT platforms. DRI researchers have been leveraging remote sensing technology to gather data on every continent on earth to better understand some of the most complex environmental phenomenon known to science. The AIC is building upon these scientific achievements incrementally and advancing software, hardware, data analysis/visualization platforms and networking capabilities to build smarter business process, smarter cities and regions, and smarter manufacturing, and industrial operations.

**LIFE SCIENCES AND INFORMATICS**

With projects spanning microbial ecology, population health, genomics and drug discovery, the AIC is collaborating with partners who are pushing the boundaries of applied science. AIC and DRI research scientists introduce the conceptual lens of system thinking and a bias for informatics, both of which engender new perspectives on the data intensive pursuits of understanding the origins of life, the propagation of health and disease, and supporting resilient and sustainable ecosystems across species. From finding new defenses against the smallest pathogens to monitoring and improving the quality of life for humans, DRI and the AIC are supporting life sciences innovation.