



JUDICIAL COUNCIL OF CALIFORNIA

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MEMORANDUM

Date	Action Requested
September 1, 2017	Approve Workplans for the Futures Commission Directives
To	Deadline
Members of the Information Technology Advisory Committee	September 8, 2017
From	Contact
Hon. Sheila Hanson, Chair, Information Technology Advisory Committee	Mr. Robert Oyung Information Technology 415-865-4994 phone robert.oyung@jud.ca.gov
Hon. Louis Mauro Vice-Chair, Information Technology Advisory Committee	Ms. Jamel Jones Information Technology 415-865-4629 phone jamel.jones@jud.ca.gov
Subject	
Draft Workplans for ITAC-Assigned Futures Commission Directives	

Summary

The Chief Justice directed the Information Technology Advisory Committee (ITAC) to report on the feasibility and resources necessary to pilot three technology innovations recommended by the Futures Commission: remote appearances for most noncriminal court proceedings; voice-to-text language interpretation services at court filing, service counters, and in self-help centers; and intelligent chat technology to provide self-help services. As a first step, workplans were developed to implement the recommendations. The workplans are due by September 29, 2017, pending approval from ITAC and the Judicial Council Technology Committee (JCTC).

Action Requested

Please review the attached workplans and decide whether to recommend that they be approved by the Judicial Council Technology Committee (JCTC).

Background on Directive and Workplans

In a May 17, 2017 letter to the chairs of the Judicial Council internal committees—including Justice Slough, Chair of the JCTC—the Chief Justice provided the following directive:

Expansion of technology in the courts. The Judicial Council’s Information Technology Advisory Committee is directed to consider, for presentation to the Judicial Council, the feasibility of and resource requirements for developing and implementing a pilot project to allow remote appearances by parties, counsel, and witnesses for most noncriminal court proceedings. Further, the committee is directed to explore available technologies and make recommendations to the Judicial Council on the potential for a pilot project using voice-to-text language interpretation services at court filing and service counters and in self-help centers. Finally, the committee is directed to explore and make recommendations to the council on the potential for a pilot project using intelligent chat technology to provide information and self-help services. The committee should seek input for these efforts from pertinent council advisory committees and stakeholders. Where pilot projects are implemented, the committee is directed to report back on outcomes and make recommendations for statewide expansion.

As a first deliverable for this directive, ITAC was instructed to prepare workplans identifying the tasks and assignments that need to occur to ensure there is a structure to track and monitor the tasks needed to implement the respective recommendations. The workplans are due September 29, 2017, following approval by the JCTC.

Process for Developing the Workplans

Since receiving this directive, the JCTC and ITAC chairs met several times to discuss the approach to the assignment, which includes defining a strategy for the efforts, drafting the workplan tasks, and seeking broad input to refine the plans. The following process was utilized to develop the workplans:

- On June 29, the Judicial Council’s Chief Information Officer/Director Rob Oyung, along with staff, hosted an all-day planning session with court information officers (CIOs) Snorri Ogata from Los Angeles, Rick Walery from San Mateo, Jeannette Vannoy from Napa, and Brian Cotta from the Fifth District Court of Appeal, to brainstorm and develop

an initial draft of the workplan for each technology topic. This session included a demonstration of the voice-to-text and intelligent chat technologies.

- On July 17 and 19, the CIO leads and Judicial Council staff hosted branch webinars to share and review each of the draft workplans and gather input. All clerk and court executive officers and court information officers were invited to attend the sessions, along with ITAC and JCTC members. Over 60 branch participants joined the webinar sessions. Most of the input centered on coordinating this assignment with existing court and branch efforts, including innovation grant activities, relevant workstreams (such as the ITAC Self-Represented Litigants E-Services and Video Remote Interpreting Pilot Program workstreams), and other advisory group initiatives (such as work by the Language Access Plan Implementation Task Force).
- On August 7, the CIO leads presented refined workplans to ITAC members at their meeting. Again, most of the discussion related to ensuring coordination with existing efforts.
- Between August 23 and 30, JCTC members were invited to share input on the workplans. Members were generally supportive of the workplans, in addition to suggesting that in the case of the remote video project:
 - A challenge may be in the timing of the proof-of-concept (POC), that is, it could get ahead of innovation grant efforts; or, alternatively, lag behind work that courts are already doing and becomes seen as forming a de facto standard that needs to be followed.
 - Incorporating the POCs as part of the procurement process for the pilots could be a means to encourage competition, evaluate multiple solutions, and eliminate redundant solicitations.
- Finally, the Judicial Branch Technology Summit on August 23 and 24 featured a workshop inviting participants to identify use cases, dependencies, and challenges in implementing these technologies to better inform the pilots.

Recommending a Two-Phased Pilot Approach

Early in the workplan development process, a two-phased pilot approach was proposed. The workplans propose that quick, small-scale proof-of-concepts be deployed in three to six months prior to conducting larger pilot projects. This approach will allow us to quickly learn about potential uses and deployment in a controlled environment.

The first phase of the projects would be funded through existing budget and provide quick but limited information while we work in parallel to prepare for more extensive pilots projects.



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INFORMATION TECHNOLOGY
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Workplan 1: Remote Video Appearances for Most Non-Criminal Hearings

Draft workplan developed by:

- Mr. Brian Cotta, CIO, Fifth District Court of Appeals and ITAC Member
- Ms. Jeannette Vannoy, CIO, Superior Court of California, County of Napa and ITAC Member

Approach – Reference existing proven remote video appearance deployments and conduct a proof of concept (POC) for any additional functionality that may not be included in existing solutions. It is believed that one or more solutions that are in place today at trial court(s) likely meet both technical and business requirements/readiness.

I. Proof of Concept - Short Term (3-6 months)

Goal: Conduct a mock remote video hearing using a web conferencing system for a specific hearing type (e.g., Civil - Small Claims) as a POC in a court.* The initial scope of the POC would be to conduct one or more mock hearings of the selected hearing type.**

** If the court conducting the POC were interested in expanding the POC to include additional hearing types or to conduct real (non-mock) hearings, then additional tasks required for local rule changes and agreement with the parties to participate would need to be addressed and time would need to be added to the schedule as appropriate. The intent would be to ensure the relevant rules of court are not limiting so that courts could choose to use the solution/technology for all fitting case types as business needs dictate.*

*** Input from the branch Technology Summit (Aug 2017) will help identify potential use case(s).*

1. Reach out to courts, to identify which court will conduct the POC (including those awarded an Innovation Grant focused on video hearings). – **Week 1**
2. Reach out to the court community to identify an evaluation team – **Week 2**
3. Identify common web conferencing solutions and select one or two to be used for the POC – **Week 2**
4. Determine operational impacts and document considerations – **Week 3-4**
 - a. Calendaring/scheduling
 - b. Conducting the hearing (formalities, procedures, etc.)
 - c. Training staff and judicial officers
 - d. Determine the need for and accommodation of interpreting (standard and ASL)
 - e. Ongoing quality control(s) for latency, ease of use and accessibility
5. Conduct POC – **Week 4-8*** (see note above if POC is more extensive than conducting mock hearings of a specific type, then additional tasks/time would be required)
 - a. Setup environment
 - b. Use the Judicial Branch’s electronic signature solution to accommodate remote signing if/when applicable

- c. Use the web conferencing solution and/or other standard cloud solutions to accommodate remote viewing and sharing of evidence and/or other related documents
 - d. Use the web conferencing solution's recording capability to capture "the record"
 - e. Use a survey tool to collect feedback from POC participants (e.g. outside parties as applicable)
6. Establish regular communication and review with evaluation team (regularly scheduled call, monitor progress, capture lessons learned, report feedback). – **Weekly**
 7. Wrap up findings from POC and propose next steps. – **Week 8-10**

II. Pilot and Productizing Plan - Long Term

Goal: Use learnings from the pilot and propose how to implement more broadly

1. Existing activities - purpose is to understand what may be leverage/linkages – **Week 1-4**
 - 1.1. Workstreams
 - 1.1.1. Reach out to Video Remote Interpreting (VRI) Workstream
 - 1.2. Active projects in courts (including Innovation Grants)
 - 1.2.1. Determine collaboration opportunities with Innovation Grants awardees (Note: The #'s below reflect the official grant #, for informational/relational purposes only)
 - 1.2.1.1. Video hearings - Placer (8, 24), Humboldt (41), Merced (44), Sacramento (50), San Bernardino (51);
 - 1.2.1.2. Video conferencing- Butte (18), San Bernardino (29), Ventura (36)
 - 1.2.2. Survey courts for additional related projects
 - 1.2.3. Communicate with courts already conducting remote video appearances to evaluate lessons learned and what solutions were or were not successful.
2. Determine technology maturity and categorize – **N/A**
 - 2.1. Categorize
 - 2.1.1. Monitor
 - 2.1.2. Ready for pilot
 - 2.1.3. Ready for production
 - 2.2. Report recommendations
3. Identify plan/next steps – **Week 4-45** (*timelines to be adjusted once the scope is determined*)
 - 3.1. **Identify and select use cases**
 - 3.1.1. Identify business problems being solved
 - 3.1.2. Identify measures of success, value add, success criteria
 - 3.1.3. Identify fit within existing portfolio of services
 - 3.1.4. Brainstorm at Technology Summit
 - 3.2. **Identify challenges and mitigations**
 - 3.2.1. Brainstorm at Technology Summit

- 3.2.1.1. Barriers, mitigations, measures of success
- 3.2.1.2. Practical limitations
- 3.3. Research**
 - 3.3.1. General market research including available tools/various vendors
 - 3.3.1.1. Identify alternative solutions/approaches to the same business problem(s) and attempt to standardize on a limited number (2?) of solutions that can coexist and work seamlessly together.
 - 3.3.1.2. Determine level(s) of integration/compatibility with existing technology being used with VRI project(s).
 - 3.3.2. Vendor visits/demos
 - 3.3.2.1. TBD – based on research & only if determined necessary
 - 3.3.3. California court demos/data gathering
 - 3.3.3.1. Dependent upon results of survey
 - 3.3.4. Find out what other state courts are doing
 - 3.3.4.1. Court IT Officers Consortium (CITOC) query
 - 3.3.4.2. National Center for State Courts (NCSC) query
 - 3.3.4.3. National Conference of Appellate Court Clerks (NCACC) query
 - 3.3.5. Explore build versus buy versus hybrid
 - 3.3.5.1. Analyze pros/cons, cost/benefit analysis
- 3.4. Financial considerations**
 - 3.4.1. Identify cost for possible technologies/solutions
 - 3.4.2. Identify funding source (e.g., BCP, cost recovery, etc.)
 - 3.4.2.1. For pilot
 - 3.4.2.2. For production/implementation
 - 3.4.2.3. For ongoing support and maintenance
- 3.5. Survey and identify existing rules and policy constraints, impacts, and changes necessary**
- 3.6. Pilot – TBD based on findings above (current category is ready for production)**
 - 3.6.1. Scope the pilot
 - 3.6.2. Create project timeline
 - 3.6.3. Identify pilot participants and methodology
 - 3.6.4. Launch/implement
 - 3.6.5. Evaluate pilot
- 3.7. Recommendations for a production implementation – TBD based on findings above (current category is ready for production)**
 - 3.7.1. Scope the service
 - 3.7.2. Create proposed timeline
 - 3.7.3. Recommendations re: directives and alternative approaches
 - 3.7.4. Align with strategic plan
 - 3.7.5. Determine priorities and resources
 - 3.7.6. Incorporate into a workstream

- 3.7.7. Determine appropriate operational processes and procedures
- 3.7.8. Ongoing support considerations and planning
- 3.7.9. Training and Marketing

##

Comments from conference calls conducted 7/17/17 and 7/17/19 to discuss this topic at high-level

Comment #1: How is step #3 related to #1; should #1 inform #3; opportunities to coordinate/connect.

Comment #2: Consider relationship to VRI project; only region (3) has met and conferred with union; capitalize on other work going forward.

Comment #3: Judicial officer shared experience of video conferencing with the prisoner, stipulated, trial entirely conducted via video conference; he was not sure of how any evidence was handled or displayed and suggested to contact CIO for information.

Comment #4: Judicial officer shared two experiences using video: 1) with court trial in which plaintiff—long-term inmate; was a civil case with most difficult issue being transportation of the inmate to the video room; and 2) conducted mental health assessment trials with patients in mental health facilities, all trials done remotely.

Workplan 2: Voice-to-Text Language Services Outside the Courtroom

Draft workplan developed by:

- Mr. Rick Walery, Superior Court of California, County of San Mateo
- Ms. Heather Pettit, Superior Court of California, County of Contra Costa

Use case as laid in the Future's Commission report, a non-English speaking individual comes to a filing counter or a self-help center. That person speaks in his/her own language is heard by the court staff member, the text of the spoken word is displayed on a screen in the speaker's language and then translated into the listener's language and the translation is also spoken in the listener's language. At the end of the process, a transcript of the interaction would be made available.

Approach – Given the immaturity of real-time voice-to-text translation and transcription services, we recommend assessing and validating the maturity of this technology in a controlled lab environment prior to potentially piloting in a local court. Part of the assessment within the lab will be to gauge the alignment of the technical tool(s) to deliver an accurate, useful translation within a complex environment such as the legal environment. The lab assessment will consider tools from personal device translation tools to enterprise-scale translation API toolkits.

Current state of technology vis-à-vis the FC recommendation. Solving more issues than it may introduce.

I. Proof of Concept (POC) - Short Term (3-6 months)

Goal – Setup a technical lab environment at the Judicial Council or a local court to test the technical recommendations of the Futures Commission for this initiative. Piloting various voice-to-text language services in a lab environment will allow for exposure to more technologies and shorter learning cycles than if a specific technology is deployed at a court for piloting. The goal of the lab pilot will be to determine next steps with this technology. Potential next step outcomes may be to continue to research the technology within a lab environment while it matures, to pilot at one court for a specific use case, or to pilot at multiple courts for multiple use cases.

1. Reach out to courts to identify steering committee and lab participants – **Week 1 - Week 2**
2. Setup governance structure to facilitate exposure to various technologies and quick learning cycles – **Week 3**
3. Establish regular communication and discussion with project team (regularly scheduled call, monitor progress, capture lessons learned, report feedback) – **Bi-weekly**
4. Determine high-level use cases within a court environment outside the courtroom. One forum for determining use cases will be at the August Technology Summit. – **Week 3**
5. Determine the various technologies and services models for delivering real-time voice-to-text translation and transcription services – **Week 4**

6. Setup demos with vendors – **Week 5 - Week 7**
7. Produce a white paper on the lessons learned within the pilot and a recommendation for next steps – **Week 8 – Week 10**

II. Pilot and Productizing Plan- Long Term

Goal – Based on the learnings from the Proof of Concept phase, devise a strategy for piloting the technology in a local court to continue to learn lessons for a broader, long-term deployment.

1. Existing activities- purpose is to understand what may be leverage/linkages
 - 1.1. Workstreams
 - 1.1.1. Reach out to the Language Access Plan Implementation Task Force (LAPITF; <http://www.courts.ca.gov/LAP.htm>) for a touchpoint regarding any current projects that may be able to provide insight or input on this initiative.
 - 1.1.2. Reach out to VRI workstream to determine if any lessons learned in VRI apply to the voice-to-text initiative
 - 1.2. Active projects in courts (including Innovation Grants)
 - 1.2.1. Survey courts for additional projects that may align with this initiative
2. Determine technology maturity and categorize
 - 2.1. Categorize
 - 2.1.1. Monitor
 - 2.1.2. Ready for pilot
 - 2.1.3. Ready for production
 - 2.2. Report recommendations
3. Identify plan/next steps
 - 3.1. **Identify and select use cases**
 - 3.1.1. Identify business problems being solved
 - 3.1.2. Identify measures of success, value add, success criteria
 - 3.1.3. Identify fit within existing portfolio of services
 - 3.1.4. Brainstorm at Technology Summit
 - 3.2. **Identify challenges and mitigations**
 - 3.2.1. Brainstorm at Technology Summit
 - 3.2.1.1. Barriers, mitigations, measures of success
 - 3.2.1.2. Practical limitations
 - 3.3. **Research**
 - 3.3.1. General market research including available tools/various vendors
 - 3.3.1.1. Conduct analyst briefing(s)
 - 3.3.1.2. Identify alternative solutions/approaches to the same business problem(s)
 - 3.3.1.2.1. Research commercially available speech interfaces

- 3.3.1.2.2. Research commercially available translation interfaces
- 3.3.2. Vendor visits/demos
 - 3.3.2.1. Learn about products:
 - 3.3.2.1.1. Identify commercially available API toolkits and services
 - 3.3.2.1.2. Research options using personal devices (i.e. smartphones, tablets)
 - 3.3.3. California court demos/data gathering
 - 3.3.3.1. Dependent upon results of survey
 - 3.3.4. Find out what other state courts are doing
 - 3.3.4.1. Court Information Technology Officers Consortium query
 - 3.3.4.2. National Center for State Courts query
 - 3.3.5. Explore build versus buy versus hybrid
 - 3.3.5.1. Analyze pros/cons, cost/benefit analysis
- 3.4. Financial considerations – TBD based on proof of concept lab findings above**
 - 3.4.1. Identify cost for possible technologies/solutions
 - 3.4.2. Identify funding source (e.g., BCP, cost recovery, etc.)
 - 3.4.2.1. For pilot
 - 3.4.2.2. For production/implementation
 - 3.4.2.3. For ongoing support and maintenance
- 3.5. Survey and identify existing rules and policy constraints, impacts, and changes necessary**
- 3.6. Pilot – TBD based on proof of concept lab findings above**
 - 3.6.1. Scope the pilot
 - 3.6.2. Create project timeline
 - 3.6.3. Identify pilot participants and methodology
 - 3.6.4. Launch/implement
 - 3.6.5. Evaluate pilot
- 3.7. Recommendations for a production implementation – TBD based on lab findings above**
 - 3.7.1. Scope the service
 - 3.7.2. Create proposed timeline
 - 3.7.3. Recommendations re: directives and alternative approaches
 - 3.7.4. Align with strategic plan
 - 3.7.5. Determine priorities and resources
 - 3.7.6. Incorporate into a workstream
 - 3.7.7. Determine appropriate operational processes and procedures
 - 3.7.8. Ongoing support considerations and planning
 - 3.7.9. Training and marketing

##

Comments from conference calls conducted 7/17/17 and 7/17/19 to discuss this topic at high-level

Comment #1: mainstream language may work but there is a lot of nuance in spoken language, idioms, and dialects that could lead to misinterpretation. The workstream my want to consider potentially including language academics/experts given the complexity of spoken language

Comment #2: similar questions are asked in the two use cases (filing counter and self-help), so perhaps real-time, spoken translation may work for common questions. Some questions that are similar and could lend themselves to macros/repetition/simplicity to overcome complexity of language difficulty. True real-time translation may be more challenging with a true, interactive conversation.

Comments from ITAC conference calls conducted 8/7/17

Comment #1: Judge Mize discussed the percentage of accuracy necessary for moving forward with this initiative, noting that 100% may not be needed and the concept that something may be better than nothing.

Comment #2: Justice Mauro agreed that testing in a lab environment first is desirable. Justice Mauro recommended that the workgroup consider any potential ramifications from inaccurate or out-of-context translations.

Comment #3: Judge Perkins suggested baseline testing of common questions.

Workplan 3: Intelligent Chat Technology (*Virtual Customer Assistant*)

Draft workplan developed by:

- Mr. Snorri Ogata, CIO, Superior Court of California, County of Los Angeles and ITAC Member
- Mr. Paras Gupta, CIO, Superior Court of California, County of Monterey

Approach – Gain insights from related capabilities already deployed (e.g., FAQ in Orange County, Avatar in Los Angeles) and conduct a series of proofs of concept (POCs) to identify target areas for high-value implementation. It is believed that this technology is readily available and the primary opportunity is to gain insight on specific technology alternatives and specific use cases.

I. Proof of Concept (POC) - Short Term (3-6 months)

Goal – Conduct a series of proofs of concepts (POCs) to assess technology readiness for various use cases (e.g., Court of Appeal, E-Filing, Self-Help). Identify key performance indicators and benchmark before/after success and capture learnings.

1. Define the overall POC goals (e.g., quick implementations, for multiple use cases, with the intent of gaining insights on what works and doesn't work). – 1 week
2. Define broad categories of desired data that need to be captured from each POC (before and after). – 1 week
3. Solicit input from interested courts to identify business usage scenarios for ChatBot that meet the POC criteria. – 1 weeks
4. Identify readily available technology solutions that support program objectives. – 1 week
5. Find pilot courts (preliminary list includes: Court of Appeal; Superior Courts of Los Angeles and Monterey) – 1 week

For each POC...

6. Work with POC courts to define / refine / publish success measures (e.g., # uses, % of questions answered correctly, ...) tailored to the measures to their specific usage scenario. – 1 week
7. Provide direction/assistance to POC courts: - 2 weeks
 - a. Formalize performance metrics to collect
 - b. Formalize features to evaluate (e.g., ease of authoring, ease of integration, usability of the Q&A engine)
 - c. Identify reporting and minimum duration/sampling size to draw meaning conclusion
8. Conduct POCs – 8 weeks
 - a. Build and deploy pilot implementation
 - b. Measure pilot implementations
 - c. Pilot court quarterly results meeting and repeat steps 6-8 for next "sprint"
9. Wrap up findings from POC and propose next steps. – 2 weeks
 - a. Assessment of Use Cases
 - b. Assessment of Technologies

- c. Recommendation of solution sets (e.g., use cases with technology)

II. Pilot and Productizing Plan- Long Term

Goal – Learnings from the pilot and how to more broadly implement

1. Existing activities- purpose is to understand what may be leverage/linkages – 4 weeks
 - 1.1. Workstreams
 - 1.1.1. Explore alignment opportunities with SRL workstream
 - 1.2. Active projects in courts (including Innovation Grants)
 - 1.2.1. Innovation Grants- Determine if virtual customer assistant is scoped within grant project for:
 - 1.2.1.1. Avatar – LA, Riverside and Yolo (project #'s: 21, 27, 38)
 - 1.2.1.2. Self-help Portal – 5DCA, Contra Costa, Orange, Riverside, San Diego, San Mateo (project #'s 17, 19, 23, 26, 30, 31)
 - 1.2.2. Survey courts for additional projects
2. Determine technology maturity and categorize – 2-4 weeks
 - 2.1. Categorize
 - 2.1.1. Monitor
 - 2.1.2. Ready for pilot
 - 2.1.3. Ready for production
 - 2.2. Report recommendations
3. Identify plan/next steps – 6-12 months
 - 3.1. **Identify and select use cases**
 - 3.1.1. Identify business problems being solved
 - 3.1.2. Identify measures of success, value add, success criteria
 - 3.1.3. Identify fit within existing portfolio of services
 - 3.1.4. Brainstorm at Technology Summit
 - 3.2. **Identify challenges and mitigations**
 - 3.2.1. Brainstorm at Technology Summit
 - 3.2.1.1. Barriers, mitigations, measures of success
 - 3.2.1.2. Practical limitations
 - 3.3. **Research**
 - 3.3.1. General market research including available tools/various vendors
 - 3.3.1.1. Conduct IT Advisory Service Analyst briefings
 - 3.3.1.2. Review additional products identified through additional research
 - 3.3.2. Vendor visits/demos
 - 3.3.2.1. Learn about specific products
 - 3.3.3. California court demos/data gathering
 - 3.3.3.1. Los Angeles

- 3.3.3.2. Orange
- 3.3.4. Find out what other state courts are doing
 - 3.3.4.1. CITOC query
 - 3.3.4.2. NCSC query
- 3.3.5. Explore build versus buy versus hybrid
 - 3.3.5.1. Analyze pros/cons, cost/benefit analysis
- 3.4. Financial considerations – BCP PROCESS**
 - 3.4.1. Identify cost for possible technologies/solutions
 - 3.4.2. Identify funding source (e.g., BCP, cost recovery, etc.)
 - 3.4.2.1. For pilot
 - 3.4.2.2. For production/implementation
 - 3.4.2.3. For ongoing support and maintenance
- 3.5. Survey and identify existing rules and policy constraints, impacts, and changes necessary**
- 3.6. Pilot**
 - 3.6.1. Scope the pilot
 - 3.6.2. Create project timeline
 - 3.6.3. Identify pilot participants and methodology
 - 3.6.4. Launch/implement
 - 3.6.5. Evaluate pilot
- 3.7. Recommendations for a production implementation**
 - 3.7.1. Scope the service
 - 3.7.2. Create proposed timeline
 - 3.7.3. Recommendations re: directives and alternative approaches
 - 3.7.4. Align with strategic plan
 - 3.7.5. Determine priorities and resources
 - 3.7.6. Incorporate into a workstream
 - 3.7.7. Determine appropriate operational processes and procedures
 - 3.7.8. Ongoing support considerations and planning
 - 3.7.9. Training and marketing