Response to the Request for Information
Establishing a Government Effectiveness
Advanced Research (GEAR) Center
By Avue Technologies Corporation
September 13th, 2018

About the Respondent

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About Avue Technologies Corporation

Avue is a serial innovations company with deep expertise in federal government matters, in particular the federal workforce. Avue's 30 years of innovations combine technology ingenuity with algorithmic thinking and focuses the unique combination of these talents on complex and seemingly intractable Government problems. Avue uses an iterative, non-linear approach to efficiently create artificial intelligence (AI) solutions for the Government's broad and complex problems. Complex and legacy-rich problems come with deeply entrenched special interests. It is in this environment that Avue thrives, challenging convention and vested interests. To do this credibly, Avue's product and solution development follows Avue's substantial investment in understanding the problem and iteratively building acceptance while creating and validating its solutions.

Avue's solutions are researched and created wholly at Avue's expense – a testament to our commitment to our solution vision. Avue uses a true and pure SaaS model, making access and deployment of its solutions rapid and economically advantageous to the Government, using a simple subscription-based model. Avue embraces Government initiatives early, to improve and apply leading-edge technologies and business and process management principles to its SaaS platform.

Avue's solutions in human capital management and veterans benefits put labor intensive, transactional processes – even where significant human judgment may be involved – into a closed loop system that eliminates labor, processing time, costs, and errors, all by leveraging AI. Avue pioneered digital AI in federal HCM in 1988.

Avue's FedRAMP-authorized, SaaS HRLOB platform has been deployed in the Federal Government, on an enterprise, multi-tenant basis, since 2001 – with 99.9% uptime since that time. A pioneer in Java development in 1998, Avue was one of the first five B2B Java applications, ever written, and the first to introduce the Government to a subscriber-based, firm fixed-price, all-inclusive SaaS model.



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A Proposed GEAR Center Engagement Model

Method **Objective** Model Means **Encourage Non-**Federal: Micro & Simplified Kickstarter **Traditional Sources of** Crowdfunding **Purchase Process, OTAs** Indiegogo **Innovation &** RocketHub Other: Grants, Philanthropy **Experimentation Micro & Simplified** Develop an eCommerce **Mechanical Turk Purchase Process** Crowdsourcing Platform for the Expert MicroWorkers **Direct Hire Term Economy** DesignHill Appointments, IPA InnoCentive **Create Forums Where** • Joint Center for **Voluntary Contributors & Solutions Result from** Mass **Experts Loaned from All Energy Storage Global Participation In** Collaboration Research - DOE **Governments**, Private Multi-, Inter-, and Trans-**Institute for Applied Enterprise and Academia Disciplinary Teams Cancer Science**

Informing and Establishing the GEAR Center

The GEAR Center should be an organic, digital hub, that leverages expertise and innovation from all sources, without limitation. Center priorities should surface from this organic engagement rather than a top-down, Government-centric, or Governance Board process.

The right digital hub would foster communities of interest in online collaboration, knowledge sharing, mobilization, and problem solving that leverages diverse, multidisciplinary, interdisciplinary, transdisciplinary, and non-traditional sources of input and expertise that transcends traditional boundaries.

Taking the best from digital platforms ubiquitous today, the Center should adopt strategies, business models, and technologies that support innovation in all forms. The Center should provide modern methods of identifying, supporting, experimenting, and deploying innovations that improve the Government's efficiency and service to citizens. Three methodologies are offered here for your consideration:

- Crowdfunding to Reach Non-Traditional Sources of Innovation & Experimentation ~
 Innovation often comes from small business and organizations that are challenging status quo thinking and status quo business models. The Center can provide the gateway to inviting creativity from these non-traditional sources.
- Crowdsourcing to Engage the Expert Economy ~ An Expert Economy provides the means
 to hire specific expertise for a precise purpose. The Center can provide the eCommerce
 platform for precision hiring for a targeted outcome in a highly agile way.
- Mass Collaboration Forums Where Solutions Result from Global Participation In Multi-, Inter-, and Trans-Disciplinary Teams ~ Mass collaboration forums provide the means for voluntary participation in problem solving and innovation from all sources.

These methodologies have models that exist globally that prove the concept can work effectively and efficiently to get the right result. The Center's funding, and the funding for its innovation, experimentation, and adoption of new breakthroughs needs to be free from Government's traditional capital allocation model that relies on annual appropriations. But that doesn't mean the means of achieving these goals don't currently exist in Government. If the Center is structured so that governments, industry, academia, non-profits, and

individuals can participate through a variety of means, the Center can be both self-sustaining and high growth. Consider:

- Using federal micro and simplified purchasing to fund projects, solutions, research, and projects as they are offered by innovators. Purchasing, or funding, projects can be based on an agency's assessment of how pertinent or valuable they would be for that entity. Non-federal entities can use similar means so that the cost is shared through crowdfunding across a broad spectrum of organizations. Projects that don't get funded or don't reach funding targets, are not in play – so it is up to the innovator to conduct sufficient research and offer a compelling project. Funding can be broken up by stages as well, for example:
 - Design and development of the MVP (minimally viable product) stage.
 - Experimentation, pilot production, test, validation, and refinement stage.
 - Production stage.
- Creating a GEAR Center contract vehicle such as an OTA or BPA with GSA in charge of on-boarding new solutions onto a vehicle that offers the Government direct access using an eCommerce model.
- Creating alternative employment models that use eCommerce instead of traditional personnel rules and regulations to create and foster a high-performing expert economy.



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Anticipated Early Focus Areas

As we are seeing in the private sector, – whether by robots or artificial intelligence – automation is changing the labor market and the concept of jobs themselves. To look at reskilling the workforce a multi-, inter-, and trans-disciplinary approach is needed.

The first step in understanding how to transform the federal workforce is to look deeply at positions that are highly transactional in nature. Federal occupations like human resources, acquisition, claims processing, grants management, entitlement processing, tax processing, and many elements in information technology, all have a substantial element of transaction processing. Transaction processing, in any form, is highly susceptible to automation via artificial intelligence or AI. AI has the power to improve efficiency and accuracy while lowering cost – and AI scales powerfully. When AI is coupled with machine learning – facilitated with HITL or human-in-the-loop decision support – AI can broaden into areas that, on the surface, appear to require substantial human judgment.

Having looked at the degree to which job tasks favor AI, then some predictive analytics need to be applied to get a ROM sense of what it is that the future will require. However, this is an activity best done expeditiously since the half-life of skills in the current labor market is brief – 2.5 to 4 years. Career spans are short and the federal government's focus on job-for-life strategies and attractive retirement benefits does not fit this emerging class of employee.

Rather than elaborately study what will be required, even in the near future, core competencies, and the assessment and development of these, should drive the reskilling process so that employees can move from one career or job to another in a truly frictionless manner. This, in effect, future-proofs the workforce and creates a highly agile workforce.

The private sector is moving away from traditional reliance on technical skills, certifications, education, and other similar credentials in favor of looking at core competencies of strategic value to their company. Core competencies are a harmonized combination of skills, technical knowledge, expertise, abilities, and behaviors. Examples of core competencies are: Analytical Thinking, Identifying Patterns or Connections, Research, Resourcefulness, Trustworthiness, Methodical Approach, Social and Emotional Learning, Creative Thinking, Forward Thinking, Conceptual Thinking, Flexibility, Interpersonal Awareness, Persuasive Communication, and Risk Management and Assessment.

To excel at workforce reskilling requires adoption of the most leading-edge development programs and processes, in particular those that are digital.

Addressing this early focus area should produce a digital hub that provides on-demand digital experiences, expert-led virtual classrooms, and collaboration with others to learn from the experiences of others. Since skill decay is a very real and often overlooked part of the learning process, the digital hub must continuously drive engagement, through means such as gamification with encourages higher and higher levels skill development, and real-time performance support.

The digital hub should also be a place where experts inside and outside of the organization can design and contribute learning activities and programs and where all development maps to roles and competency models that fit the strategic value the organization provides.

Platform administration should be simple and accessible by SMEs and also meet the federal government's cybersecurity requirements via FedRAMP. All workforce development programs should map to the performance management process which will help inform future needs.

Federal human resource expertise is also essential here. Mapping to positions, compensation levels, labor market conditions, candidate sourcing strategies, and performance management and recognition all need to cohesively align with the reskilling and upskilling strategy of the organization. True federal HR expertise offers an even more valuable element – designing the right policy structure within the current constraints of law and regulation.

While digital hubs can be government-wide, it is essential that the strategic focus and mission of the agency be key to determining what content is delivered and how to effectively measure progress longitudinally. Cloud, SaaS platforms offer the best way to meet government-wide standards while also providing multi-tenant structure that provides for agency variances. And nothing can work without a robust cybersecurity framework that not only meets FedRAMP requirements but also optimizes security that is baked into the DevOps environment in which the digital hub is offered.

Avue Indigo A 21st Century Federal HCM Platform









- HRLoB Certified by OPM, OMB, and GSA as a HR Line of Business Private Sector Shared Service Center
- The Avue Platform is Authorized under FedRAMP as is the Infrastructure (AWS GovCloud)
- Avue is a Cloud, SaaS Platform.





Thank you for the opportunity to provide input on this important initiative. We welcome future discussions, questions, and opportunities to continue engaging.