**Instructions for completing a Concept Paper to the BTI Institute**

<Use 11 point Arial font, or larger, throughout the document. Limit to 3 pages >

**<Concept Papers must not contain proprietary information**. **>**

#### Title:

Author(s): <Name and Affiliation>

# A. Challenge

**Gap/Challenge:** <What are the specific HS challenges (problem/unknown/gap) that should be addressed? State the question that should be addressed>

# B. Rationale

**Motivation:** <How did you identify the challenges? What evidence is there that they exist? What is their magnitude?>

**Relevance:** <How well do the specified challenges fit within the BTI mission? Choose and refer to an IPT category from the [DHS Integrated Product Teams R&D Report](https://www.dhs.gov/publication/integrated-product-teams-department-homeland-security-rd-report). Alternatively, refer to other policy documents from DHS (e.g., the [DHS 5-Year Strategic Plan 2015-2019](http://www.dhs.gov/sites/default/files/publications/st/ST_Strategic_Plan_2015_508.pdf), and the [Quadrennial Homeland Security Review](http://catalog.data.gov/dataset/strategy-quadrennial-homeland-security-review-qhsr)) or DHS components (e.g., the [S&T Visionary Goals,](https://www.dhs.gov/science-and-technology/visionary-goals) the [CBP Vision and Strategy 2020](https://www.cbp.gov/document/publications/vision-and-strategy-2020), or the [U.S. Border Patrol Strategic Plan](http://www.cbp.gov/sites/default/files/documents/bp_strategic_plan.pdf))>

**Impact/Benefit:** <Does the research to meet those challenges have a strong potential for advancing the state-of-the-art and contributing significantly to the DHS mission? How will this work impact/benefit DHS and its component agencies? What are the expected new capabilities? What are the negative impacts if the challenges go unmet or the consequences if solutions are delayed?>

**Essentials for BTI Funding:** <Challenges that are more appropriately addressed by efforts that are not within the mission of BTI cannot be considered for competition topic areas. We are interested in why these HS challenges currently are not being adequately addressed or sufficiently funded. What funding gaps exist (either private or public)? What existing efforts are addressing the problem? What level of support (money, collaboration, or related research) currently exists to address this problem? Why are current approaches believed to be inadequate or not sufficiently timely?>

# C. Path to Addressing the Challenge

**Deliverables (Outputs):** <State clearly and succinctly the types of deliverables (outputs) that could be produced by the kind of projects discussed above (e.g., Journal Publications, Conference Publications, Hardware/Software Products, Systems, Data Sets, Policy Documents). Please specify why the desired outcomes are necessary in the context of the stated HS Challenges >

**Performance Metrics:** <Description of measures that could be used to evaluate project and progress performance – how could BTI quantify success in addressing the HS Challenges discussed. Please also specify how BTI could assess the potential impact of the deliverables (outputs) produced.>

# D. References (optional)