CBNAIR Objectives

Minimize negative impact to humans (Fundamental Objective)				
Second Level Objective	**Third Level Objective**	**Measure of effectiveness**	**Metric**	**Collection Method**
Allow first responders to detect presence of NBC agent	Receive inputs from on-scene responder	Degree of data corruption sent from responder to EBCAIS	Percentage of actual data sent	OT&E, performance reviews
	Receive & evaluate environmental data from external sensors	Accuracy of testing	Sensitivity/Specificity tests	Computer modeling, OT&E
	Access EBCAIS agent detection information	Database availability	Percentage of time	Computer modeling, OT&E
		Degree of data corruption sent during return transmission	Percentage of data sent	OT&E
Provide first response medical diagnosis	Receive vital signs from responder	Data corruption	Percent of actual data sent	OT&E
	Receive other visible symptoms from responder	Data corruption	Percent of actual data sent	OT&E
	Process information received from first responders	System response time	Time (seconds)	Computer modeling, OT&E
	Access EBCAIS medical diagnosis information	System response time	Time (seconds)	Computer modeling, OT&E
		Accuracy of information received	Percentage of data sent	Diagnosis recommendation provided by and evaluated by medical experts
	Transmit diagnosis to on scene responder	Data corruption	Percentage of actual data sent	OT&E
Recommend medical treatment	Evaluate medical diagnosis	Effectiveness of evaluation algorithm	Compare to medical expert evaluations	Medical expert determination
	Access EBCAIS medical treatment information	System response time	Time (seconds)	Computer modeling, and OT&E
Provide effective evacuation plans	Estimate affected area based on environmental conditions	Compare EBCAIS results with models		Computer modeling, release mock agent
	Identify evacuation	Compare EBCAIS		Computer

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	routes	results with models		modeling, human only tests
	Locate shelter facilities	Compare EBCAIS results with models		Computer modeling, human only tests
	Provide information to command center and on scene personnel	System response time and availability	Time (seconds, minutes)	Computer modeling, OT&E

Minimize negative impact to the environment and property (Fundamental Objective)

Second Level Objective	Third Level Objective	Measure of effectiveness	Metric	Collection Method
Provide initial clean-up recommendation to first responders	Determine/calculate contaminated area	Level of negative affects	Various	Observations, field tests
	Provide clean up procedures for detected agent	Effectiveness of recommendations	Various	Determine impact to environment and property
	Recommend level or protective gear	Effect on clean-up personnel	Various	Observations, OT&E, protective gear testing
	Recommend possible containment agents	Sensitivity/Specificity		Various
Provide COA to contain affected area		Level of negative affects	Various	Observations, exercises, lessons learned

Optimize system performance (Means Objective)

Second Level Objective	Third Level Objective	Measure of effectiveness	Metric	Collection Method
Interoperate with other public safety systems		Apply industry/government system integration standards	Level of compliance varies based on methodology used	Testing methods may vary based on methodology
Minimize latency			Time (seconds)	OT&E, system performance measurement tools
Maximize system		Percentage	Time (seconds, minutes, days, etc)	OT&E, system performance

availability				measurement tools
Maximize reliability		Sensitivity/specificity		Computer modeling, OT&E
Maximize ease of use		User satisfaction	Various ways to measure	Questionnaires, interviews
Maximize portability		Weight	Lbs/kgs	
	Mobile comms capability	Bandwidth Type of wireless comms Range Durability	Frequency Miles	Electronic measurement tool Stress tests Develop prototype OT&E

Minimize cost (Means Objective)

Second Level Objective	Third Level Objective	Measure of effectiveness	Metric	Collection Method
Minimize development costs	Identify EBCAIS objective	Approval by system users	Various	Questionnaires, interviews
	Accurately capture operational requirements	Approval by system users	Various	Questionnaires, interviews
		Compare to policy/guidance documents	Various	Research and interviews
	Accurately capture system requirements		Various	Stakeholder feedback
	Employ experienced developers		Productivity	Productivity tools and methodologies
Minimize life cycle cost	Use open source/industry standard technologies		Dollars	Various
	Develop cost effective long term maintenance strategy		Dollars	Various costing methods
Minimize training costs	Develop a user friendly system	User response time	Time (seconds, minutes)	Perform exercises and observer users
	Time required to be proficient		Time (hours, days)	Perform exercises, run computer based training scenarios

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	Evaluate response results		Subjective attributes	Lessons learned from actual incidents, exercises, OT&E
Minimize 'schoolhouse' training	Determine level of training required to make users proficient	Perform front end training analysis to determine level of training required	Various	Evaluate recommendations with exercise observations
Maximize the number of structured processes to increase automation	Determine number of processes performed by system or significantly aids responders	Compare to processes responders could not significantly rely on EBCAIS	Various	Long term study based on evaluating actual incidents, exercises, and interviews w/users
Deliver operational system on schedule (Means Objective)				
Maintain development schedule		Compare projected schedule to actual schedule	Days, weeks, months, years	User project management tools such as MS Project
Assign the best qualified personnel to the development of EBCAIS		Level of expertise of employees	Productivity	Observations, employee evaluations
Maintain dialogue with appropriate stakeholders		Various	Various	Various