

DHS S&T Support of NLE11 Using SUMMIT

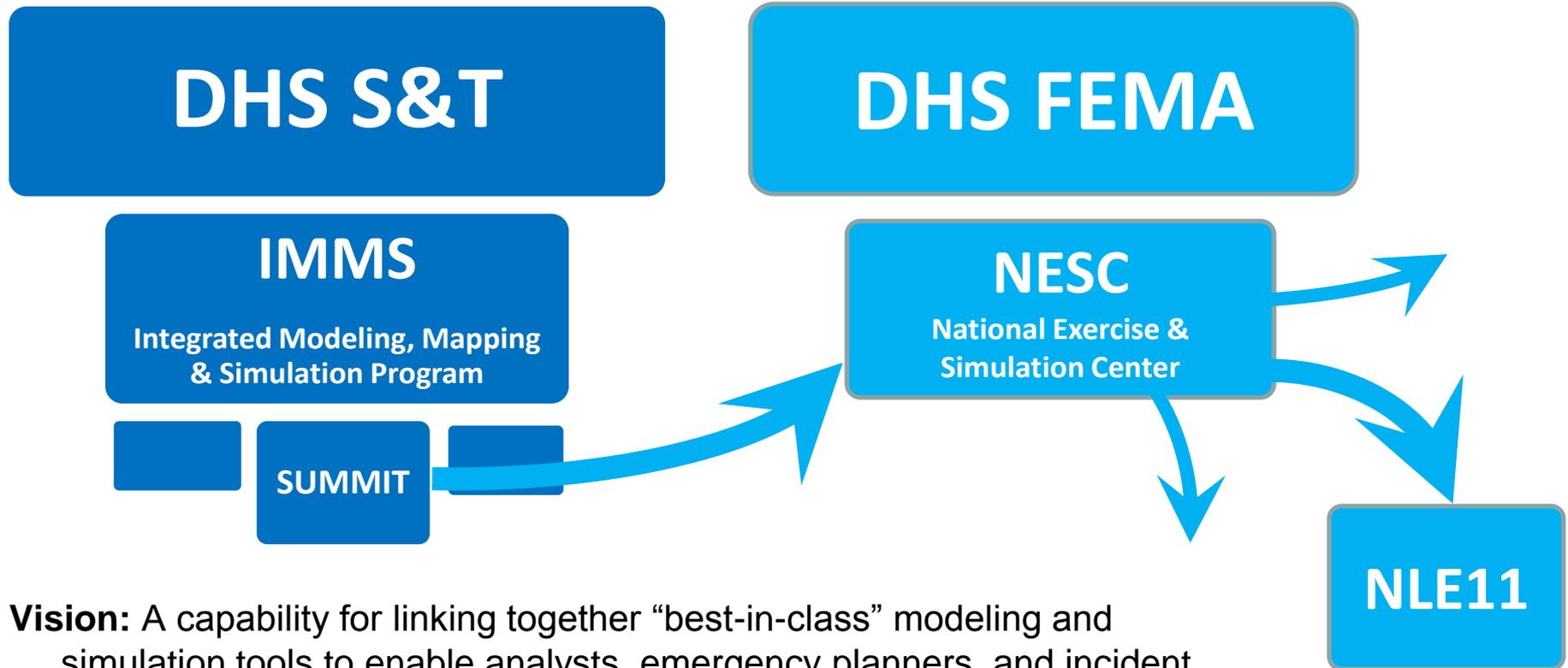
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Standard Unified Modeling, Mapping, and Integration Toolkit (SUMMIT)



Vision: A capability for linking together “best-in-class” modeling and simulation tools to enable analysts, emergency planners, and incident managers more effectively, economically, and rapidly prepare, analyze, train, and respond to real or potential incidents.



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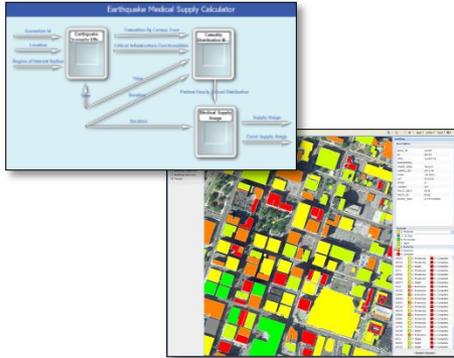


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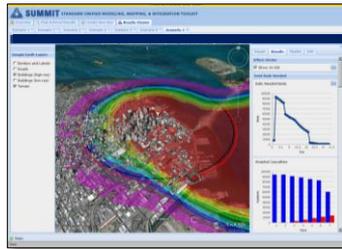
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SUMMIT is providing next-generation exercise capabilities to NLE11



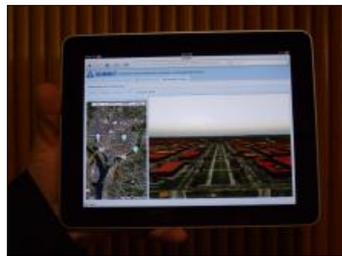
Planners use SUMMIT to generate and refine scenario data

- Linking models to calculate data for scenario
- Bridging model-driven scenario with objective-driven scenario



Controllers use SUMMIT to visualize scenario data

Visualizing model output in 2D (GIS) and with charts/graphs, supporting common operating picture



Players use SUMMIT to view scenario data in a virtual world

Introducing next-generation immersive visualization tools for exercises



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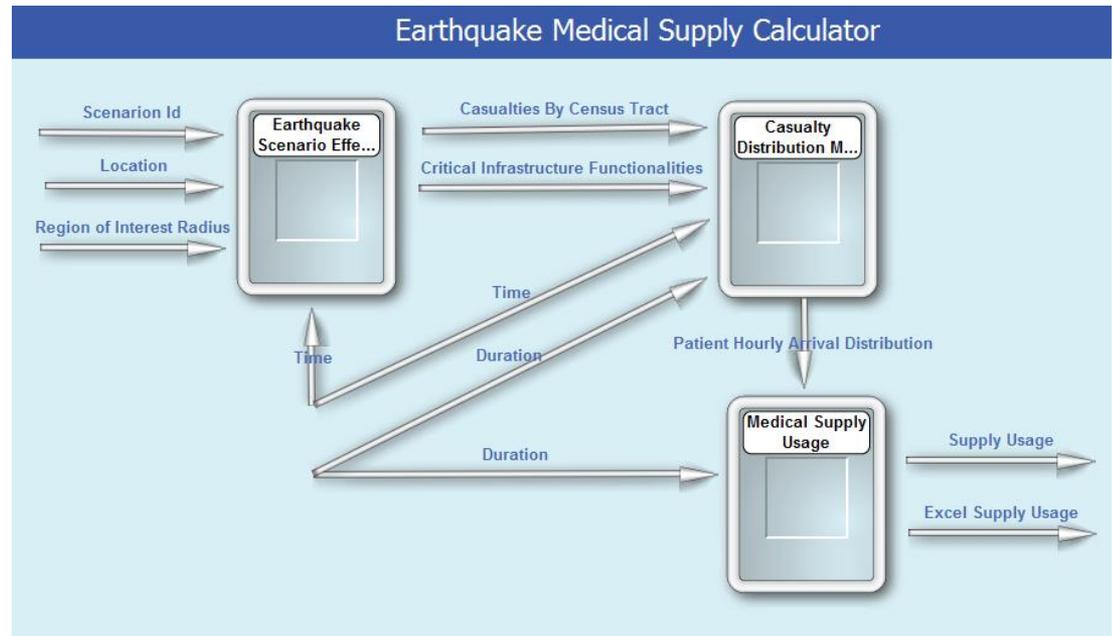
Planners use SUMMIT to generate medical surge data for scenario

SUMMIT linked HAZUS outputs to casualty distribution model and AHRQ Hospital Surge Model.

Casualties from HAZUS were distributed over time to nearest undamaged hospitals. AHRQ Hospital Surge Model calculated medical needs (staffing, supplies, hospital census).

Medical surge data is part of scenario and will be used by controllers in MCC during exercise conduct.

Medical surge data was calculated for all hospitals and medical centers receiving casualties in all 8 states playing in NLE11.



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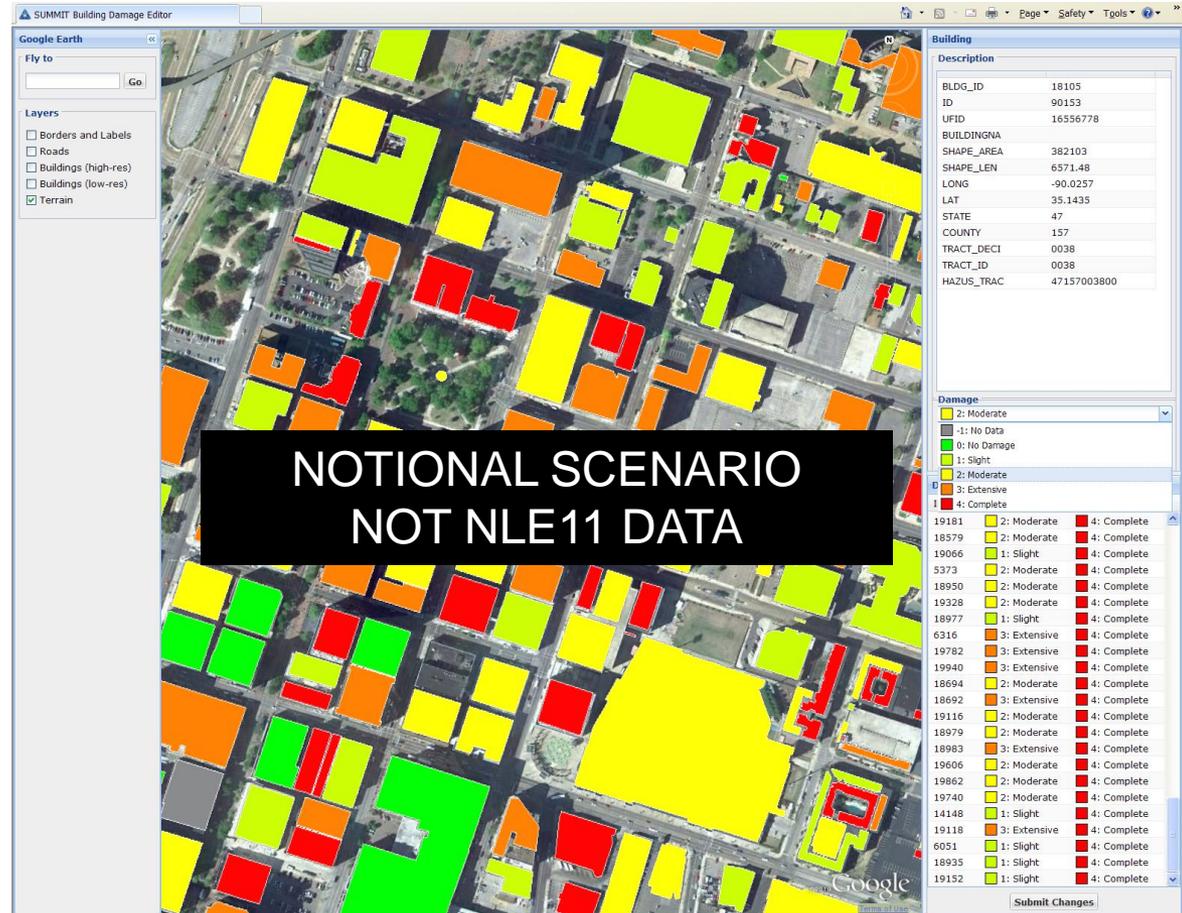
State and local planners use SUMMIT's building damage adjudication tool to refine scenario

SUMMIT generated individual building damage states, based on HAZUS results.

Individual building damage states can be modified by planners to support exercise objectives.

Adjudicated building damage will be used in MCC during exercise.

Tool is being piloted in locations with shaking severity (MMI) > VI and populations > 25,000.



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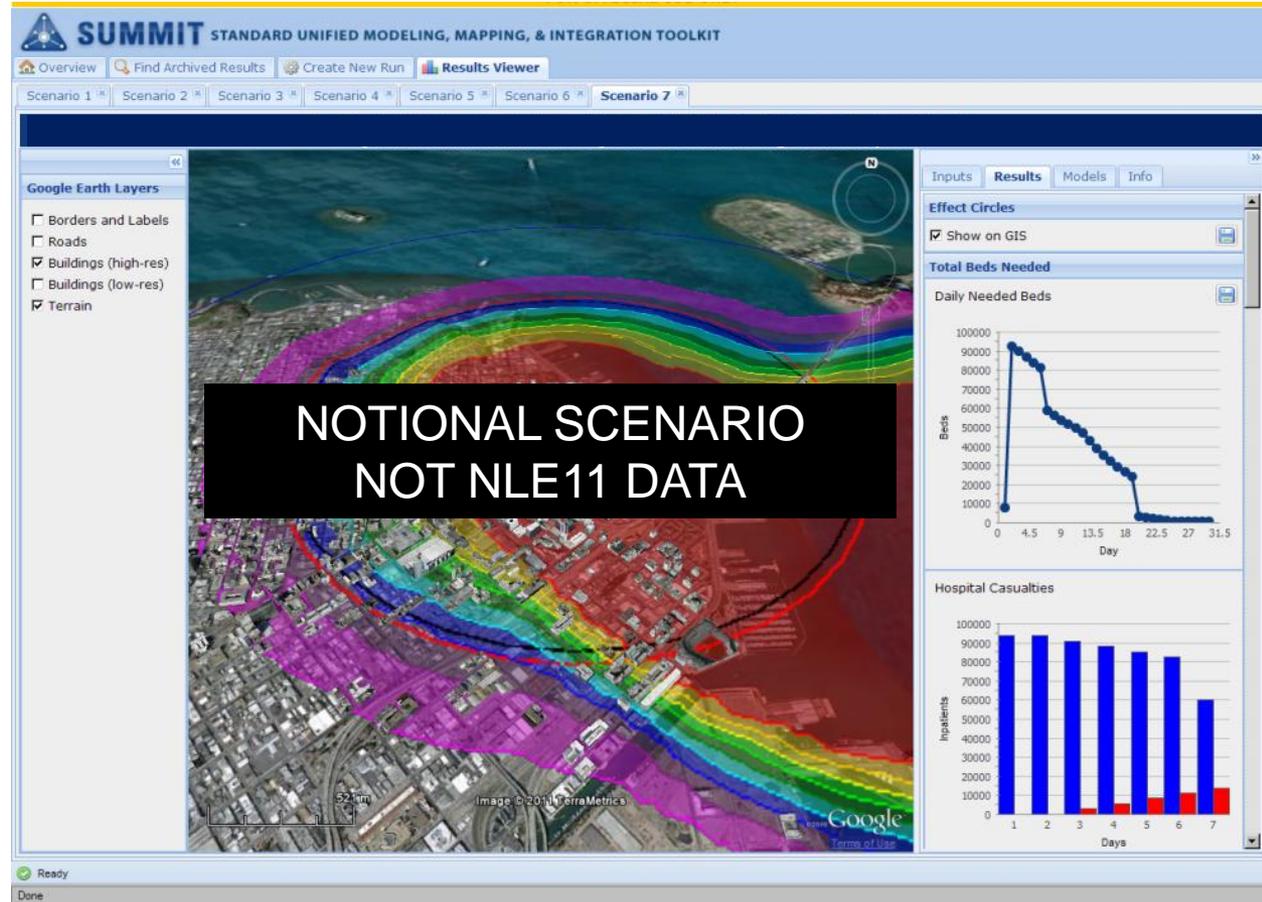


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Controllers use SUMMIT to visualize damage and medical surge data

SUMMIT has a results viewer that will display model output in 2D (GIS) and as charts and graphs.

SUMMIT will be used to view HAZUS and medical surge data for all 8 states in MCC during exercise. This will support the common operating picture.



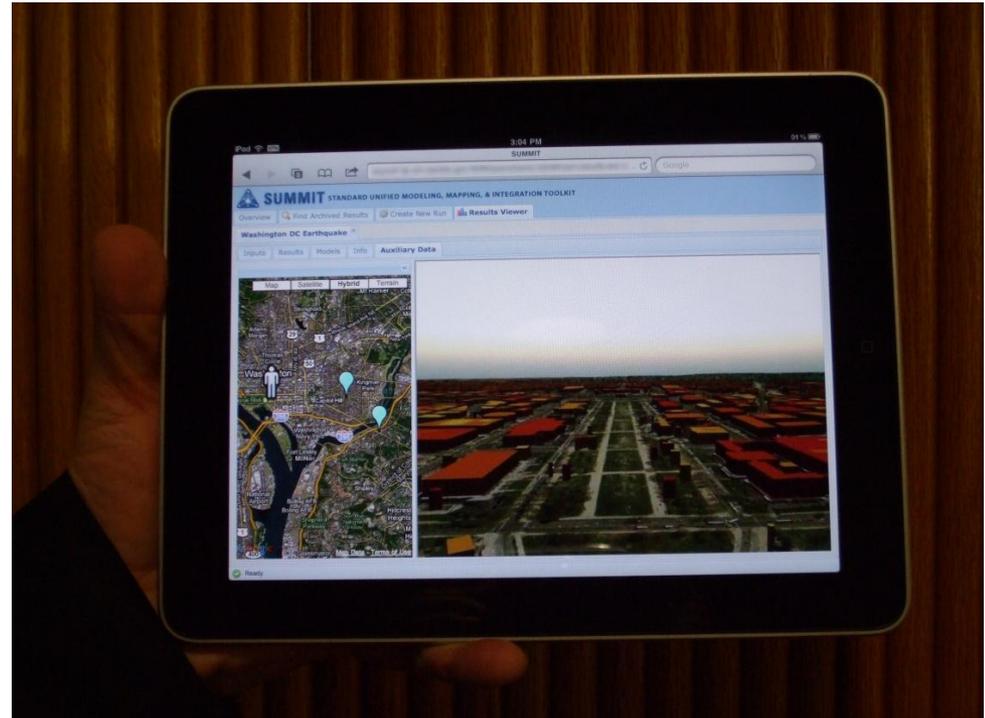
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Damage assessment teams use SUMMIT to view virtual building damage in the field

SUMMIT generated individual building damage states, based on HAZUS results. Building damage is being adjudicated with exercise planners. Damage data will be visualized in 3D environment and viewed on a portable device (iPad).

Images of scenario building damage will be used by 'boots on the ground' players during damage assessments. This virtual view of damage in the field provides enhanced realism to exercise scenario.

iPad visualization is being piloted in Jonesboro, AR.



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