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**Response of the MITRE Corporation to the NIST RFC on the ROI initiative
Green Paper (Draft NIST Special Publication 1234)**

For additional information about this response, please contact:

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The MITRE Corporation is happy to have the opportunity to review and provide comments on the draft Green Paper. As a not-for-profit, public interest company, we operate seven federally funded research and development centers (FFRDCs) and perform independent research to address public sector challenges. We believe that transitioning technology into the private sector is a critical part of our public interest charter and we routinely do so. Maximizing the impact of these transitions is both a corporate and a national goal.

While reviewing the draft Green Paper, we were not only pleased to see that our prior recommendations had been incorporated but were also impressed by the organization, depth, and outcome-focused nature of the document. The result is an outstanding assessment and description of status, background, and necessary actions – for individual issues as well as for the return on investment (ROI) initiative overall. The document is a good step toward meeting the lab-to-market Cross-Agency Priority goal, and we applaud the interagency's efforts.

After reviewing the document, MITRE has developed the following recommendations we believe will further enhance the impact of the Green Paper:

- **Strategy 1, Government Use License:** Bayh-Dole and Stevenson-Wydler provide intellectual property rights to nonprofits, yet some federal agencies attempt to impose restrictions on the ability of nonprofits to assert patent rights or copyright for other than journal articles. Emphasis must be made to communicate to federal agencies the need to provide these rights to nonprofits and to not impose restrictions as a part of the contract negotiation process.
- **Strategy 1, Software Copyright:** The document should note that software development processes are changing, with modern software delivery best practices likely to complicate the software copyright issue even further¹. The Air Force's Kessel Run approach would be a good exemplar for a test analysis.²
- **Strategy 2:** The U.S. government should consider participating more actively in international standards-setting organizations, as these often set parameters for technologies that will soon be commercially available. By better understanding what is potentially available (from government-developed capabilities), these bodies will be able to create standards that more readily enable future innovations to come to fruition. For example, 5G internet will result in a new, global cyber ecosystem. The extent to which it creates transparent and competitive environments for new information technologies depends on the standards and architecture that will be adopted.
- **Strategy 3:** While the discussion on technology entrepreneurship programs is well developed, a wider viewpoint is also needed if we are to meet the goal of developing a more entrepreneurial mind-set within federal researchers. What can be done with traditional incentives (such as student loans, research dollars, data access, and training programs) and with expanded and more strategic use of the Intergovernmental Personnel Act and other means? The U.S. is not the only country investigating this issue, so we should study other countries' research and development cultures to see how their approaches could be applied here.³

¹For example: software that combines open-source and specifically-developed code, leveraging libraries of codes with differing IP agreements, and the growing practice of multiple parties collaboratively developing code.

²<https://kesselrun.af.mil/>

³For example, China's approach to identifying and developing strategic markets is providing technology entrepreneurs (from around the world) with ambitious goals and a framework that enables their investments to

- **Strategy 5:** Enhanced public-private collaboration is required to better understand global science and technology trends and benchmarks. Existing stovepiped analysis efforts should be integrated, with additional assets brought into the fold, such as the National Intelligence Officer for Science and Technology (to collect and analyze information on the competitiveness of foreign technology developments) and the National Academy of Sciences (which is a proven resource in convening government, academic, industry, and other experts, and can lead workshops that focus on global and technology-specific trends).

Please don't hesitate to reach out if you have any questions or comments. We appreciate the opportunity to provide our input and we applaud your work to date on this thoughtful paper. We would welcome an opportunity to meet to discuss the paper and our additional input in detail if you are interested.

have impact — and is reportedly further reinforced with government grant funding. As a result, China is moving beyond the U.S. in fusion energy and may achieve practical quantum communication and large-scale implementation of artificial intelligence in advance of the U.S.