

## INTRODUCTION

In 2016, the World Health Organization (WHO) adopted the voluntary Joint External Evaluation (JEE) process to help countries strengthen their capacities to prevent, detect, and respond rapidly to public health events under the International Health Regulations (2005) (IHR). The JEE Tool, a data collection instrument, is used as part of this collaborative process to assess IHR- and Global Health Security Agenda (GHSa)-relevant capacities, and to identify and prioritize capacity-building needs. Targeting resources effectively to build and sustain capacities requires stakeholders to develop plans that are actionable and contain sufficient costing information to support rational and sustainable implementation efforts. Since the IHR entered into force in 2007, national stakeholders and their international partners have struggled to define the costs of strengthening and maintaining health security systems that cross levels and agencies and rely on multi-sectoral coordination for action. Based on a methodology developed by our research team in case study countries spanning multiple WHO regions, we have ***developed a publicly available, web-based costing tool to support countries in developing costed action plans to achieve capacities prioritized under the JEE process.*** The IHR costing tool integrates user-supplied, country-specific data into a template derived from field practices and best guidance for achieving specific capabilities that contribute to IHR core capacities. This costing tool, in combination with the JEE and financing tools already available, represent a significant step in helping national and international decision makers develop practical plans to improve global health security.

[WWW.GHSCOSTING.ORG](http://WWW.GHSCOSTING.ORG)

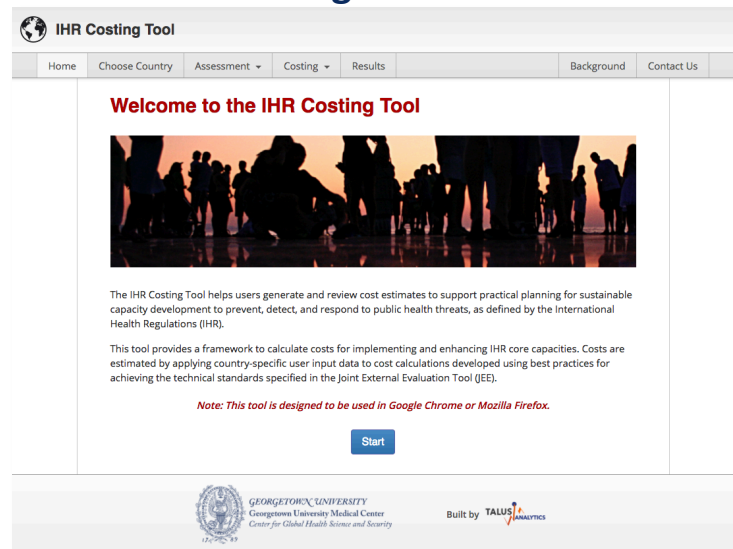
## METHODOLOGY

This work builds on costing templates, previously developed by our research team, based on a review of IHR implementation in 14 case study countries and further refined through country feedback collected while supporting WHO in developing and pilot-testing an earlier conceptual framework for IHR costing in 6 countries. Since the JEE contains more indicators than the previous IHR Core Capacity Monitoring Framework, we reviewed published guidance from WHO, OIE, and other international authorities to address the new indicators. In addition, published JEE evaluations were reviewed to identify the specific capabilities required to achieve a given score for each indicator, and the activities necessary to build each capability.

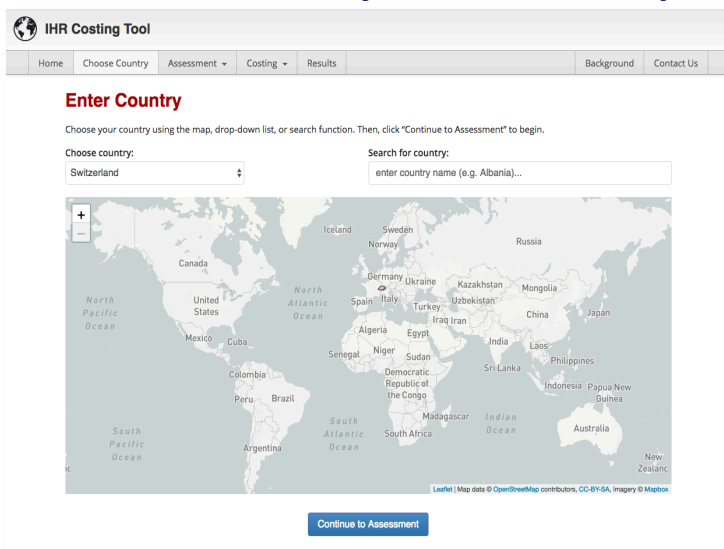
We developed an interactive, web-based user interface to guide users through the process of estimating costs for a user-specified step increase in JEE capacity score. A back-end database of cost calculations covers costing for each capability and activity identified in the above analysis. Calculations include multipliers for each administrative level, where applicable, because IHR requires capacities to detect, assess, and report unusual events from the local, intermediate, and national levels. To support summary analysis and planning efforts, each cost is tagged with a specific JEE indicator, functional category, and whether it represents a start-up, capital, or recurring cost. Indicators for which costing tools have already been determined elsewhere are linked and aligned where possible to help prevent duplication or confusion.

## RESULTS

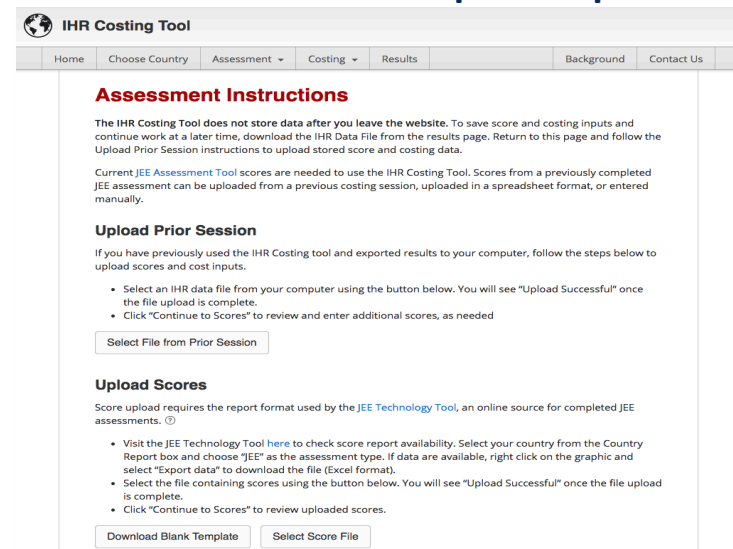
### 1. Home Page: Introduction



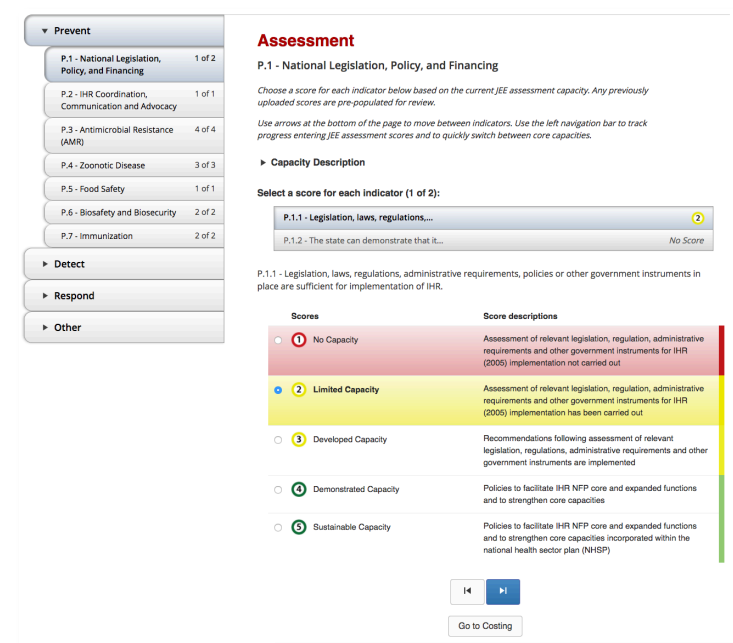
### 2. Choose Country: Interactive Map



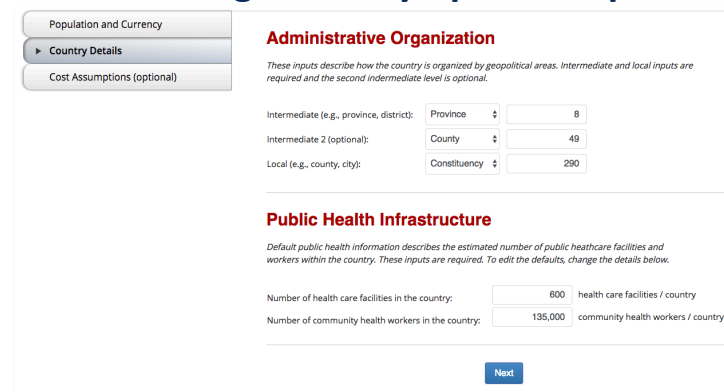
### 3A. Assessment: File Upload Options



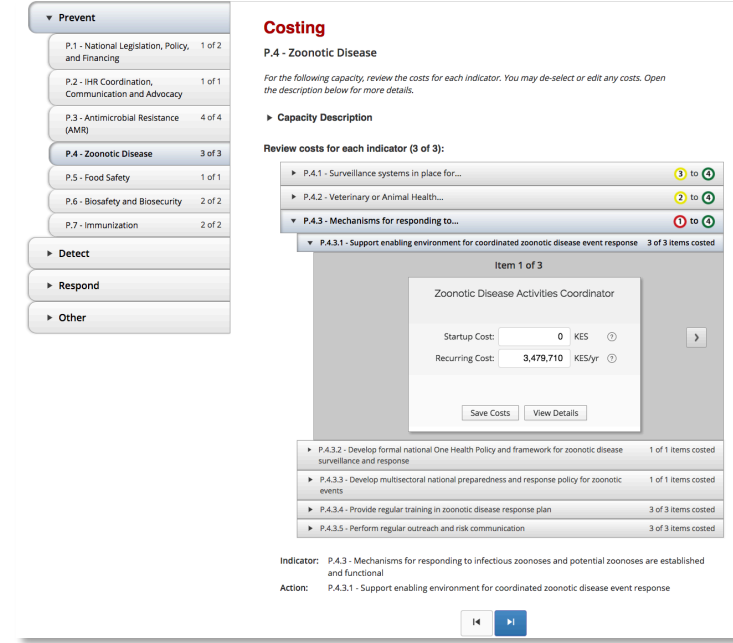
### 3B. Assessment: Enter and Review JEE Scores



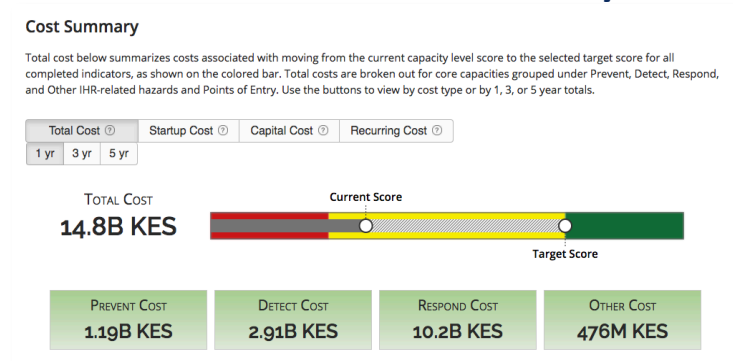
### 4A. Costing: Country-Specific Inputs



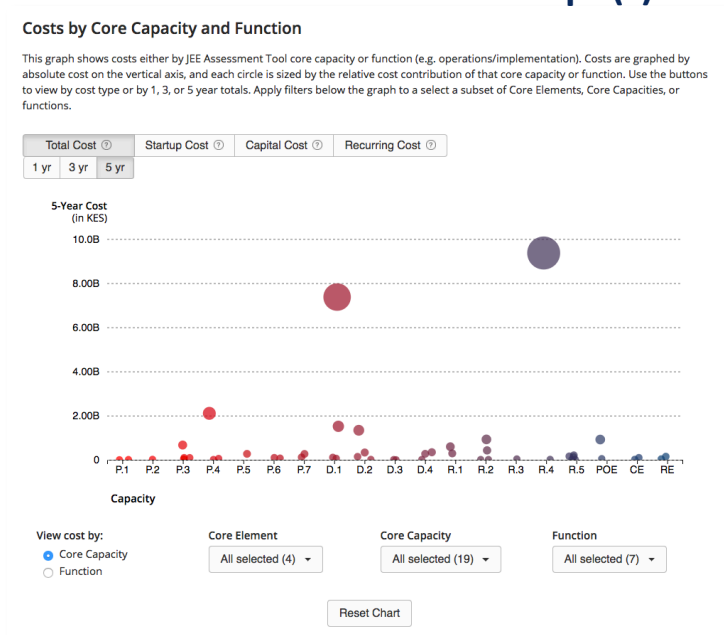
### 4B. Costing: Enter Costs



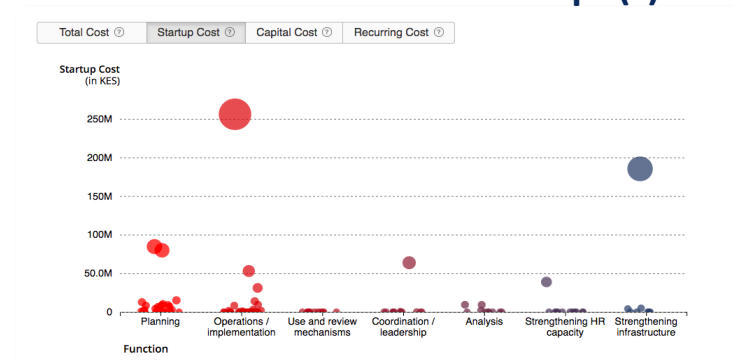
### 5A. Results: Cost Summary



### 5B. Results: Interactive Graph(s)



### 5B. Results: Interactive Graph(s)



## CONCLUSIONS

- Country experiences were used to develop an open access, web-based tool to estimate country-level costs for strengthening IHR compliance
- No sensitive user data stored by the tool
- Multiple options for use include storing data between sessions and working offline in a spreadsheet template
- Cost calculations align to the JEE and use country-specific data
- Includes JEE score upload from JEE Technology Tool (developed by the PSRT and powered by Qlik Technologies)
- Interactive visualizations to explore costs by category, function, core capacity, and over 1, 3, and 5 years
- Export detailed costing results to Microsoft Excel
- Identifies the costs associated with practical steps to improve global health security

## OTHER INFORMATION

### Acknowledgements:

We thank the entire Center for Global Health Science and Security research team for their research support in developing the tool. Initial efforts supported by the U.S. Defense Threat Reduction Agency - Cooperative, Biological Engagement Program and the Department of State Biosecurity Engagement Program. The conceptual framework was strengthened through collaboration with the WHO and its technical partners. Current efforts were supported by Open Philanthropy Project and Georgetown University Medical Center. We are grateful to our partners and colleagues at the World Health Organization, the Centers for Disease Control and Prevention, the World Bank, McKinsey and Company, the GHSa Private Sector Roundtable, Tom Frieden, Peter Sands, Anas El Turabi, and Phil Saynisch for their feedback and support.

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