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**Transition Plan – Instruction**

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# Purpose & Contents of the Transition Plan – Instruction

The “Transition Plan – Instruction” is focused on the instructional components of the program. The technology architecture information is included in a separate document. This plan includes the following components[[1]](#footnote-2).

* **Program Recommendations.** To assist the government in administering future programs, we have compiled overall program recommendations as well as release-specific recommendations.
* **Performance Objectives & Learning Asset Inventory.** We provide the performance objectives for the overall program aligned to each of the learning assets/activities, including self-directed learning, guided learning, and classroom content. We also provide all assessment items (including solutions/answers).
* **Facilitator Labor Category Descriptions.** We describe the labor category needed to effectively facilitate the program, including the labor category titles, years of experience by labor category, and the number of FTEs by labor category.
* **Product Roadmap/Backlog.** We include the Product Roadmap used during the Program and the most current product backlog (electronic file).
* **Learning Assets.** We have collected and packaged all learning assets developed under this contract for future use, delivery, and enhancement. This includes the PowerPoint-based facilitator guides used throughout the program, which contain notes to guide facilitators in delivering the course content. We provide a summary of the learning assets collected in this document; the learning assets themselves will be shared via secure file transfer and/or DVD along with the other technical assets.

# Program Background

To transform how the government builds and buys digital services, OFPP and USDS issued a challenge to industry in 2015 to create and pilot a training and development program that transforms how Federal Contracting Professionals procure digital services. The challenge sought to achieve three primary outcomes for Federal Contracting Professionals:

* Become digital service procurement experts;
* Become equipped with the knowledge necessary to be imbedded within agency digital service teams to serve as a business advisor to the team, its customers, and its stakeholders; and
* Possess the knowledge to lead agency training, workshops, and consultations in order to expand digital service procurement expertise within their agency and the government.

To achieve these outcomes, ICF and ASI Government teamed up to create the Digital Acquisition Pilot (DAP). The solution we created addressed three primary challenges:

* **How do we design a program on topics that are *constantly evolving*?** The digital product and services marketplace is rapidly evolving. The program must be relevant today and over time.
* **How do we address participants’ *unique learning needs*?** Federal contracting professionals have varying on-the-job needs and levels of experience and performance with digital services acquisition. The program must take into account varying needs at the individual and cohort level.
* **How do shift *individual and cultural mindsets*?** This workforce has been trained to follow a certain set of rules and processes that support acquisition; their organizations expect them to act this way. As digital technology evolves, acquisition practices must shift to support their design and delivery. The program must transform employees’ mindset to embrace change, innovation, creative compliance, and productive partnerships with program offices and stakeholders.

Given the overall challenge outcomes and the three specific challenges described above, we designed a program using agile learning design, in which we 1) **build** instruction in segments (two two-week iterations which comprise one-month releases), **measure** it using regular assessments, and **learn** in an iterative fashion, and 2) fix some performance objectives/instruction (60%) while allowing the remainder of the instruction (40%) to flex to address individual and cohort learning needs. Thirty Federal Contracting Professionals graduated from the pilot program with their core-plus specialization in digital services.

We used the data gathered from participants and the program faculty (i.e., our team and USDS) over the six-month program to document our findings and recommendations for the next program iteration—what we call the “minimum viable product” or MVP. We then adjusted the MVP based on findings and recommendations from the pilot and ran the MVP program from July 2016-January 2017. We had 26 Federal Contracting Professionals graduate from the MVP with their core-plus specialization in digital services. In the next sections of this report, we present our overall recommendations for continuing to evolve the program based on findings throughout the MVP.

# Overall Recommendations

In this section, we present our overall recommendations for program enhancement. The next section provides our suggested actions for smooth program ownership transition and program sustainability.

Assessment data demonstrates that **participants mastered content and achieved program objectives**. When comparing the pre- and post-program survey, for all of the topics, there was either an increase in the percentage of participants who were aware, could describe, could act, and could teach key program topics – or the percentage remained stable. Many participants reported they were equipped to take actions associated with program concepts, thus achieving the program goal of creating digital services acquisition professionals who have command of key concepts and can start to apply those concepts to their daily work situations. In terms of being able to describe the topics, the greatest percentage gains were seen for the Agile Methods topic of *Distinguishing among agile methods* and the Acquisition for Digital Services topic of *Digital Marketplace intelligence and types of suppliers.* For being able to act on topics, the greatest gains were seen for the Agile Methods topic of *Deciding when agile methods are appropriate* and the Digital Services Concepts topic of *The role of the Product Owner.* Finally, the greatest gains for being able to teach about a topic were seen for the Digital Services Concepts topic of *The role of the Product Owner.*

The Capstone Skills Test administered at the close of the program showed the majority of participants experienced an increase in comprehension and mastery of Release 2, 3 and 4 content with the exception of Release 1. Evidence demonstrates the majority of program participants gained knowledge in Release 2, 3, and 4 content. Release 1 is the only Release for which a large number of participants saw a decrease in their scores from the Pre-Assessment to the Capstone Skills Test[[2]](#footnote-3).

Next, we present findings and recommendations associated with each overall component of the program: program design, instructional strategies and content creation, delivery, assessment, and technology experience.

## Overall Program Design

In terms of the overall program design, our findings and recommendations include the following:

* **Participants experienced “entry burden” as they struggled to master highly technical digital services concepts**, evidenced by the low scores on Release 1 assessment and technical questions on the Capstone Skills Test. We hypothesize that participants found it difficult to concentrate on the substance of the required content, and how it could apply to various situations, because they were simply trying to follow basic terminology. To ensure incoming participants are ready for digital services content, and to minimize additional support required by facilitators and program staff, **pre-requisites are recommended as requirements for program entry**.
  + While low scores on technical concepts may be due to a variety of factors, we surmise that it is related to the sheer breadth of content to be covered. This is supported by participant quantitative and qualitative feedback. Interestingly, we also received feedback that we did not cover *enough* of the digital services marketplace and focused too much on agile.
  + Since participants do not need to develop actual digital services technical skills, but rather an awareness and familiarity with such topics is required, (i.e., at the Knowledge level of learning within the cognitive domain of Bloom’s taxonomy), creating or requiring learners to complete digital services-focused pre-requisites can efficiently address this issue. Learners can enter the program with a basic knowledge of these services, and then during the program build on this knowledge, ask thoughtful questions of technical guest speakers, and integrate technical elements into exercises and activities. Pre-requisites could be sourced from curated existing content and updated to keep pace with the changing market (e.g., Massive Open Online Courses [MOOCs]).
  + Implementation ideas include requiring participants to provide online course completion certifications to program staff prior to Day 1, providing participants early access to the portal such that they can complete pre-requisites there, inviting alumni to host topic-specific webinars (i.e., mini-courses with knowledge assessments) participants must complete before Day 1, and requiring each participant to make a five-minute presentation on a topic they learned from pre-requisites to strengthen collective cohort knowledge and build camaraderie.
* Participants remarked that they always felt “rushed” and they didn’t have enough time to complete assignments and assessments. We recommend **adjusting overall program length to allow for more reflection and iterative remediation during program delivery, possibly moving back to a six-month duration.** We recommend providing participants a full two weeks for self-directed learning for each iteration, followed by in-classroom time. For some iterations during the MVP, the classroom time overlapped with self-directed learning, and thus participants did not have enough time to build knowledge and then apply that knowledge in the classroom, as well as complete required assessments. In addition to benefiting participants, the increased time period would allow for timely assessment data analysis and results reporting, and thus enable participant remediation in their low-performing performance objectives.
* We recommend **allocating sufficient upfront time before program launch to review prior cohort outcomes and decide on administrative adjustments, as well as refresh program concepts that will not be changing, thus allowing the pre-assessment to measure more stable program content for each performance objective and permitting in-program time to be spent on the responsive components of the curriculum.** For each offering, adequate time should be allocated to review prior cohort outcomes and trends and determine what specific adjustments will be made (i.e., technology and program administration) and precisely how those will be implemented, prior to delivering the next program. Program staff found it challenging to have only one month to revise the pilot program before launching into the MVP, given the reduction of program length from six months to four months and the increase in classroom instruction time from eight to 14 days. At least two months before launching subsequent offerings, program owners should decide whether performance objectives require updating, identify stable program content for each performance objective, ensure that the level of learning associated with performance objectives is fully aligned to learning activities and assessment questions, and identify initial content preferences for the responsive curriculum elements.
* It is important to note that, with the MVP, we believe we have reached a maturation point where we have a stable set of comprehensive performance objectives; those should remain stable and different approaches to teach to those performance objectives can change. For instance, guest speaker updates, article updates, etc. can occur, but they should all remain aligned to the consistent performance objectives. Our assumption is that **the current MVP content may need to be refreshed before the next offering but that the performance objectives would largely remain stable**. In the future, while we recognize a portion of the content would be evolving and responsive as part of the agile learning design, that evolving content would be nested under existing performance objectives, rather than require an update to the performance objectives themselves. For certification purposes, this is important, as a certain proportion of stability is required for certification. Simultaneously, we acknowledge that certification will necessarily expire and require periodic (i.e., annual or biannual) re-certification, for select content will need to be updated to stay current with evolving technology and digital acquisition landscape.

## Instructional Strategies & Content Creation

In terms of the instructional strategies and content creation, our findings and recommendations include the following:

* Participant feedback indicated that the **use of the threaded case study (SBA) and scenario (MAP) provided useful application opportunities for participants.** While we maintain that this instructional approach was beneficial, we suggest the MAP scenario be refreshed to reduce the focus on a COTS product so as to provide more flexibility.
* As an instructional strategy, we received mixed feedback about usefulness of blogging, as it was introduced mid-program. We recommend **continuing the use of blogging but introducing it at the start of the program and better explaining how it can be used optimally**. We also recommend introducing structured activities that require dialogue specifically regarding blog posts.
* **The live digital assignment (LDA) is a viable instructional method; however success requires more upfront, realistic expectation-setting.** Communications must convey the context of the LDA and its underlying purpose and rationale. It should be clear to participants that they must define the problem and solve it. Participants should know the assignment is intended to be unstructured and open-ended, as these characteristics mimic the types of real-world challenges program alumni face as they lead change in this emerging field.
* **Participants are more likely to maximize the value of the LDA if they are required to meet with their coach throughout the program.** Starting during the program orientation, we recommend holding a structured brainstorming activity to help participants connect with their LDA coaches, thereby providing a bit more scaffolding to support their learning. Participants and coaches should be required to meet once or twice per iteration, and assignment coaches should brief IPM/Web Conference/Classroom facilitator after each meeting so that the facilitator can prepare for a Live Digital Assignment discussion and know what information to solicit from participants. Prepare coaches in advance for their role and responsibilities (document what those look like and share), rationale for the LDA, and empower them to give guidance.
* Participant feedback indicated that **shadowing provided a useful opportunity for participants to gain valuable exposure to the digital services world.** Participants could benefit from clear guidance regarding sourcing and structuring shadowing opportunities, and ICF believes that program alumni could and should help cultivate shadowing opportunities for program participants.
  + There was participant feedback asking that in place of an extensive LDA, extending the shadowing requirement would be more helpful: “I got so much usable experience and knowledge from the shadowing assignment that I'd much prefer having a requirement to do 1-2 weeks of shadowing (or even a rotational detail to) a practicing agile team.”
* Another viable instructional strategy is **requiring participants to hold home agency brown-bags**, perhaps as one of the requirements for a silver badge. Participants could convene one brown-bag towards the beginning of the program (e.g., here’s what I am going to learn) and a second later in the program (e.g., here’s what I have learned). Aside from a solid developmental experience, the brown-bag(s) can serve to increase appreciation within agencies (and for participants’ supervisors) of what digital services acquisition involves.
* **Expanding content coverage to include content other than just agile software development.** Participants and the program faculty expressed the desire to learn about other topics beyond just agile software development so as to build knowledge and skills around how to buy digital services of all types. This would include more of a focus on topics like purchasing cloud and XaaS. Including these topics as part of the program-prerequisites (see previous section) would be one way to provide coverage of them, and then activities within the program itself would need to be modified/expanded to include a focus on these topics.

## Delivery

In terms of the delivery, our findings and recommendations include the following:

* To maintain high quality content and delivery, ICF recommends **ensuring that there are digital services experts with current experience acquiring digital services involved throughout the program.** USDS subject matter experts provide up-to-the-minute information on best practices for digital acquisition, and effectively integrate the vital nuances of procurement into program content. This subject matter expertise is absolutely critical for the success of the program, both for the content/assessment components as well as for identifying and involving the appropriate guest speakers. The time commitment for said subject matter experts is large, and we acknowledge that incorporating multiple perspectives is desired. We recommend structuring subject matter expert involvement such that a small team of individuals participate, and thus responsibility does not rest solely on one subject matter expert’s shoulders. A lead subject matter expert could participate in the pre-launch review, visioning, and identification of content emphases (discussed above), followed by targeted participation from remaining subject matter team members according to their specialty areas or time availability.
* ICF recommends **enhancing upfront communication to participants and their supervisors to ensure realistic expectations are formed regarding program time commitment and supervisory support.** ICF believes we have reached a maturation point where time estimates for learning activities can now be stable and accurately reflect true time commitment. We recommend including a written description in all recruitment and application materials that details time commitments, the degree to which routine job responsibilities must be “dialed back” for participants, and desired level and kind of supervisory support. Further, program candidates and supervisors could view alumni video testimonials describing realistic expectations and desired supervisory support to help ensure these key messages are internalized during the application process. Potentially, candidates and supervisors who determine they cannot provide what is needed or that the timing is poor given other competing demands at their agency will self-select out of a given application process.
* Beyond the recruitment and selection phase, ICF recommends **providing regular communication to supervisors to ensure they keep pace with what participants are learning and can support them** in a manner consistent with larger change management program goals.Participants suggested a monthly newsletter to their supervisors. Supervisors could be included in the iteration emails to facilitate them making connections with ongoing work and ongoing culture change around acquiring digital services. Supervisors could be invited to attend select webinars and/or demo days starting in Release 2. Furthermore, supervisors could be provided with a bulletin twice during the program with some questions suggested for supervisors to ask participants to keep the dialogue going about emerging learning. Since the supervisor-employee relationship is critical in helping to ensure that when the participant returns to their job, they are supported in applying their skills, ICF recommends placing additional emphasis on supervisors going forward.
* **Guest speakers were well-received and should continue to be involved with small adjustments.** Participants liked hearing from guest speakers, but ICF cautions against choosing to include guest speakers simply because participants like them. ICF recommends providing guest speakers with structured expectations for interactive presentations that encourage participant involvement (e.g., 2-3 topics with discussion questions and examples of application to real-world situations), ample questions and answers, and opportunities for participants to practice new skills (rather than being lectured at). One viable approach could include short presentations (either in-person or via video conference) followed by a small group activity where participants apply what was discussed to their home organization or to scenario, and then rapidly present out to the larger group to reinforce and share learning. ICF also recommends that participants understand that following each guest speaker will be a problem solving and/or reflection activity so participants know to remain attentive and ask questions if needed. In addition, guest speakers should be **should be provided with an overview of the program and specific information about what they should share with the participants in alignment with the performance objectives** for the iteration/release in advance of their sessions. In addition, for webinars, they should also be fully oriented to the webinar technology in advance of the session.

## Assessment

In terms of the assessment, our findings and recommendations include the following:

* Given program objectives of building solid digital services acquisition knowledge and providing a supportive environment where learners can begin practicing applying new skills to real-world situations, ICF recommends **retaining a consistent blend of knowledge- and application-focused assessment questions**, across the release assessments and the Capstone Skills Test. Assessments both provide participants with feedback throughout the program to help target learning efforts and provide cohort-level information to inform iterative content design and delivery. To be successful in both goals requires adequately capturing the extent of knowledge and application attained. Questions measuring knowledge gains and questions measuring application ability are both essential.
* ICF recognizes that minor adjustments to assessment instructions could benefit the program. We recommend **ensuring assessment instructions emphasize how scenarios and questions are aligned with certain performance objectives.** Participant feedback indicated that it was not consistently clear that each assessment question measured one or more performance objectives. The government could consider including labels next to assessment questions that indicate which performance objectives are relevant to that question.
* As with the pilot program administration, ICF experienced challenges surrounding the timing of assessment completions. At times, “late” completion inhibited ICF’s ability to analyze cohort-level results in time for those results to influence the next iteration content and instructional strategies. Furthermore, when some participants complete a given release assessment (a) before the classroom session where additional content was presented or (b) weeks after they complete that release, the assessment no longer serves as a true post-test measuring capability at the end of a release. ICF recommends requiring the **completion of assessments on their due date** (or within a shorter “time window” after all release content presented; see [“grace period” functionality](http://edx.readthedocs.io/projects/open-edx-building-and-running-a-course/en/latest/grading/grace_period.html) that can be used in Open edX) **to allow for regular cohort-level analysis of the data to rapidly inform in-program modifications and remediation.** We recognize that for assessments to have firm deadlines, adjustments to the current badging approach may be required (i.e., permitting participants to go back and finish prior content may not be feasible). However, keeping to firm deadlines could also help reinforce to participants the importance of keeping pace with the program content and a respect for the progressive nature of the content (i.e., content builds on itself so it is vital to keep pace).
* Some participants reported they would prefer to see the correct answers to assessment questions (and their underlying rationale) so they can reflect and learn throughout the program. ICF recommends **considering sharing correct answers for all assessment questions, taking into account the tradeoffs involved.** ICF notes that while this information is beneficial to program participants, releasing such information constrains the government’s ability to re-use assessment questions wherever possible. Re-using questions maintains a low resource demand on the government for assessment-related activities, and allows allocated resources to be focused on developing new assessment questions for new content.
* As part of the routine procedure of preparing to administer the program, ICF recommends the government **tweak selected assessment questions to align with the level of learning covered during various releases.** This review and adjustment should be a standard practice whenever any content is significantly adjusted or new content is introduced.
* At different times during the program, participants raised questions about the interrelationships between grading and badging. ICF recommends **refining and clarifying the grading approach and timing of grading.** The grading approach must be articulated clearly prior to the program’s outset, as well as the interrelationships between grading and badging. ICF recommends scheduling time between the final classroom session and graduation for assessment scoring and providing detailed feedback to program participants before final results are shared at graduation. Finally, as the program continues over time and the government tracks assessment data trends, results presentations could show assessment results for each individual relative to the cohort average score (i.e., amount a given individual is above or below the cohort average). This may aid in interpreting assessment results, provided the underlying philosophy aligns with the government’s vision for how to reinforce learning and mastery.
* To streamline the quantity of assessment tests and minimize respondent burden, ICF recommends **considering using a set of release pre-assessments rather than both a program pre-assessment and release pre-assessments.** Release pre-assessments served well as a pre-test measure of the cohort’s understanding before exposure to release content, and instant feedback to participants provided information to help them focus their learning efforts. Additionally, and provided participants are required to complete these tests promptly, results can effectively influence content refinement. ICF notes that the combined set of release pre-assessments may be compared with the Capstone Skills Test to produce pre- and post-program comparisons.

## Technology Experience

In terms of participants’ technology experience, our findings and recommendations include the following:

* As the program continues to evolves, ICF recommends that the **portal user experience evolve with it. Specifically, we recommend adjustments related to the discussion boards.** Students tended to use the discussion boards solely to comply with program requirement that they do so (i.e., as a “check the box” activity), rather than using them to further their learning. Instructionally, it may make sense to reduce the number of discussion board posts that are required so as to promote richer discussion on a narrower selection of threads, or to require that participants respond to one another’s posts (as is often done in graduate classes that have an online component). Furthermore, the overall built-in edX discussion board functionality was challenging from a user experience standpoint, and participants frequently created new posts rather than replying to a thread, based on how the functionality/buttons were set up. We provided a “patch” during the program (i.e., we linked to specific discussion board threads rather than using the built-in discussion board widget provided in the edX Studio), but a more long-term solution should be sought either by fixing the edX discussion board via backend coding/custom development or using an external discussion board forum. In other edX courses, external discussion board services are sometimes used, or the WordPress program blog (described elsewhere) could be used as a discussion forum. Note that the Open edX provides resources for [managing course discussions](http://edx.readthedocs.io/projects/open-edx-building-and-running-a-course/en/latest/manage_live_course/discussions.html) that can also be referenced as revisions are considered.
* To help motivate participation and provide mastery experiences, we recommend **continuing to include badges** **but to** **refine the badging user experience**. At the start of the program, we used one approach to badge tracking that we adjusted mid-program, which created some participant confusion. The new badging approach we moved to is closer to the desired end state, but there were some user experience challenges such that participants were sometimes not sure whether the system had recorded their completion of an activity. In addition, badging leaderboard should be included from the program outset, though there are considerations related to participant affect related to being at the bottom of the leaderboard. This could be addressed by only providing the top ten badging leaders on the leaderboard, rather than listing all participants. Alternatively, if the leaderboard was not included on the portal itself, it could be shared each time the cohort comes together (webinar or in person).
  + In addition, we had to pull badging completion data from Badgr, our badging system, in order to know who had completed which activities, then tracked it via an Excel spreadsheet at the cohort level. In the future, **automating that process and/or integrating it into the edX Progress tab would be useful and decrease the time required for program staff administration.**
  + To help explain badging or other challenging technology components, program owners may consider recorded video walkthroughs or webinars with technology demonstrations, rather than having staff respond to numerous emails from students with the same or similar questions.
* We received comments throughout that it was **sometimes hard to find materials on the portal given the number of iterations and activity sub-sections there were**. Within each iteration, we had “bronze” and “silver” activities (as per our badging approach) aligned to each performance objective, and there were links to each activity in the left menu bar. This meant that some iterations had 10+ activity links in them, making it hard to remember how to find specific content. From an information architecture perspective, there may be other ways to organize content within each iteration and/or to adjust our badging approach so that silver/gold activities can be included within the same section, thereby decreasing the visually cluttered left menu bar.
* The badging functionality is not currently synched with the Open edX default Progress tab/scoring functionality. **Moving forward, the Progress tab should either be hidden (as it is now) or better synced with the badging approach.** Information about establishing a grading policy and the built-in edX functionality is available [here](http://edx.readthedocs.io/projects/open-edx-building-and-running-a-course/en/latest/grading/index.html). Documentation about our custom badging approach is available in the technical documentation report.
* If there is continued use of a VPN for content development, the **number of simultaneous users in the Open edX Studio (which is the program administrator “side” of the portal) should be limite**d. When multiple users are in the Studio, users experience slowness and occasional freezing. Note that depending on the final hosting and security environment, this may not be a problem for the government.

# Actions for Immediate Transition and Ongoing Program Sustainability

Based on ICF’s experience with the pilot and MVP administrations of the program, we looked across our overall recommendations and identified actions that will contribute to smooth program administration transition and an effective, sustainable program. In some cases, these recommendations are not described in detail in the preceding section (e.g., recruitment and selection process; competencies and career development), but they are included here based on discussions with USDS/GSA during our retrospective session on February 1, 2017. We place emphasis on those factors that will maximize the learners’ experience and program quality while simultaneously minimizing required time for program staff administration.

|  | Immediate (next cohort) | Medium-Term (within FY17) | Longer-Term (within FY18) |
| --- | --- | --- | --- |
| Recruitment and Selection Process | | | |
| Possibly source alumni to help review applications |  | X |  |
| Include video “intention statement” in application | X |  |  |
| Include technical prerequisites before application |  | X |  |
| Source alumni to host program recruitment events (include information for supervisors about time commitment) |  | X |  |
| Competencies and Career Development | | | |
| Interview incumbents/alumni and develop competencies with behavioral/skill rating anchors |  | X |  |
| Create development “path” starting with prerequisites, program, and post-program recommendations |  |  | X |
| Embed communications about competencies in selection process and alumni events |  | X |  |
| Overall Program Design | | | |
| Allocate time before each cohort to verify performance objectives are stable and identify content for any revised objectives | X |  |  |
| Adjust program duration longer (closer to 6 mo.) | X |  |  |
| Instructional Strategies & Content Creation | | | |
| Periodically refresh threaded case study (SBA) and scenario (MAP) |  |  | X |
| Introduce home agency brown-bags as requirement | X |  |  |
| Delivery | | | |
| Retain a small team of subject matter experts to design content and source guest speakers for each cohort | X |  |  |
| Offer video-based realistic previews of time commitment for candidates and their supervisors | X |  |  |
| Maintain communication campaign for supervisors re: program content and time requirements |  | X |  |
| Provide guidelines to guest speakers and pair with applied activity | X |  |  |
| Assessment | | | |
| Retain two (2) dedicated subject matter experts to revise questions for each cohort | X |  |  |
| Enforce completion deadlines (tied to badging & culture) |  | X |  |
| Use release pre-assessments | X |  |  |
| Align questions with learning level, retain mix of knowledge- and application-based questions | X |  |  |
| Firm up grading approach and communicate | X |  |  |
| Technology Experience | | | |
| Offer video orientation of portal | X |  |  |
| Offer video tutorials to explain badging | X |  |  |
| Integrate badging into edX |  | X |  |
| Adjust discussion board functionality |  | X |  |
| Program Delivery Certification | | | |
| Create and maintain annual certification standards (content, delivery, instructional strategy mix, assessments, technology experience) |  | X |  |
| Create and maintain certification review processes, consider employing subject matter expert team as reviewers or outsource |  |  | X |
| Pilot test certification |  |  | X |

# Facilitator Requirements

To effectively facilitate the program, we recommend having personnel with the following qualifications fulfill the program facilitator roles:

| Labor Category Title | Years of Experience & Desired Knowledge/Skills/Abilities | Number of FTEs\* |
| --- | --- | --- |
| Facilitator | * 6-8 years of experience, with at least five years of facilitation experience in a variety of environments (i.e., both traditional classroom and virtual or asynchronous learning environments), on a variety of topics (i.e., both technical and soft skills), and with a variety of audiences (i.e., both junior and mid-level audiences). *Preferred:* The facilitator should have a demonstrated track record of positive evaluations from participants. * [If DiSC assessment is used] Experience debriefing the DiSC assessment * Expertly shifts among multiple training delivery methodologies as needed to meet project-specific requirements, such as lecture, case study, leading small group exercises, or simulation | 0.36  [approximately 250 hours required over a four-month program] |
| Digital Services Acquisition Expert Facilitator | * At least eight years of experience in the acquisition field, with at least four years of Federal government IT/digital services acquisition experience * Actively participates in government digital services acquisition professional forums/organizations that provide up-to-the-minute awareness of emerging digital services acquisition trends and best practices * Delivers instructional content in the classroom or an alternative learning environment, such as a synchronous or asynchronous web-based learning environment * Draws upon subject-matter and domain expertise to provide insight into digital services acquisition mission and challenges. Asks thought-provoking and engaging questions of participants, and challenges participants to apply new learning to real-world situations. | 0.36  [approximately 250 hours required over a four-month program] |
| Agile/Scrum Facilitator | * Facilitator who is certified in agile methodologies to facilitate agile instruction during orientation * Demonstrated experience delivering agile instruction to non-technical audiences in ways that are understandable and relatable. Expertly adjusts and responds to participants’ incoming knowledge levels. | 0.03  [approximately 20 hours required over a four-month program] |
| Digital Services Expert | * At least five years of experience in digital services field with at least three years of experience as a developer involved with agile software development and/or the development of other digital services * Actively participates in digital services professional forums/organizations that provide up-to-the-minute awareness of emerging digital services trends and best practices * Demonstrated experience speaking on and/or delivering training on complex digital services topics to non-technical audiences in ways that are understandable and relatable. Adjusts and responds to participants’ incoming knowledge levels. | 0.05  [approximately 40 hours required over a four-month program] |

*\*Note that we calculated the Number of FTE estimates based on hours expended during the four-month MVP program. These estimates include involvement of the facilitators in select program design workshops, but they do not include estimates associated with the government digital services SMEs nor the instructional designers, assessment staff, or technologists who are needed to administer the program. In addition, these estimates are based on the current program design and will need to be revisited if and when the current design is adjusted.*

# Product Roadmap/Backlog

The Product Roadmap for this program proceeded as follows.

|  |  |  |  |
| --- | --- | --- | --- |
| Orientation | | | |
|  | Start | Finish | Notes |
| Sprint 1 | 7/1/2016 | 8/1/2016 |  |
| Orientation delivery | 8/2/2016 | 8/4/2016 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Release 1: Digital Services in the 21st Century Government | | | |
|  | Start | Finish | Notes |
| Iteration 1.A: The Digital Services Professional | 8/8/2016 | 8/19/2016 |  |
| Sprint 2 | 8/8/2016 | 8/19/2016 |  |
| Iteration 1.B: The Digital Services World | 8/22/2016 | 9/2/2016 |  |
| Sprint 3 | 8/22/2016 | 9/2/2016 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Release 2: What Are You Buying? | | | |
|  | Start | Finish | Notes |
| Iteration 2.A: Understanding Your Needs and Agency Readiness | 9/6/2016 | 9/16/2016 |  |
| Sprint 4 | 9/7/2016 | 10/10/2016 |  |
| Iteration 2.B: The Digital Services Market | 10/11/2016 | 10/21/2016 |  |
| Sprint 5 | 10/11/2016 | 10/21/2016 |  |

| Release 3: How Do You Buy? | | | |
| --- | --- | --- | --- |
|  | Start | Finish | Notes |
| Iteration 3.A: Developing an Acquisition Strategy | 10/24/2016 | 11/4/2016 |  |
| Sprint 6 | 10/25/2016 | 11/11/2016 |  |
| Iteration 3.B: Acquiring Digital Services | 11/7/2016 | 11/18/2016 |  |
| Sprint 7 | 11/14/2016 | 12/2/2016 |  |

| Release 4: Awarding & Administering Digital Service Contracts | | | |
| --- | --- | --- | --- |
|  | Start | Finish | Notes |
| Iteration 4.A: Awarding Digital Service Contracts | 12/5/2016 | 12/16/2016 |  |
| Sprint 8 | 12/5/2016 | 12/23/2016 |  |
| Iteration 4.B: Digital Services Delivery (or How Solutions Get Done) | 12/19/2016 | 12/23/2016 |  |
| Sprint 9 | 1/23/2017 | 2/24/2017 |  |

During each of the above sprints (aside from those when custom portal features were developed), we achieved a release-specific version of the following user stories and associated sub-tasks, which we tracked in JIRA.

* **Develop Iteration X.X self-directed learning materials**
  + **Activities associated with the X.X performance objective**
    - Develop draft storyboards
    - SME QA draft
    - QA draft
    - Update following government review
    - Program
    - QA programmed version
  + **Develop Iteration 4.A LDA**
    - Develop draft items
    - Review draft test items
    - Program Iteration 4.A LDA
    - QA Iteration 4.A LDA
* **Support Iteration X.X webinar**
  + Coordinate speaker attendance with government
  + Conduct kickoff/technology orientation call with the guest speaker
  + Facilitate webinar
  + Create transcript of webinar
  + Download recording of webinar and post to portal
* **Set up badging**
  + Set up badging xBlock
  + QA badging xBlock
* **Develop Iteration X.X pre-/post-assessment**
  + Develop draft test items
  + Review draft test items
  + Program Iteration 4.A pre-assessment
  + QA Iteration 4.A pre-assessment
* **Develop Release 3 cohort-level summary of assessment results**
* **Iteration 4.A iteration planning meeting**
  + Develop slide deck
  + Develop iteration welcome email
  + Prep & facilitate session
  + Record transcript of 4.A webinar & post recording + transcript to portal
* **Monitor program inbox & respond to participant inquiries**
* **Develop transition plan components**

The Product Backlog is included as an Excel file along with the assets that are being delivered to the government; the file is name “MVPProductBacklog\_March2016.xls.”

# Learning Asset Inventory

We include an Excel spreadsheet in the final assets we are delivering to the government that maps the learning activities/assets within each delivery medium to the associated performance objectives. This file is named “Learning Assets Inventory.xls” and contains two tabs:

**Tab 1 – Learning Assets:** Maps the overall goals of each release to the iteration terminal performance objectives (i.e., the overall iteration objective) to the enabling performance objectives to the learning activities.

**Tab 2 – Additional Documentation:** This tab includes a list of the documentation we collected and are providing to you as part of the transition plan. It includes the following:

* Overall design
  + Overarching design meeting notes (raw)
  + MVP curriculum structure spreadsheet
  + MVP Performance Objectives List
* Orientation
  + Classroom facilitator guides – Days, 1, 2, 3 (with facilitator notes; participant version is posted to the portal), participant packet, handouts
  + Pre-program survey (Word version)
  + Pre-assessment summary (Word version)
  + Pre-assessment data (raw)
* Iteration 1.A
  + Design document (draft for your records; the final design shifted during development)
  + Design session notes (raw)
  + IPM slides (PPT)
  + Webinar slides (PPT)
  + Pre-/post-assessment summary (Word)
  + Pre-/post-assessment data (raw)
  + (Recordings of webinar sessions are posted to the portal.)
* Iteration 1.B
  + Design document (draft for your records; the final design shifted during development)
  + Design session notes (raw)
  + IPM slides (PPT)
  + Webinar slides (PPT)
  + Pre-/post-assessment summary (Word)
  + Pre-/post-assessment data (raw)
  + (Recordings of webinar sessions are posted to the portal.)
* Iteration 2.A
  + Design document (draft for your records; the final design shifted during development)
  + Design session notes (raw)
  + IPM slides (PPT)
  + Webinar slides (PPT)
  + Pre-/post-assessment summary (Word)
  + Pre-/post-assessment data (raw)
  + (Recordings of webinar sessions are posted to the portal.)
* Iteration 2.B
  + Design document (draft for your records; the final design shifted during development)
  + Design session notes (raw)
  + IPM slides (PPT)
  + Webinar slides (PPT)
  + Pre-/post-assessment summary (Word)
  + Pre-/post-assessment data (raw)
  + (Recordings of webinar sessions are posted to the portal.)
  + Classroom facilitator guides – Days, 1, 2, 3 (w/facilitator notes – participant version is posted to the portal), participant packet, handouts
* Iteration 3.A
  + Design document (draft for your records; the final design shifted during development)
  + Design session notes (raw)
  + IPM slides (PPT)
  + Webinar slides (PPT)
  + Pre-/post-assessment summary (Word)
  + Pre-/post-assessment data (raw)
  + (Recordings of webinar sessions are posted to the portal.)
* Iteration 3.B
  + Design document (draft for your records; the final design shifted during development)
  + Design session notes (raw)
  + IPM slides (PPT)
  + Webinar slides (PPT)
  + Pre-/post-assessment summary (Word)
  + Pre-/post-assessment data (raw)
  + (Recordings of webinar sessions are posted to the portal.)
  + Classroom facilitator guides – Days, 1, 2, 3 (with facilitator notes – participant version is posted to the portal), participant packet, handouts
* Iteration 4.A
  + Design document (draft for your records; the final design shifted during development)
  + Design session notes (raw)
  + IPM slides (PPT)
  + Webinar slides (PPT)
  + Pre-/post-assessment summary (Word)
  + Pre-/post-assessment data (raw)
  + (Recordings of webinar sessions are posted to the portal.)
* Iteration 4.B
  + Design document (draft for your records; the final design shifted during development)
  + Design session notes (raw)
  + IPM slides (PPT)
  + Webinar slides (PPT)
  + Pre-assessment summary (Word)
  + Pre-assessment data (raw)
  + (Recordings of webinar sessions are posted to the portal.)
  + Classroom facilitator guides – Days, 1, 2, 3 (with facilitator notes – participant version is posted to the portal), participant packet, handouts
* End-of-Program Activities
  + Capstone Skills Assessment summary (Word)
  + Capstone Skills Assessment data (raw)
  + Live Digital Assignment Rating Forms (self/peer, rating panel) (Word)
  + Live Digital Assignment summary (Word)
  + Live Digital Assignment Rating data (raw)
  + Participation Data (3 levels of badging "roster")
  + Pre-Post Program Summary (Word)
  + Pre-Post Program data (raw)
  + Final Program Scores (raw)
  + MVP Data Codebook (xls)

# Appendices – Detailed Findings/Recommendations

In the following appendices, we present detailed findings and recommendations specific to each release and iteration. Our overall program recommendations are summarized in earlier sections of this report. Program administrators who are revising specific program materials will find this section useful, and ICF recommends it be closely reviewed prior to the next program’s administration.

## Appendix A: Program Setup and Ongoing Support Needs

In this section, we include recommendations about how to effectively setup the program and support it from a logistical perspective, as well as communicating with participants and tracking assignment submissions.

#### Email: Meeting Invites, Iteration Kickoff Emails, and Other Communications

Based on feedback received from participants during the program, all meeting invites should be sent to participants at the beginning of the program. In addition to the meeting invites, the location and time should be included in the initial overview email that outlines the program. If location or times are changed, participants need to be notified as soon as possible to ensure that they can adjust travel plans accordingly.

If Outlook is being used as the email client, carbon copy program staff or the program email address in each response to participants. This ensures that the message was successfully sent, and makes record-keeping easier.

For each iteration release, participants were emailed an iteration outline. It is suggested that these outlines, along with any other important communications, are sent in reply to previous cohort-wide communications. This allows participants to easily reference information from past iterations. Additionally, this information should be posted in the “Course Updates” section of the portal.

Participants should be given the option to add a secondary email address to the email listserv if their agency has strict security settings. If participants are unable to access their agency email address outside of work, or if their agency’s firewalls block certain types of content (e.g., YouTube/videos), a secondary email address allows them to access content outside of work hours. However, based on current security requirements, participants can only use government email addresses to access the portal.

For future programs, a program email address and inbox is recommended. However, as discussed in the discussion boards section, we recommend encouraging participants to ask questions that may be pertinent to the entire class on a dedicated discussion board thread, and that program staff regularly check this thread and provide responses. This will help reduce the amount of time required to monitor the program email and to respond to participants with similar questions. Program email inbox monitoring required upwards of three hours per week, and we sent 300+ emails throughout the MVP program.

#### Discussion Boards

Throughout the duration of the MVP, we received feedback from participants that discussion boards were not generating conversation because of the requirement to make submissions. Participants suggested that open-ended questions be used in place of guiding questions. It is the recommendation of the facilitation team that the discussion boards be used as a place for participants to ask content and other course-related questions. Participants should be encouraged to answer each other’s questions, and program staff should engage participants on the discussion board as well.

#### Live Digital Assignment

Live Digital Assignment teams should submit their assignments via email to the program email address. It is recommended that the facilitation team create designated folders for each LDA assignment to aid in record keeping and to track via Excel. In the future, using the portal to track assignment submission would be preferable; an [open response assessment](http://edx.readthedocs.io/projects/open-edx-building-and-running-a-course/en/latest/exercises_tools/open_response_assessments/Manage_ORA_Assignment.html) is available on the new Open edX release and could be used for this purpose.

#### Webinar Setup & Support, Recording, and Transcribing

We used Adobe Connect software to deliver the webinars throughout the program. Other webinar technology may be used, should the government not have an Adobe Connect license. When using the selected webinar technology, ensure each webinar session is recorded. After the session has been completed, the webinar video should be downloaded from the webinar service and uploaded to YouTube (or another video sharing site). Once the video is hosted on the web, it can be added to edX using a [video xblock](https://open.edx.org/xblocks). Each webinar session requires a transcript to be Section 508 compliant, so there should be a member from the facilitation team (or a third party) on the phone line for each webinar to record a transcript.

##### Guest Speakers

For course webinars, each guest speaker should be given a walkthrough of the webinar platform to ensure that they are comfortable presenting slides and to determine if/how they want to use the interactive capabilities of the webinar service (e.g., polling, whiteboard). We recommend a 30-minute prep session two days in advance of their scheduled session. Guest speakers should also be briefed on the context of the iteration (i.e., the performance objectives that they are helping to achieve and any other content emphases based on feedback from facilitators or participants) so that their discussion with participants is relevant and meaningful.

#### Pre-Program Communications/Prep

Prior to orientation, participants completed the pre-assessment in the portal, the pre-program survey, and the DiSC assessment. The DiSC assessment is available [here](https://www.discprofile.com/products/everything-disc-workplace-profile/) and costs $59.25 per person. DiSC results were then used to assign participants to LDA teams, such that teams had a balance of different work styles on their teams; the assignments for the MVP are included in the learning assets being provided to the government.

Given the rapid turnaround between award and orientation, participants had less than a week to complete these assessments; we recommend providing participants at least a week’s notice when the program is administered in the future. This would also allow more time for the program administration team to make team assignments.

In addition, another hurdle in the MVP was getting participants access to the portal. While these challenges are likely to be mitigated when the portal is hosted on a government website, we still recommend providing adequate time to work through technology challenges prior to orientation so that all participants have access and are up to speed on the technology component prior to orientation.

## Appendix B: Guided Learning: Orientation

The MVP orientation session was conducted on August 2-4, 2016 at the Washington D.C. ICF location (1725 I St. NW). The session was facilitated by Heather Govoni (ICF), Marshall Hepner (Team ICF), Neil Chaudhuri (Team ICF), Jeanette Cantrell/Pam Dorland (ICF, agile overview), Maya Larson (DiSC Assessment debrief), and Traci Walker (USDS). Guest speakers included:

* Mikey Dickerson, then-current USDS Administrator: Mr. Dickerson spoke about USDS’ initiatives to create a more awesome government and how this program supports that overall goal.
* Dan Willis, DHS: Mr. Willis spoke about using design methodologies to solve problems in the digital space.
* Charles Worthington, USDS: Mr. Worthington spoke about the Digital Services Playbook and how it was created.
* Small Business Administration (SBA) panel: The SBA panel spoke about their experiences to date with the SBA ONE Contracting Systems Modernization.

The overall objectives of the orientation session were to introduce participants to the program, explore participant work styles and preferences, introduce digital services terms and processes, discuss agile principles, introduce the SBA case and the threaded scenario, and begin to explore how agile is being procured in government.

Participants received a printed participant packet, as well as printed excerpts from the SBA ONE Contracting Systems Modernization effort acquisition package and their personalized results from the DiSC assessment.

### Evaluation Methodology

The orientation was evaluated through:

* Participant feedback
* Facilitator feedback
* Client feedback

### Findings and Observations

#### Feedback

On the last day of orientation, participants participated in a sticky note activity to gather feedback on the orientation experience. They were asked to provide the following types of feedback:

* Start Doing
* Stop Doing
* Continue Doing

Themes from each category included the following:

* **Start Doing**
  + Provide slides before the orientation starts/post to the portal
  + Provide more background on course expectations/calendar prior to orientation
  + Have live digital assignment teams sit together
  + More real-world examples from the acquisition standpoint
  + Provide more time for the amount of information covered/adjust pacing
  + Tell students to bring laptops so that they can take notes and walk through the edX platform
* **Stop Doing**
  + Slow down the pacing/timing so that there is enough time for all presentations/discussions
  + Do not have working lunches
  + Ensure consistency in what is advertised/discussed around CLPs
  + Do not start the course in the 4th quarter
* **Keep Doing**
  + Lots of real world examples of how Agile has successfully been used in government, including associated documentation
  + Having speakers from across government participate and share knowledge (specific comments about Mikey Dickerson, Charles Worthington, SBA team)
  + Hands-on activities to illustrate agile principles (i.e., play-dough exercise)
  + DiSC assessment
  + USDS happy hour

In addition, ICF collected feedback from the facilitators, and this feedback is woven into the recommendations below.

### Recommendations for Future Deliveries

The following recommendations are based on the findings and observations noted in the previous section. Global recommendations, or those recommendations that affect the material in more than one area, are discussed first. More specific changes to individual days are included after the global recommendations.

#### Global

* Because of the amount of opening content in orientation and the first release, we recommend requiring pre-work from participants before orientation. This pre-work could come in the form of reading materials or videos that introduce key digital services topics such as open source, cloud, agile, and more.
* Another option to ease the amount of content during orientation is to provide details such as the course outline, badging, and scoring prior to class. This will also prepare participants for the level of involvement associated with the course. This could be accomplished via recorded video presentations that are posted to the portal or via live webinars.
* More time should be spent providing context on the LDA assignment and its rationale, to include the fact that it is intended to be open-ended and unstructured, as these are the types of challenges that participants will be asked to address as they lead change in this emerging field.

#### Day 1

* We recommend retaining the DiSC assessments, which was well received and provided a smooth transition into the LDA discussion.

#### Day 2

* If pre-work can be added before orientation, the session that would normally cover this could be used as time for the class to discuss what they learned and ask questions of digital services SMEs.
* The Agile/Scrum presentation and activity were well received. For the activities, we had a mix of facilitators and government guests participate as “product owners.” A few product owners expressed a desire for more guidance on their role, beyond the one-page instruction sheet that they were given. Therefore, in preparation for this session, we recommend identifying potential product owners early and prepping them for the activity via a more comprehensive instruction sheet and/or prep meeting.

#### Day 3

* The Small Business Administration (SBA) panel was well received for orientation and for the remainder of the course, and we recommend that this activity and panel be repeated in future program deliveries.

To replicate the orientation experience, the following will need to be arranged for each offering of the program:

* Facilitator experienced in debriefing the DiSC assessment for Day 1 of orientation
* Guest speakers to kickoff and welcome participants to the program (USDS administrator or similar upper management personnel) on Day 1
* A guest speaker to introduce important “digital” documentation (Digital Services Playbook) and to provide a digital overview on Day 2
* Certified agile/scrum instructor to conduct and run the agile training and activity on Day 2
* Supporting facilitators who can prepare for and play the role of the product owner during the agile activity on Day 2
* A government team that has procured digital services using best practices that will be explored in the course (e.g., SBA) for at least two hours on Day 3

## Appendix C: Guided Learning: Webinars

Guided learning webinars were held during each iteration to help orient participants to the goals of each iteration and to enable them to either learn from a guest speaker or reflect back on what they had learned. Recordings of these webinars, as well as transcripts, are posted to the portal under the Guided Learning Webinars heading within each iteration. Below, we provide our recommendations regarding webinars in future offerings of the course and a list of all webinars from the MVP.

**Iteration Planning Meeting (IPM) Recommendations**

* IPMs should be continued and are conducted at the beginning of each iteration to walk learners through the sessions and activities. As discussed in Appendix A: Program Setup and Ongoing Support Needs, an iteration welcome email is sent prior to each session and serves as a checklist.
* These should be kept to 30 minutes.
* The facilitator should work closely with the development team so they can share the team’s vision and answer questions. The facilitator should use screen share to show participants where different sessions and activities “live” on the portal.

**Retrospective Webinar Recommendation**

* Retrospectives were not always possible because of the tight timeline in the MVP. In most cases throughout the MVP, retrospectives were done in person during the classroom sessions.
* Given the importance of reflection to the learning process and to the overall agile learning design of the program, we recommend that retrospectives continue to be included in the program, either in the classroom or via webinars. If the program continues to include a classroom session for each release, retrospectives can continue to be included there. If less classroom is used or the program is extended, then we recommend including retrospective webinars at regular intervals.

**Guest Speaker Webinar Recommendations**

* Webinars with guest speakers were generally well received, and we recommend continuing with these webinars to support knowledge-focused performance objectives and to connect participants with other professionals in this field.
* Guest speakers with “on the ground” experience (like Mary O’Toole) were very well received, as were guest speakers from USDS. We recommend securing guest speakers at least a release in advance (if not more), so the speaker can prepare and the development team can include a description of the topic being covered in the information we provide to participants. In addition, as discussed in Section 3: Overall Recommendations, guest speakers should be provided with an overview of the program and specific information about what they should share with the participants in alignment with the performance objectives for the iteration/release.

### MVP Webinars

#### Release 1

* Iteration 1.A Planning Meeting: August 8, 2016
* Iteration 1.A Webinar with Alex Ose (USDS) re: open source: August 16, 2016
* Iteration 1.B Planning Meeting: August 22, 2016
* Iteration 1.B Retrospective: August 30, 2016

#### Release 2

* Iteration 2.A Planning Meeting: September 6, 2016
* Iteration 2.A Webinar with Clair Koroma (USDS) re: building a product vision: September 4, 2016
* Iteration 2.B Planning Meeting: October 11, 2016

#### Release 3

* Iteration 3.A Planning Meeting: October 24, 2016
* Iteration 3.A Webinar with Janine Gianfredi (USDS) re: communication/storytelling: November 2, 2016
* Iteration 3.B Planning Meeting: November 7, 2016

#### Release 4

* Iteration 4.A Planning Meeting: December 5, 2016
* Iteration 4.A Webinar with Mary O’Toole: December 13, 2016
* Iteration 4.B Planning Meeting: December 19, 2016

## Appendix D: Self-Directed Learning: Release 1

During Release 1: Digital Services in the 21st Century Government, learners achieved the following overall goal: *Describe digital services in the 21st century, including what they are, who provides them, how they are delivered, and why they are important.*

In the table below, we present the performance objectives for each of the two iterations in Release 1 along with the learning activities that aligned with each one.

|  |  |
| --- | --- |
| Iteration 1.A: The Digital Services Professional | |
| N/A | [Release Scenario Staging](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/947cea5e6ecf46f8982e7128f9bcfbe2/)[[3]](#footnote-4) |
| 1.1 | Define digital services and the problems they can be used to solve. |
|  | * [Readings](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/8da6acd5a9d742bcbf37e6bf8bb5bed2/) * [Online Learning: The Who & What](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/179f3f1b3d48428fa699b59fef65d289/) |
| 1.2 | Identify key digital services roles/professionals in the digital services ecosystem and their challenges. |
|  | * [Readings](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/8da6acd5a9d742bcbf37e6bf8bb5bed2/) * [Online Learning: The Who & What](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/179f3f1b3d48428fa699b59fef65d289/) * [Digital Services Blog Activity](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/ba85ad5336a244a6b0532c8e74edfb33/) |
| 1.3 | Identify modern design, development, and delivery methods used by digital services professionals. |
|  | * [Readings](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/8da6acd5a9d742bcbf37e6bf8bb5bed2/) * [Digital Services Blog Activity](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/ba85ad5336a244a6b0532c8e74edfb33/) * [Online Learning: The How](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/f1dc1192122f4912b3943e33ef18203d/) |
| 1.4 | Identify "who's who" in the digital services arena, including public and private sector organizations and individuals. |
|  | * [Readings](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/8da6acd5a9d742bcbf37e6bf8bb5bed2/) * [Activity Break: Starting Your Who’s Who List](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/a96f581dc9314967b84552bed7aa08dc/) |
| 1.5 | Illustrate your new role as a digital service acquisition professional and that of your team members. |
|  | * [Readings](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/8da6acd5a9d742bcbf37e6bf8bb5bed2/) |
| N/A | * [Live Digital Assignment: Hypothesis](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/abdd718c89464aadbb3e5014f9d1b6c3/3ee413150919402da40adcff28a850b3/) |

|  |  |
| --- | --- |
| Iteration 1.B: The Digital Service World | |
| 1.6 | Identify the available sources of supply within the digital services market segments, such as Open Source Software, Big Data, XaaS, Cloud, and more. |
|  | * [Readings](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/8eb2301ffdd440cebc07dc9f67ab5107/89e4a29c68964e54ad2161049c4456ab/) * [Online Learning: Understanding Sources of Supply (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/8eb2301ffdd440cebc07dc9f67ab5107/8c455f9590b3450aa211d40e0535694b/) * [Activity: Trend Analysis of Fast Company's Most Innovative Companies (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/8eb2301ffdd440cebc07dc9f67ab5107/a8203df7504f4246ad5d3e3d8c5ed3fc/) |
| 1.7 | Identify the high-level principles of agile development that make it effective. |
|  | * [Readings](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/8eb2301ffdd440cebc07dc9f67ab5107/89e4a29c68964e54ad2161049c4456ab/) |
| 1.8 | Describe what sets agile methods apart from waterfall development and delivery methods. |
|  | * [Readings](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/8eb2301ffdd440cebc07dc9f67ab5107/89e4a29c68964e54ad2161049c4456ab/) |

### Evaluation Methodology

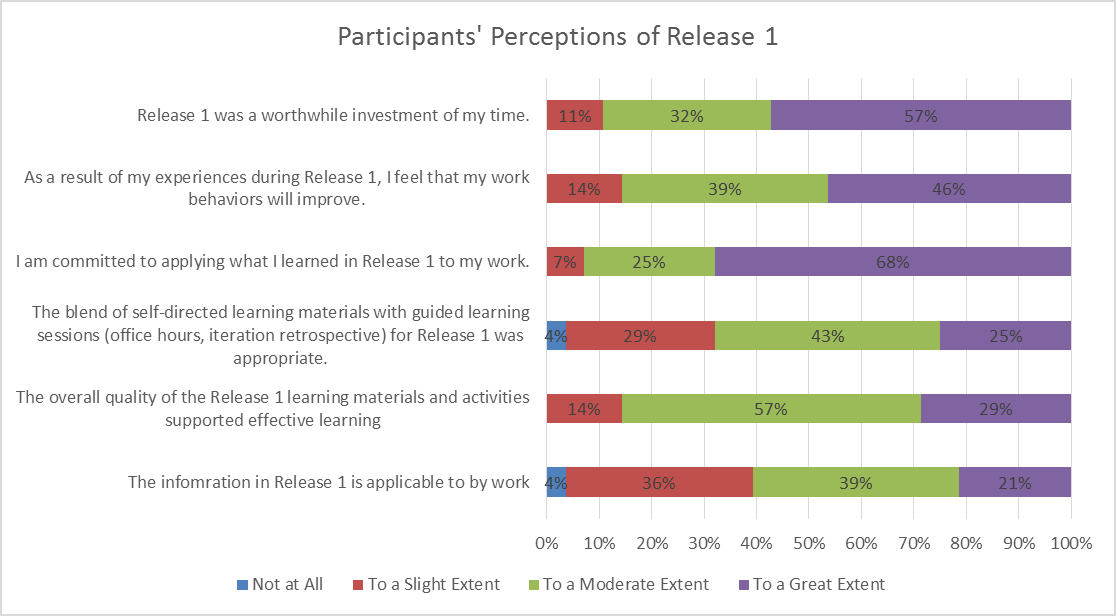
The Release 1 self-directed learning component was evaluated through:

* Participant feedback
* Facilitator feedback
* Client feedback

### Findings and Observations

#### Feedback

*Perceptions of Release 1 Content*

The student perception of Release 1 content was very positive. Nearly all participants (93%) have either a strong or moderate commitment to apply what they learned in Release 1 to their work. A clear majority (85%) of participants believe their work behaviors will improve as a result of Release 1. A clear majority (86%) of participants reported that the quality of Release 1 learning elements supported their learning. Multiple participants felt that the content in Release 1 Content provided good foundational knowledge that they need; some participants indicated that real world applications of content, such as showing contract language, would have been beneficial to include.

*Participant commitment, expectations, and learning application*

When asked is their expectations for Release 1 were met, 86% of participants responded that their expectations were met to a moderate or great extent.

Additionally, 50% of the participants reported that they are in a job role where they can apply what they have learned immediately.

*Instruction and Technology*

Regarding the instruction and course technology, there were many comments about the large number of content, and information coming at once. There were many comments about the large amount of content and information coming at once. Multiple participants indicated that this was especially difficult coming at the end of the fiscal year when their job responsibilities are particularly heavy.

Several comments focused on having too many readings or desiring more real-time examples.

Overall, participants thought that the instruction for this Release was good, although some did indicate a desire for more in-person instruction or real-time interactions, even though they acknowledge this may not be realistic.

Some participants experienced challenges with the portal, such as not being able to access it on the GSA network or challenges due to DoD firewalls. While many participants thought that the portal was fine, a few participants found the portal difficult to navigate.

***Release 1 Knowledge Assessment Results***

For each of the performance objectives included in Release 1, participants also completed Pre-Program Assessment questions to assess the same objectives. The charts below display the scores on the Pre-Program Assessment and Release 1 for each of the relevant performance objectives, and the chart displays a comparison between the scores.

*Average overall score, score distribution*

* Average score for the Section 2 (Level 2 knowledge assessment) questions was 15.68 out of 28 or 60% correct.
* Lowest score was 8 (30%); Highest score was 21 (81%)

*Highest and lowest scoring performance objective(s)*

Participants performed **best** on Performance Objective 1.4 – **Identify “who’s who” in the digital services arena, including public and private sector organizations and individuals,** followed by Performance Objective 1.2 – **Identify key digital services roles/professionals in the digital services ecosystem and their challenges,** and Performance Objective 1.3 – **Identify modern design, development, and delivery methods used by digital services professionals.**

Participants performed **poorest** on Performance Objective 1.8 – **Describe what sets agile methods apart from waterfall development and delivery methods,** followed by Performance Objective 1.7 – **Identify the high-level principles of agile development that make it effective.**

Mean percentage scores for each of the Release 1 performance objectives are provided in the following chart:

*Highest and lowest scoring performance objective(s)*

For each of the performance objectives included in Release 1, participants also completed Pre-Program Assessment questions to assess the same objectives. The table below displays the comparison between scores on the Pre-Program Assessment and Release 1 for each of the relevant performance objectives.

|  |  |  |  |
| --- | --- | --- | --- |
| **Comparison of Cohort Pre-Program Assessment and Release 1 Scores for Release 1 Performance Objectives** | | | |
| **Performance Objective** | **Score Increase** | **Equal Score** | **Score Decrease** |
| **1.1** | 41% | 56% | 4% |
| **1.2** | 19% | 59% | 22% |
| **1.3** | 0% | 93% | 7% |
| **1.4** | 4% | 89% | 7% |
| **1.5** | 19% | 44% | 37% |
| **1.6** | 37% | 30% | 33% |
| **1.7** | 26% | 52% | 22% |
| **1.8** | 7% | 78% | 15% |

One caveat with regard to these comparisons is that the scores for the Pre-Program Assessment relied on fewer items. This means that it may have been easier to receive a high score on the Pre-Program Assessment than Release 1 because fewer questions needed to be answered correctly. As such, to make these comparisons participant scores were grouped around confidence intervals to better equate scores. The number of items for each performance objective in both the Pre-Program Assessment and Release 1 are provided in the following table.

|  |  |  |
| --- | --- | --- |
| **Number of Items per Performance Objective** | | |
| **Performance Objective** | **Pre-Assessment**  **# of items** | **Release 1**  **# of items** |
| **1.1** | 2 | 10 |
| **1.2** | 2 | 7 |
| **1.3** | 1 | 8 |
| **1.4** | 1 | 7 |
| **1.5** | 6-7 | 10 |
| **1.6** | 4-5 | 13 |
| **1.7** | 3-5 | 14 |
| **1.8** | 1 | 12 |

### Recommendations for Future Deliveries

The following recommendations are based on the findings and observations noted in the previous section. Global recommendations, or those recommendations that affect the material in more than one area, are discussed first. More specific changes to individual learning activities are included after the global recommendations.

#### Global

Under the badging model used in the course, it is intended that every performance objective will have two related activities (one bronze, and one silver). In future course deliveries, additional activities should be built out to ensure that there are two activities per performance objective. For instance, with performance objectives 1.7 and 1.8 (the lowest scoring objectives in the Release 1 assessment), there were only readings tied to the performance objectives. If there were another self-guided learning tied to these objectives, chances are that they would have scored higher.

There were many comments about the large amount of content and information coming at once. Multiple participants indicated that this was especially difficult coming at the end of the fiscal year when their job responsibilities are particularly heavy. If the goals and objectives of the program are to remain the same, then we recommend that more time be given to each iteration, or that there be additional iterations as part of a longer program. Alternatively, course delivery can be adjusted to coincide with a less busy time of year. In addition, by providing more upfront information about required time commitments, this can also help prepare participants for the required time commitment. Additionally, seat time for each activity should be carefully re-examined to ensure that participants are able to accurately estimate how long required activities will take them.

Some participants experienced challenges with the portal, such as not being able to access it on the GSA network or challenges due to DoD firewalls. While many participants thought that the portal was fine, a few participants found the portal difficult to navigate.

Release 1 is the only Release for which a large number of participants saw a decrease in their scores from the Pre-Assessment to the Capstone Skills Test. There could be multiple reasons for this. For example, having a different number of items to assess objectives from the Pre-Assessment to the Capstone Skills Test can have a large impact because there are few items to measure each objective. Alternatively, it is possible that because Release 1 was the furthest removed timewise from the Capstone Skills Test, that participants did not recall information as well or did not retain as much information because they were still learning about how the course was structured in the early days. We include recommendations to address this in Section 3: Overall Recommendations.

***Iteration 1.A***

*Activity: Starting Your Who’s Who List*

* Participant feedback showed that mandatory discussion posts did not generate conversation, partially based on the unintuitive functionality of the built-in edX discussion board functionality. To combat this specifically for this activity, we could transition it to be a blogging activity using the [program blog](https://digitalacquisitionpilot.wordpress.com/). In addition to increasing the effectiveness of this singular activity, introducing blogging and the blogging platform in Iteration 1.A (rather than in Release 3) would help eliminate confusion and difficulty that comes with introducing a new system later in the program. Discussion boards could then be repurposed to serve as a place for participants to ask any content-related questions of each other and the program staff. Alternatively, other courses that use the edX program sometimes link to external discussion board services. See Section 3: Overall Recommendations for additional information.

*Activity: Digital Services Blog Activity*

* For this activity, in which participantsread a digital service blog and responded to questions in the form of a discussion post, an alternative to discussion posts can be used. As mentioned above, student blogs can be used to post their responses. Additionally, Open edX has a built-in [open response assessment](http://edx.readthedocs.io/projects/edx-partner-course-staff/en/latest/exercises_tools/open_response_assessments/OpenResponseAssessments.html) that was used for open-ended responses to Iteration Assessments. If the open response feature is used, program staff can read, evaluate, and provide feedback to participant responses.

***Iteration 1.B***

*Readings*

In Iterations with readings, it would be helpful to note in the portal which specific performance objective(s) each reading aligns with. In the case of performance objectives 1.7 and 1.8, readings were the only learning activities that were related, but there was no explicit statement in the portal which readings tied to those performance objectives.

## Appendix E: Self-Directed Learning: Release 2

During Release 2: Understanding What You Are Buying, learners achieved the following overall goal: Determine the problem to be solved while effectively supporting and communicating with the customer.

In the table below, we present the performance objectives for each of the two iterations in Release 1 along with the learning activities that aligned with each one.

|  |  |
| --- | --- |
| Iteration 2.A: Understanding Your Needs and Agency Readiness | |
| 2.1 | Analyze stakeholders in your sphere of influence that will impact digital services acquisition. |
|  | * [Activity: Stakeholder Analysis (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/71b467daf27345b3aa759b287b8c22e1/4f8609e5e3ac477d871ce43288062eb3/) |
| 2.2 | Assess your agency’s readiness for change and innovation. |
|  | * [Activity: Agency Change and Innovation Readiness Survey (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/71b467daf27345b3aa759b287b8c22e1/f26d442328334f9abecf46b4b6050e11/) |
| 2.3 | Analyze a digital service need to determine the most appropriate market for the service. |
|  | * [Activity: Practice Analyzing a Digital Service Need (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/71b467daf27345b3aa759b287b8c22e1/7f2ac958495b4b07812ddd2b7499d1b2/) |
| 2.4 | Ask effective exploratory questions to understand the agency's need and make recommendations on a course of action for a digital acquisition procurement. |
|  | * [Live Digital Assignment: The Product Vision](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/71b467daf27345b3aa759b287b8c22e1/4b263d21290d4474986a8810e4335ce9/) |

|  |  |
| --- | --- |
| Iteration 2.B: The Digital Services Market | |
| 2.5 | Identify why communicating openly and responsibly with potential vendors is critical to digital services acquisition success and how to do it. |
|  | * [Activity: Communicating the Mission/Need (S&G)\*](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/71b467daf27345b3aa759b287b8c22e1/a4a16cb913504e4fb377b0f237e84da4/) * [Online Learning: Responsible Pre-Solicitation Communication (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/da397bdc9d4b4ae3be72e2240b5379f0/ec15e76d46614c1bacbef0f7d6078426/) |
| 2.6 | Differentiate between buying compliance and buying outcomes. |
|  | * [Online Learning: Responsible Pre-Solicitation Communication (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/da397bdc9d4b4ae3be72e2240b5379f0/ec15e76d46614c1bacbef0f7d6078426/) |
| 2.7 | Conduct effective market research for digital services. |
|  | * [Online Learning: Building Your Market Research Toolkit (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/da397bdc9d4b4ae3be72e2240b5379f0/3bbddda6e4304a2a8659a7be508eb037/) |

\*Communicating the Mission/Need activity was included in Iteration 2.A, but relates to performance objective 2.5.

### Evaluation Methodology

Release 2 self-directed learning was evaluated through:

* Participant feedback
* Facilitator feedback
* Client feedback

### Findings and Observations

#### Findings

##### Overview

Twenty-four of the 28 participants currently enrolled in the course completed the Release 2 assessment (86%). Overall, participation remained strong on activities associated with the Release. Overall, participants had positive perceptions of the type of content included in Release 2, are were more prepared for the time commitment than they were in Release 1. The average overall score on the knowledge assessment questions was 64% correct.

The majority of participants (64%) said that their IDP helped to focus their efforts during Release 2 to **a slight extent** or less.

Half of the participants (50%) indicated that they did not believe they had enough time to complete the coursework and assignments. Thirty-eight percent of the participants indicated that they spent more than three hours on the live digital assessment; however, one third of the participants (33%) said that they spent less than 10 hours on Release 2 activities outside of the live digital assessment and the classroom session.

##### Perceptions of Release 2 content

Most participants (87%) have either a strong or moderate commitment to apply what they learned in Release 2 to their work.

Most participants (70%) believe their work behaviors will improve as a result of Release 2.

A clear majority (78%) of participants reported that the quality of Release 2 learning elements supported their learning.

While most participants (70%) thought the Release 2 information is applicable to their work, a few (9%) thought that it was not applicable at all to their work.

Multiple participants felt that the content in Release 2 provided good, deeper level information and is preparing them to incorporate agile requirements in the future.

##### Participant commitment, expectations, learning application

Majority of participants (70%) said that their expectations for Release 2 were met to **a moderate or great extent**.

Over half of the participants (60%) are in a job role where they can apply what they have learned immediately.

Sixty four percent of the participants think that the live digital services assignment is a valuable way to apply what they learned in the program to a real-life procurement challenge. A few of the participants indicated that the more direction was needed or the assignment would be better placed as a capstone type project for the course.

##### Instruction and technology

In general, participants liked the guest speakers, but some noted that these sessions could get off track or seem ill prepared given the evolving program.

Participants mentioned a few challenges encountered when using the technology. Specifically, there was some difficulty in navigating the portal or finding the layout confusing. Badging was also identified as an area that could use improvement.

##### Time Commitment *f*or Release 2

Compared to Release 1, almost half (48%) of the participants indicated that they are settling into the rhythm of the program and the time commitment it will require.

Most of the participants (57%) did not complete the majority of the Release 2 activities during their regular work hours.

##### *Average overall score, score distributio*n

Average score for the Section 2 (Level 2 knowledge assessment) questions was 19.13 out of 30 or 64% correct. The lowest score was 14 (47%), and the highest score was 24 (80%).

##### Highest and lowest scoring performance objective(s)

Participants performed **best** on Performance Objective 2.5 – **Identify why communicating openly and responsibly with potential vendors is critical to digital services acquisition success and how to do it**, followed by Performance Objective 2.2 – **Assess your agency’s readiness for change and innovation.**

Participants performed poorest on Performance Objective 2.7 **– Conduct effective market research for digital services**, followed by Performance Objective 2.1 – **Analyze stakeholders in your sphere of influence that will impact digital services acquisition.**

Mean percentage scores for each of the Release 2 performance objectives are provided in the following chart:

##### Release 2 Performance Comparisons

For each of the performance objectives included in Release 2, participants also completed Pre-Program Assessment questions to assess the same objectives. The table below displays the comparison between scores on the Pre-Program Assessment and Release 2 for each of the relevant performance objectives.

|  |  |  |  |
| --- | --- | --- | --- |
| Comparison of Cohort Pre-Program Assessment and Release 2 Scores for Release 2 Performance Objectives | | | |
| **Performance Objective** | **Score Increase** | **Equal Score** | **Score Decrease** |
| **2.1** | 29% | 0% | 71% |
| **2.2** | 74% | 0% | 26% |
| **2.3** | 48% | 0% | 52% |
| **2.4** | 70% | 4% | 26% |
| **2.5** | 87% | 9% | 4% |
| **2.6** | 0% | 30% | 70% |
| **2.7** | 17% | 4% | 78% |

One caveat with regard to these comparisons is that, in some cases, the scores for the Pre-Program Assessment relied on fewer items. This means that it may have been easier to receive a high score on the Pre-Program Assessment than Release 2 because fewer questions needed to be answered correctly. In addition, we had 5 questions (out of 30) with a “select all that apply” response requirement, and if participants did not include all correct responses, their answer was scored as “incorrect.” We suggest considering that this approach eliminated participants who largely had mastery of that question but might have missed one of multiple correct answers. Thus, ICF recommends not employing this type of question structure in future assessments. The number of items for each performance objective in both the Pre-Program Assessment and Release 2 are provided in the following table.

|  |  |  |
| --- | --- | --- |
| **Number of Items per Performance Objective** | | |
| **Performance Objective** | **Pre-Assessment**  **# of items** | **Release 2**  **# of items** |
| **2.1** | 0-2 | 8 |
| **2.2** | 5-8 | 4 |
| **2.3** | 4-5 | 5 |
| **2.4** | 3-5 | 4 |
| **2.5** | 2-5 | 4 |
| **2.6** | 1 | 4 |
| **2.7** | 2-4 | 6 |

### Recommendations for Future Deliveries

The following recommendations are based on the findings and observations noted in the previous section. Global recommendations, or those recommendations that affect the material in more than one area, are discussed first. More specific changes to individual learning activities are included after the global recommendations.

#### Global

At the time the assessment data above was pulled (11/9/2016), 24 of 28 participants had completed the Release 2 Assessment. As discussed in Section 3: Overall Recommendations, we struggled to garner 100% participation on assessments, which is desired when analyzing cohort-level data, and participants often completed assessments after an iteration was complete, thereby delaying our ability to analyze the data and identify trends. In the future, strict deadlines should be instituted for time-sensitive tasks, such as by using the due date feature in Open edX where the activity closes once the due date passes.

In Release 2, 43% of participants said that they felt overloaded with the time commitment required by the program. As with Release 1, it is recommended that seat time for each activity be reevaluated. Additionally, the duration of each iteration should be considered. As discussed in Section 3: Overall Recommendations, adding reflection time between iterations would also be advisable, so as to allow for program staff analysis of assessment data and participant remediation in their low-performing performance objectives.

#### Iteration 2.A Activity: Stakeholder Analysis

The Stakeholder Analysis Activity is the only self-guided learning tied to performance objective 2.1 (the second lowest scoring performance objective at 39.4%). In order to improve performance on this objective, it is recommended that an online learning be added to the iteration to build participant knowledge before requiring them to apply it as part of the activity. To align with the sphere of influence piece of the performance objective, content can be pulled from the pilot’s [Online Learning: Using Your Influence to Affect Positive Change](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2015_T1/courseware/06beaf5c90b1400da673d18a0244671f/5f3048ca54ae48b3aca454b0ed8d38bd/).

#### Iteration 2.B Online Learning: Introduction to Building Your Market Research Toolkit

In the Release 2 assessment, the mean percentage score was 30.9% for performance objective 2.7. The only associated learning activity is the Introduction to Building Your Market Research Toolkit online learning. It is suggested that the online learning be expanded to include more detailed information about conducting market research. Knowledge checks can also be used to allow participants to gauge their knowledge prior to the release assessment.

Additionally, a second activity or online learning should be developed to reinforce market research concepts. Market research is currently covered in the classroom session, but participants were expected to have taken the release assessment before the classroom. The Salesforce Market Research materials from the classroom could developed into an activity or online learning.

## Appendix F: Guided Learning: Release 2 Classroom Session

The MVP Release 2 classroom session was conducted on Oct. 17-21, 2016 at the FHWA training institute (1310 North Courthouse Road, Suite 300). The session was facilitated by Heather Govoni (ICF), Glen Phillips (Team ICF), Neil Chaudhuri (Team ICF), and Traci Walker (USDS). Guest speakers/invited guests included:

* Aaron Pava, USDS: Mr. Pava spoke about understanding stakeholder challenges and government transformation. He also spoke about his experience doing business with the government as a small business owner.
* Jonathan Mostowski, USDS: Mr. Mostowski spoke about the Government Digital Service Acquisition Stack Exchange.
* David Yang (ICF), Courtney Welton (ICF), Will Randolph (Team ICF), Aaron Pava (USDS), Brent Maravilla (USDS), Matt Cutts (USDS): These individuals participated in the influence conversation role plays that were held on Day 4 (Oct. 20).
* Mark Junda, Department of Veterans Affairs, and team: Mr. Junda and team discussed a recent coding challenge conducted for the VA Appeals acquisition.
* Shannon Sartin, USDS: Ms. Sartin spoke about the lean acquisition planning canvas and how to use it for acquisition strategy and planning.

The overall objectives of the orientation were to review key concepts covered in Release 2: Understanding What You’re Buying and to discuss foundational concepts in Release 3: How Do You Buy?

To replicate the Release 2 classroom experience, the following will need to be arranged for each offering of the program:

* Six guests for the influence conversation role play activity. These guest should review the written preparation materials as well as participate in a 30-minute discussion with the facilitators to discuss logistics and desired outcomes.
* A small business vendor guest speaker who can talk about the challenges and opportunities for doing business with the government (Mr. Aaron Pava filled this role in the MVP)
* A digital services expert to recap the digital services content from Release 1 and answer participant questions

### Evaluation Methodology

The Release 2 classroom session was evaluated through:

* Participant feedback
* Facilitator feedback
* Client feedback

### Findings and Observations

#### Feedback

On the last day of the classroom session, participants participated in a sticky note activity to gather feedback on the Release 2 experience. They were asked to provide the following types of feedback:

* Start Doing
* Stop Doing
* Continue Doing

Themes from each category included the following:

* **Start Doing**
  + Providing and using more example solicitations
  + Including more exercises, activities, and discussions
  + More guest speakers
  + More networking opportunities with the guest speakers
  + Provide more LDA structure and focus
  + Keep conversations on track
* **Stop Doing**
  + Fewer readings
  + Earlier planning and organization of sessions
* **Keep Doing**
  + Guest speakers

The ICF and USDS team debriefed about the Release 2 classroom session and conducted a retrospective on October 26, 2016. Notes and findings from this retrospective included the following:

* Live digital assignment:
  + Ensure we communicate out about the intentionally unstructured nature of the assignment from the get-go and the rationale behind it. Emphasize that we do not have the answers, and we are relying on them to define the problem and help solve it, as these are the types of challenges they will be facing more and more in the digital services realm (and in the 21st century environment in general).
* Ensure we are not covering contracting officer 101 materials and that we are focused on digital services acquisition-specific practices. The introduction to Release 3 materials on Day 5 fell flat.
* Influence conversation activity:
  + Conduct more rigorous preparation with the invited influence conversation guests, including those who are invited from the government. Emphasize that the guests should be “tough” in their role plays so as to best prepare participants for what they will likely encounter on the job.
  + The influence conversation activity conducted on Day 4 was useful, but verbal feedback from one participant was that we should provide the self-directed learning about conducting such conversations before the classroom, rather than after it.
* During Day 3, we conducted an activity to help participants think about techniques for conducting market research and reaching non-traditional vendors. While some groups thought of “out of the box” solutions, most came up with relatively standard approaches. To help encourage participants to think innovatively, the team thought it would be useful to test out having moderators at each table group during activities when possible.
* We will continue to start at 8 am.
* We will add optional brown bag sessions during lunch where participants are able to discuss topics of interest with the USDS team.

### Recommendations for Future Deliveries

The following recommendations are based on the findings and observations noted in the previous section. Global recommendations, or those recommendations that affect the material in more than one area, are discussed first. More specific changes to individual days are included after the global recommendations.

#### Global

* At the beginning of each classroom session, facilitators should have a sign-in sheet for participants. Tracking attendance will help when validating final participation grades.
* With seven performance objectives in Release 2, it was difficult to cover each of them in-depth during a four-day classroom session. Instead, it may be beneficial to focus on difficult concepts that would benefit most from having additional instruction (e.g., performance objective 2.7 and how to seek answers with market research).
* Where possible, activities should revolve around actual digital service examples. Participant feedback reflected a high desire to see real-life examples over hypothetical scenarios.
* Tweak existing activities to include a combination of group work with “rotating,” customized facilitation at small tables. This will help promote innovation and creative thinking. Each table/group should have a moderator that helps facilitate discussions and guide their ideas. If resources/facilitators are limited, consider providing cohort members the opportunity and responsibility to serve in that role on a rotating basis.

#### Day 2

* In the Release 1 Review, Neil Chaudhuri’s presentation was in-depth and covered important Release 1 topics. However, there were several questions on the relationship to contracting. This presentation should be included in future deliveries, but the relationship to contracting should be considered.

#### Day 3

* The results of the MAP Case Study and Market Research activities were generic and did not stimulate ideal discussion. There were some interesting tools/resources that participants were using, but there is room for improvement. As mentioned in the global recommendations, it would help to have experienced guests sit with each table to facilitate discussion. Additionally, many of the questions that were asked were generic regarding challenges encountered, additional questions, etc. Having more targeted questions that encourage self-discovery can be beneficial in the future.

#### Day 4

* The influence conversation activity received positive feedback from participants, but was delivered too early in the program. Participants did not have online learnings about influence until Iteration 3.A, whereas these learnings would have guided their conversations if they were before the activity.
* In the influence conversations activity, it was recommended that at least 1-2 conversations be held virtually because many of their interactions as COs are virtual. This could be simulated in the classroom (e.g., have participants sit back to back when conducting the conversation) or actually conducted virtually. If conducted virtually, structured feedback should be provided, so participants feel similarly connected to the feedback piece of the activity and the supportive atmosphere.

#### Day 5

* The VA Guest Panel on Day 4 was popular with participants, as it gave them insight into a real, relatable experience with digital services. It would be helpful to spend more time on Day 5 having a discussion about the panel—what lessons were learned, how can you implement similar ideas, etc. On Day 5, this discussion cut into the Release 3 Introduction, so having designated time would be beneficial.
* The Lean Acquisition Planning Canvas received positive feedback, and Shannon Sartin was an effective, energetic presenter.

## Appendix G: Self-Directed Learning: Release 3

During Release 3: Understanding What You Are Buying, learners achieved the following overall goal: Effectively use techniques for acquiring digital service solutions in your solicitation or acquisition strategy.

In the table below, we present the performance objectives for each of the two iterations in Release 3 along with the learning activities that aligned with each one.

|  |  |
| --- | --- |
| Iteration 3.A: Developing an Acquisition Strategy: | |
| 3.1 | Identify how to develop an acquisition strategy for digital services. |
|  | * [Online Learning: The Acquisition Strategy (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/cc2f78a334f24c17940c2164df6740a6/d3df202ae24941f082cd9e139a0b2b8d/) |
| 3.2 | Select an acquisition strategy that supports your customer's needs for a digital acquisition. |
|  | * [Activity: Developing the Acquisition Strategy](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/cc2f78a334f24c17940c2164df6740a6/7c3e6dd2a68040acbf29e5b95406c8b4/) |
| 3.3 | Identify strategies and communication methods to apply at different phases of the change lifecycle. |
|  | * [Readings (S&G)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/cc2f78a334f24c17940c2164df6740a6/9bed0ed4cb62466f8cfe044432d7b08e/) * [Online Learning: Preparing for and Having an Influence Conversation (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/cc2f78a334f24c17940c2164df6740a6/1845838559f3433fabf32bad1c2e785a/) * [Online Learning: Difficult Conversations (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/cc2f78a334f24c17940c2164df6740a6/f31984a2db0f4a81b2da7a4007da5bf2/) * [Blogging Activity: Change-Related Challenges (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/cc2f78a334f24c17940c2164df6740a6/0f520ef211dc42cf8ce46010377d6ef9/) |
| 3.4 | Identify evaluation methods and criteria on cost and pricing, terms and conditions, security concerns (cyber), and data rights to evaluate vendor maturity and ability to deliver a product that solves a given need and given the definition of success. |
|  | * [Online Learning: The Acquisition Strategy (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/cc2f78a334f24c17940c2164df6740a6/d3df202ae24941f082cd9e139a0b2b8d/) * [Activity: Assess 18F BPA Submissions (S&G)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/cc2f78a334f24c17940c2164df6740a6/92c0b7748705493ca78136e94104c3c9/) |

| Iteration 3.B: Acquiring Digital Services | |
| --- | --- |
| 3.5 | Identify the role that security plays in digital service contracts. |
|  | * [Webinar: Digital Services: More Secure Than You Think They Are (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/ee98b671d8674d4eb6f551369522c32d/ebee10079ce8420aac9c8faea63172ae/) * [Activity: FedRAMP and Digital Services (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/ee98b671d8674d4eb6f551369522c32d/c40f3af01f0c416dbf58ffa98c774577/) |
| 3.6 | Develop your acquisition package for procuring digital services, including proposal and source selection methods. |
|  | * [MAP Case Study: Developing the RFQ - Part I (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/ee98b671d8674d4eb6f551369522c32d/27ec9342ca544473958ff9ac8dfe9be2/) * [Online Learning: Compliance & Other Legal Issues (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/ee98b671d8674d4eb6f551369522c32d/9dbb8e3614854310a9a5a2ee8f16a1f6/) * [Activity: Compare Acquisition Packages (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/ee98b671d8674d4eb6f551369522c32d/5c825f10db2f47b49d1f918f61212bb4/) |
| 3.7 | Define evaluation criteria, given evaluation strategy discussed in your acquisition strategy. |
|  | * [Activity: Top Evaluation Criteria (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/ee98b671d8674d4eb6f551369522c32d/937f86d751b341d895c34e71a13982c5/) * [Activity: Further Practice with Evaluation Criteria (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/ee98b671d8674d4eb6f551369522c32d/4d2ab2b7463748afa7bbc43309232241/) * [Activity: Evaluation Criteria Research (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/ee98b671d8674d4eb6f551369522c32d/42932eacce00444e990b3fa46cdb4fc7/) |

### Evaluation Methodology

The Release 3 self-directed learning was evaluated through:

* Participant feedback
* Facilitator feedback
* Client feedback

### Findings and Observations

#### Findings

##### Overview

The content for Release 3 was presented and assessed in two iterations: Release 3A and Release 3B. For each iteration, participants responded to a pre-test and post-test. Participation levels for these assessments where high, with over 90% of the program participants completing each. Overall, self-reported participation remained strong on Release 3 activities. Additionally, most participants had positive perceptions of the type of content included in Release 3, and reported they were more prepared for the time commitment than they were during Release 1. The average overall score on the knowledge assessment questions was 79% correct.

Half of the participants (50%) reported that their Pre-Assessment Assigned Sections helped to focus their efforts during Release 3 to a slight extent or less.

Half of the participants (50%) indicated that they did not believe they had enough time to complete the coursework and assignments. Approximately one-third of the participants (31%) indicated that they spent more than three hours on the live digital assignment, and approximately one third of the participants (35%) reported that they spent less than 10 hours on Release 3 activities outside of the live digital assessment and the classroom session.

*Perceptions of Release 3 content*

Most participants (89%) have either a strong or moderate commitment to apply what they learned in Release 3 to their work.

Most participants (77%) believe their work behaviors will improve as a result of Release 3.

A clear majority (80%) of participants reported that the quality of Release 3 learning elements supported their learning.

While most participants (70%) reported the Release 3 information is applicable to their work, a few (9%) reported it was not applicable at all to their work.

##### Participant commitment, expectations, learning application

Majority of participants (77%) said that their expectations for Release 3 were met to a **moderate or great extent**.

The majority of the participants (93%) report they are in a job role where they can apply what they learned immediately.

Half of the participants (50%) report that the live digital services assignment is a valuable way to apply what they learned in the program to a real-life procurement challenge.

##### Instruction and technology

In general, participants indicated that the instruction in Release 3 was of high quality; though a few noted that they would have liked more consistency across the course (e.g., instructors, presentation format of materials, information about class logistics). In the qualitative comments, some participants also noted that they desired information in advance of the sessions (e.g., a full schedule of meeting times and locations before the class starts, details about what would be covered in each session before it occurs).

In reviewing the qualitative data gathered from participants, some noted that it was difficult to locate information in the portal or determine which activities had been completed.

##### Time Commitment for Release 2

Compared to Release 1, over half (54%) of the participants indicated that they are settling into the rhythm of the program and the time commitment it requires.

Most of the participants (61%) did not complete the majority of the Release 3 activities during their regular work hours.

##### Release 3 Knowledge Post-Assessment Results

###### Total Release 3 Post-Assessment average overall score, score distribution

Twenty-four of the 26 participants currently enrolled in the course (92%) completed the Release 3A Post-Assessment. All 26 current cohort members completed the Post-Assessment for Release 3B.

For the participants who completed the post-assessment for both Release 3A and Release 3B, the average total score was 17.29 out of 22 or 79% correct.

The lowest score was 14 (64%); the highest score was 20 (91%).

###### Release 3A Post-Assessment average score, score distribution

The average score on only the Release 3A Post-test was 12.54 out of 14, or 90%.

The lowest score was 10 (71%); the highest score was 14 (100%).

###### Release 3B Post-Assessment average score, score distribution

The average score on only the Release 3B Post-test was 4.73 out of 8, or 59%.

The lowest score was 2 (25%); the highest score was 6 (75%).

###### Highest and lowest scoring performance objective(s)

Participants performed **best** on **Performance Objective 3.3 – Identify the effective characteristics of a change agent and strategies to apply at different phases of the change lifecycle as you return to your agency**.

Participants performed **poorest** on **Performance Objective 3.7 – Define evaluation criteria, given evaluation strategy discussed in your acquisition strategy**.

Mean percentage scores for each of the Release 3 performance objectives are provided in the following chart:

Of note in this chart is that participants scored highest on Objectives 3.1 through 3.4, and lower on Objectives 3.5 through 3.7. The first four objectives were included in Iteration 3.A, while the last four were part of Iteration 3.B.

##### Release 3 Performance Comparisons

For each of the performance objectives included in Release 3, participants were asked to complete both a Pre- and Post-Assessment of their knowledge related to the performance objectives. The Pre-Assessment was completed before the classroom instruction and/or activities, while the Post-Assessment was completed after classroom instruction and/or all activities. The table below displays the comparison between scores on the Release 3 Pre-Assessment and the Post-Assessment. A few of the program participants did not complete both the Pre- and Post-Assessment. As such, performance comparisons cannot be made for those individuals.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Comparison of Cohort Pre- and Post-Assessment Scores**  **for Release 3 Performance Objectives** | | | | |
| **Performance Objective** | **Score Increase** | **Equal Score** | **Score Decrease** | **Did not Complete One or Both Assessments** |
| **3.1** | 27% | 42% | 23% | 8% |
| **3.2** | 62% | 12% | 15% | 12% |
| **3.3** | 38% | 42% | 8% | 12% |
| **3.4** | 8% | 65% | 15% | 12% |
| **3.5** | 54% | 4% | 35% | 8% |
| **3.6** | 81% | 0% | 12% | 8% |
| **3.7** | 46% | 0% | 46% | 8% |

The greatest percentage of participants saw an increase in their score for Objective 3.6. Objective 3.7 had the greatest decrease in scores from pre- to post-assessment.

### Recommendations for Future Deliveries

The following recommendations are based on the findings and observations noted in the previous section. Global recommendations, or those recommendations that affect the material in more than one area, are discussed first. More specific changes to individual learning activities are included after the global recommendations.

#### Global

As stated above, participants scored higher on objectives in Iteration 3.A versus Iteration 3.B. Iteration 3.A was a full two weeks in length, which provided participants with more time to master the Iteration 3.A content. Iteration 3.B was split into two parts: 1 week for online self-directed learning and 1 week in the classroom. This data suggests that participants may not have had sufficient time to master the performance objectives for the self-directed component in Iteration 3.B (when they only had one week to complete it), which lays the foundation for all of the hands-on application of those objectives in the classroom sessions. Therefore, we recommend ensuring participants have ample time to master the self-directed content prior to coming to the classroom where they can practice and engage with the content. Alternatively, if the schedule remains the same, we recommend reducing the number of performance objectives (and subsequently the amount of self-directed content) that are achieved within such a short amount of time or lowering the desired level of learning.

In general, we recommend assessing whether each performance objective is necessary to achieving the overall terminal performance objective of this release, which is how to develop the acquisition strategy and prepare for publicizing the contract.

In addition, as discussed in Section 3: Overall Recommendations, some adjustments may be needed to ensure that assessment questions align with the level of learning that is required by the performance objective (e.g., if the performance objective focuses on application, then the assessment questions should be constructed to measure achievement of that objective and thus, require the learner to apply their knowledge).

#### Specific Adjustments

Below are recommendations for each of the low-performing objective areas:

* *3.5 Identify the role that security plays in digital service contracts.* Participants completed two self-directed learning activities to enable them to achieve this objective, and the learning activities were aligned to the performance objective. However, the assessment questions aligned to this performance objective asked participants to apply their knowledge, rather than identifying a definition or description. To address this, the level of learning within the performance objective could be elevated along with adjusting the learning activities accordingly; alternatively, the assessment questions could be adjusted to focus on a lower level of learning to align with the existing performance objective and learning activities.
* *3.6 Develop your acquisition package for procuring digital services, including proposal and source selection methods*. The cohort was given a short five-day window to complete all of the self-directed learning activities to master this objective. This is a large subject area, and the data suggests that more time is needed to allow for learning and mastery of the concepts before coming to the classroom to apply the knowledge. We recommend extending the time spent on the self-directed learning to prepare participants for practice and application in the classroom.
* *3.7 Define evaluation criteria, given evaluation strategy discussed in your acquisition strategy.* Again, this is a large subject area and should be given more time to allow for learning and mastery of the concepts before coming to the classroom to apply the knowledge. We recommend extending the time spent on the self-directed learning on this topic as well.

## Appendix G: Guided Learning: Release 3 Classroom Session

The MVP Release 3 classroom session was conducted on November 14-18, 2016 at the ASI Government Training Institute (1655 North Fort Myer Drive, Suite 1000; Arlington, VA). The session was facilitated by Melissa Martin (ASI), Will Randolph (ASI), Neil Chaudhuri (ASI), Heather Govoni (ICF) and Traci Walker (USDS). Guest speakers/invited guests included:

* Johnathan Mostowski, USDS: Mr. Mostowski spoke about pricing structure and how to do estimates and contract structure based on the needs of the customer. Traci Walker co-facilitated.
* Guest speaker on Day 3, Challenge.gov: This presentation focused on innovative ways to buy services and specifically how Challenge.gov can be used in this capacity.
* Guest speaker Day 4, Evan Cooke: Mr. Cooke spoke about security considerations and how to account for various needs and constraints in digital services contracting.
* Vendor Roundtable, Day 4 (David Yang, Mary Schwarz, Steve Ziegler, Jared Elling, Andy Zeswitz, and Rami Aboushakra of ICF & Rohan Bhobe of Nava): Vendors were invited to provide participants feedback during an activity using the threaded scenario as well as to share their perspectives on current digital services acquisition trends and challenges.

### Evaluation Methodology

The Release 3 classroom experience was evaluated through:

* Participant feedback
* Facilitator feedback
* Client feedback

### Findings and Observations

#### Feedback

On the last day of the classroom, participants participated in a sticky note activity to gather feedback on the Release 3 classroom experience and Release 3 in general. They were asked to provide the following types of feedback:

* Start Doing
* Stop Doing
* Continue Doing

Themes from each category included the following:

* **Start Doing**
  + Course Content
    - Cloud, big data, and social media – how do you do that? How do you deal with data portability?
    - Consider eliminating IPMs and do an “IPM” at the end of the classroom so that learners know what to do and then send out an email reminder.
  + Live digital assignment
    - Send out an email on general LDA topics, then participants rank what they want to focus on, and then the faculty develops the topics for the teams to work on
    - Start LDA projects later in the program
  + Logistics: consider an in-residence program
  + Positive affirmation and feedback to the participants that they’re doing a good job
  + Providing and using more examples, samples, and templates
  + Provide more time to complete the online self-direct learning
  + Including more exercises, activities, and discussions in the classroom when the cohort is together
  + More networking opportunities with the guest speakers
* **Stop Doing**
  + Pre-assessments felt long in some places; post-assessment is longer also
  + Get a lot more out of the in-person engagement
  + Learners aren’t sure where they stand in the course in terms of participation and final assignments for the overall course; confusion over old and new badging system
  + Fewer online learnings, specifically webinars
  + Online discussion boards have become a “check the box” activity
  + Use a different case study; as the MAP progressed, it became less compatible with the entire life cycle of the digital acquisition.
* **Keep Doing**
  + Get a lot more out of the in-person engagement
  + Guest speakers and panels; vendor panel was super helpful and loved the openness
  + Influence role play was a favorite
  + Agile activity with play-dough
  + Guest speakers and the discussion panels
  + More role play and scenarios to work through as teams in class
  + Make the LDA easier to keep up with and relevant to the release

The ICF and USDS team debriefed about the Release 3 classroom session and conducted a retrospective on November 28, 2016. Notes and findings from this retrospective included the following:

* Having the Release 3 classroom session so close to the Release 2 classroom session was challenging (they were only separated by approximately 3 weeks).
* Metrics activity was well received.
* USDS offered lunchtime office hours that were well-received during the session.
* Vendor roundtable activity successfully encouraged CO-vendor dialogue, which was the first time many program participants (and even the invited vendors themselves) had had a chance to engage in this manner.
* Will Randolph’s presentation on leading change was well-received and positioned appropriately such that participants can continue to think about how they used what they have learned once they graduate.

### Recommendations for Future Deliveries

The following recommendations are based on the findings and observations noted in the previous section.

* Ensure there is adequate time between classroom sessions for participants to complete activities and for the program faculty to prepare/adjust based on participant feedback and the evolving digital services field.
* Continue to offer role play and practice-focused activities like the metrics activity and vendor roundtable activity.
* Provide actionable samples and templates, when possible, so that participants can use them on the job.
* Guest speakers continue to be well-received and should continue to be included (however, see Section 3: Overall Recommendations for considerations on how to involve them in a way that encourage interaction with participants rather than solely lecture content).

## Appendix H: Self-Directed Learning: Release 4

During Release 4: Understanding What You Are Buying, learners achieved the following overall goal: Evaluate vendors who deliver digital services using instantaneous, objective metrics on project health, developed via appropriately applied lean thinking and agile development methods while experimenting with flexible contract design and administration strategies.

In the table below, we present the performance objectives for each of the two iterations in Release 4 along with the self-directed learning activities that aligned with each one.

|  |  |
| --- | --- |
| Iteration 4.A: Awarding Digital Service Contracts | |
| 4.1 | Select a technical evaluation team with the necessary digital skills. |
|  | * [Online Learning: The Technical Evaluation Team (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/1c67b4cd66634f10972ede931aef65e3/) * [Activity: Tech Evaluation Panel Checklist (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/8e9eae4760ed450592cc2226b9c80576/) |
| 4.2 | Identify how to get the best value solution for your program by negotiating tradeoffs. |
|  | * [Activity: The Tradeoff Game (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/e091b0b5bc034a98989f1b17a3616bcb/) * [Online Learning: Negotiating With Vendors (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/84253e6b2eee4c488a4e2c98b86f3a05/) * [Activity: Negotiation Tactics (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/0df8d319c9d44705a5a094f4d698414d/) |
| 4.3 | Determine the next steps that follow contract award. (Kickoff, Ramp-up, Baselining) |
|  | * [Readings: Post-Award Management of Agile Contracts (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/cd215c69940d40e2a980c8b25ec1e59f/) * [Online Learning: The Power of an Effective Debrief (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/cede0c4861b244e48b45a4cb756ac81d/) * [Webinar: How SBA Conducted Post-Award Administration Activities (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/001da47dc8e94634ba3062af996ff54a/) * [Activity: Post-Award Webinar (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/df4a9c31c7064bd3a38fcb26961450ba/) |
| 4.4 | Identify the effective characteristics of a change agent and strategies to apply at different phases of the change lifecycle as you return to your agency. |
|  | * [Activity: Blog Your Acquisition Package! (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/b56df63452914fb2b19e3bc48023d7d1/) * [Activity: Blogging Research (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/a3dd3124f6754ef1b05b3aa918d1d7c2/) * [Online Learning: Leading Change (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/d61d3dd826d344ca874dbc831687475a/) * [Online Learning: Building Your Resilience (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/06beaf5c90b1400da673d18a0244671f/f21b850e91794bd881d04991568e66f5/) |

|  |  |
| --- | --- |
| Iteration 4.B: Digital Services Delivery (or How Solutions Get Done) | |
| 4.5 | Identify software engineering practices for high-quality digital services like version control, continuous integration, and continuous delivery. |
|  | * [Reading: Amplifying Agile Delivery (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/b76c0a6f6b8e4b4c944f86cb6e927ba8/ee751a1bdd6c4599a4e5ae08d101bcde/) * [Activity: Software Engineering Best Practices Analysis (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/b76c0a6f6b8e4b4c944f86cb6e927ba8/fb9f87fffe72460ab1ad8ec69c7b691e/) |
| 4.6 | Identify metrics creation and utilization to help identify when failure actually occurs. |
|  | * [Activity: Using Metrics and Incentives (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/b76c0a6f6b8e4b4c944f86cb6e927ba8/8f35ef6f549e4844a6f5bf980295f2e4/) * [Activity: Practice Building Incentives (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/b76c0a6f6b8e4b4c944f86cb6e927ba8/31c34bd6ec254438a0c0fcceaaa97758/) |
| 4.7 | Determine how to execute an exit strategy and course correct. |
|  | * [Activity: Exit Strategy (B)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/b76c0a6f6b8e4b4c944f86cb6e927ba8/853a98bd204e4146891d8f766ebf0be8/) * [Readings: Warranties in Agile Development (S)](https://dsat.gsa.gov/courses/course-v1:OMBChallengeX+DAP01+2016_01/courseware/b76c0a6f6b8e4b4c944f86cb6e927ba8/dde4849e89544de182cb02ec311007af/) |

### Evaluation Methodology

The Release 4 self-directed learning experience was evaluated through:

* Participant feedback
* Facilitator feedback
* Client feedback

### Findings and Observations

#### Findings

##### Overview

The content for Release 4 was presented and assessed in two iterations: Release 4A and Release 4B. Participants were asked to complete both a Pre- and Post-Assessment for Release 4A, and a Pre-Assessment for 4B in addition to completing the course content. Twenty-three of the 26 participants (88%) currently enrolled in the program completed both the 4A Pre- and Post-Assessments; 21 of the current program participants (81%) completed the Release 4B Pre-Assessment. The overall average score on the knowledge assessment questions for the 4A Post-Assessment was 87%.

##### Release 4 Knowledge Assessment

This section presents the knowledge assessment results related to information presented in Release 4. These results are divided into two iterations; the material presented in Release 4A and the material presented in Release 4B.

###### Release 4A Knowledge Post-Assessment Results

* **Release 4A Post-Assessment average score, score distribution**
  + For the participants who completed the 4A Post-Assessment (77%), the average total score was 10.40 out of 12 or 87% correct.
  + The lowest score was 8 (67%) and the highest score was 12 (100%).
* **Highest and lowest scoring performance objective(s)**
  + Participants performed **best** on Performance Objective 4.2 – **Implement evaluation methods and criteria to evaluate vendor maturity and ability to deliver a product that solves a given need.**
  + Participants performed **poorest** on Performance Objective 4.3 – **Describe how to run an effective evaluation to get the best solution.**
  + Mean percentage scores for each of the Release 4A performance objectives are provided in the following chart:

###### Release 4B Knowledge Pre-Assessment Results

* **Release 4B Pre-Assessment average score, score distribution**
  + For the participants who completed the 4B Pre-Assessment, the average total score was 5.14 out of 9 or 57% correct.
  + The lowest score was 2 (22%), the highest score was 8 (89%).
* **Highest and lowest scoring performance objective(s)**
  + Participants performed **best** on Performance Objective 4.7 – **Determine how to execute an exit strategy and course correct.**
  + Participants performed **poorest** on Performance Objective 4.5 – **Identify software engineering practices for high-quality digital services like version control, continuous integration, and continuous delivery.**

Mean percentage scores for each of the Release 4B performance objectives are provided in the following chart:

##### Release 4A Performance Comparisons

For each of the performance objectives included in Release 4A, participants were asked to complete both a Pre- and Post-Assessment of their knowledge related to the performance objectives. The Pre-Assessment was completed before the classroom instruction and/or activities, while the Post-Assessment was completed after all other activities. The table below displays the comparison between scores on the Release 4A Pre-Assessment and the Post-Assessment. A few of the program participants did not complete both the Pre- and Post-Assessment. As such, performance comparisons cannot be made for those individuals.

|  |  |  |  |
| --- | --- | --- | --- |
| **Comparison of Cohort 4A Pre- and Post-Assessment Scores** | | | |
| **Performance Objective** | **Score Increase** | **Equal Score** | **Score Decrease** |
| **4.1** | 19% | 38% | 19% |
| **4.2** | 42% | 31% | 4% |
| **4.3** | 42% | 31% | 4% |
| **4.4** | 38% | 31% | 8% |

Over 40 percent of participants saw an increase in their score for Objectives 4.2 and 4.3. The objective for which the most participants saw a decrease in their score from pre- to post-assessment was Objective 4.1.

### Recommendations for Future Deliveries

The following recommendations are based on the findings and observations noted in the previous section. Global recommendations, or those recommendations that affect the material in more than one area, are discussed first. More specific changes to individual learning activities are included after the global recommendations.

* Performance objective 4.5 - **Identify software engineering practices for high-quality digital services like version control, continuous integration, and continuous delivery**: Participants performed most poorly on this objective in Iteration 4.B. This may have been because we had originally planned to have a guest speaker discuss continuous integration and delivery, but the timing of the iteration (around the holidays) interfered with that. Having that content during the iteration may help participants grasp it in time for the iteration post-assessment (we did include the guest speaker in the Release 4 classroom session, but that was conducted after participants had completed the Iteration 4.B post-assessment).
  + We had readings and a silver-level activity tied to performance objective 4.5. Few participants completed a silver or gold badge for this iteration, meaning that most participants who completed iteration 4.B only conducted the readings for this iteration.
  + In places where this is the case, having an online learning instead of readings may be beneficial.
* Performance objective 4.6 - **Identify metrics creation and utilization to help identify when failure actually** occurs: This objective was touched upon in the Release 3 classroom metrics activity, and then there were two activities aligned to it in Iteration 4.B. However, if the only associated learning is an activity, there is a chance that participants are not quite grasping the foundational content. Where this is the case, participants should receive feedback on their assignments prior to taking the post-assessment. The activities included reference to some external resources, but it may be beneficial to build out content for participants to help guide them.

# Guided Learning: Release 4/Capstone Classroom

The MVP Capstone session was conducted on January 9-11, 2017 at the Washington D.C. ICF location (1725 I St. NW). The session was facilitated by Peter Bonner (ICF), Will Randolph (ASI), Neil Chaudhuri (ASI), and Traci Walker (USDS). Guest speakers included:

* Acumen guest speakers: Guest speakers from the Acumen team participated in a negotiation role play scenario associated with the threaded scenario. In addition, they shared insights about post-award management and agile contract administration.
* DHS Flexible Agile Support for the Homeland (FLASH) Team Panel: A team involved in the recent FLASH acquisition shared insights from their experience and efforts to include innovative procurement techniques and digital services best practices.

### Evaluation Methodology

The Release 4 classroom experience and the overall program experience was evaluated through:

* Participant feedback
* Facilitator feedback
* Client feedback

### Findings and Observations

#### Feedback

Participants participated in a sticky note activity to gather feedback as well as a large group debrief. They were asked to provide the following types of feedback:

* Liked
* Learned
* Lacked
* Longed for

Themes from each category included the following:

* Liked:
  + Guest speakers
  + Shark tank format of the capstone presentations
  + The workload in Release 4 was much more manageable.
  + Capstone design
    - Video and then questions
    - Scenario-based assessment
    - Short, realistic. Reflected overall course content questions were about judgment instead of role management.
  + Mary O’Toole webinar. Her administration techniques were a success.
* Learned:
  + Another person didn’t like the blogging experience, but was really glad that they did it.
  + Learned various methods on awarding and administrating digital services contracts.
  + Importance of monitoring performance
  + Discussed source selection and negotiation
  + Proposal review exercise
* Lacked:
  + Iteration 4.A and 4.B. did not provide much learning material.
  + Some argued that the Capstone Test questions were not objective and that questions could be answered in multiple ways. Some suggested including essay questions instead of multiple choice.
  + Timing around the holidays was challenging.
* Longed for:
  + An easier method to study the exam – some questions could not be reviewed (when results are displayed, only the answer that participants selected displayed, if they got it wrong they couldn’t see the correct answer).
  + Practice questions
  + Open ended sections in the capstone assessment that allows participants to write in answers/show rationale
  + More case scenarios and guest speakers from agencies and sample contracts

### Recommendations for Future Deliveries

The following recommendations are based on the findings and observations noted in the previous section.

* Continue to use a “Shark Tank” presentation style for the final presentations.
* Consider better explaining the rationale for the Capstone Skills Test and its current multiple choice format. While an essay-based test is an option, as requested in the student feedback, it presents challenges from a resourcing perspective, as program faculty would need to individually grade each test. Therefore, we recommend retaining the current test format while adjusting the communication around it.

1. *Note that some components are provided as attachments and do not appear in this Word document itself. For those components, we include a component summary in this document with a reference to the name of the attachment that can be found in the final transition plan assets.* [↑](#footnote-ref-2)
2. Potential explanations for this finding include restriction of range (i.e., low quantity of Release 1 questions in Pre-Assessment), the fact that Release 1 was the furthest removed in time, or it might have been harder to retain Release 1 information. [↑](#footnote-ref-3)
3. The hyperlinks are no longer active since the de-commissioning of the MVP portal. [↑](#footnote-ref-4)