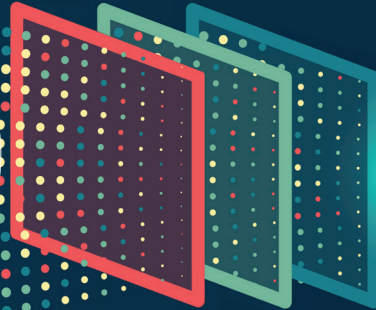# CREXDATA

Critical Action Planning over Extreme-Scale Data

Real-time critical management of extreme scale and complex data

Pushing the frontiers of analytics, prediction, simulation and visualizatiion to provide extremely precise, timely and useful results to support human and automated decision-making in critical situations

OBJECTIVES

Develop an extreme-scale data **ingestion and fusion toolbox and realistic simulation models and tools**

Create real-time predictive knowledge and forecasts **including federated learning, complex event forecasting under uncertainty and techniques for Prediction-as-a- Service**

Reduce perceived complexity via **graphical workflow design and visual anlaytics coupled with eXplainable AI approaches and augmented reality under uncertainty**

CASE STUDIES

Weather emergencies use case

Ingest and fuse extreme data to improve situation awareness that informs decisions in weather emergency scenarios

Health crisis use case

Integration of epidemiological and multi-scale simulation models with machine learning to support decision-making in health crises

Maritime use case

Real-time route forecasting to ensure safer navigational routes

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