

Explosive Device Response Operations Target Capability Calculator Overview

Purpose of the Tool

This calculator was developed to help bomb squad commanders and response planners determine the number of bomb teams needed within a squad based on the risks faced by the jurisdiction(s) they support. The tool estimates bomb team demand by considering a jurisdiction's population, likely attack profile, and critical infrastructure/key resources. Bomb team demand estimates by population are derived by a survey of bomb squads across 23 counties and cities of different sizes and characteristics. The population estimates are further refined through TCL 2.0 planning factors as they relate to differing attack profiles and as selected by the user. Finally, bomb team requirements may be adjusted to account for threats to critical infrastructure.

In addition, the tool presents initial and life-cycle costs for acquiring and maintaining bomb teams. Costs are based on team configurations as specified in National Incident Management System (NIMS) resource typing definitions (team types and descriptions can be found within the tool itself). Planners can customize the costs and quantities of personnel and equipment to reflect the realities and needs of their jurisdiction. In this way, the tool provides jurisdiction-specific costs to assist with budgeting and the preparation of investment justification proposals.

How to Use the Tool

When using Excel 2007, please go to the control bar at the top and allow macros. When using Excel 2003, click "Allow macros" upon opening the calculator.

Jurisdictions can input their basic risk factor information on the "Your Info" page. This creates the suggested team types and numbers, which is then populated throughout the tool. Default quantities and costs are already populated in the tool, but planners can change these to reflect the costs and needs of their jurisdiction. This customization is then copied so that the output cost pages are jurisdiction-specific. Costs are presented in terms of the initial investment costs as well as annualized life-cycle costs for maintenance.

Cost Drivers

Cost is annualized in the calculator to assist in bomb squad budgeting and to identify cost drivers. Cost drivers are those component costs which, on an annualized basis, are most expensive. In almost all cases, equipment will consistently have a higher initial cost than personnel, but will have significantly less annualized cost when the service life of the equipment is considered. Personnel, however, will consistently have a higher annual cost than equipment will.

Another important aspect of cost is that generally, a handful of equipment items are responsible for the majority of annualized equipment cost. For instance, the explosive ordnance disposal (EOD) response vehicle, large robot, and CBRNE containment vessel



are fairly obvious cost drivers because of their large initial expense. However, the Chemical Biological Response Aide (COBRA) computer is the next equipment cost driver due to its much shorter service life even though it has a much smaller initial cost when compared with vehicles, robots, and containment vessels.

How to Use the Results

This calculator supports planners, decision-makers, and grant-writers as they decide how many EDRO teams may be necessary at the jurisdictional level, and how much they will cost over their average nine-year lifespan. Throughout the tool, there are boxes marked “How could I use this information.” Click on those boxes for specific examples of how those data can be utilized.

Tool Limitations

This tool looks at the team-based resource requirements of capabilities, including equipment, personnel, and training. It does not take into account other parts of preparedness, such as building strong plans to implement the EDRO capability, or exercising the capability to keep it operational and effective.

It is also important to note that running this tool at the city/county level does not produce the full picture of regional preparedness. EDRO teams are often shared across geographical areas that supersede city or county limits. Users can calculate requirements for larger jurisdictional footprints (such as a UASI) by combining populations and risk factors. However, the requirements produced will be only the number and types of teams needed, and not where (geographically) they should be placed to ensure maximum capability coverage.

References

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