

Virtual Agent Phase 2 Discovery and Inception Readout

August 2021



U.S. Department
of Veterans Affairs

Executive Summary

If the Phase 1 Proof of Value answered the questions of *Who?* and *What?*, this Phase 2 Discovery and Inception set out to answer the question *How?*. The activities during this workshops ultimately culminated in our Phase 2 Product Roadmap which can be described in three parts:

Phase 2 Roadmap

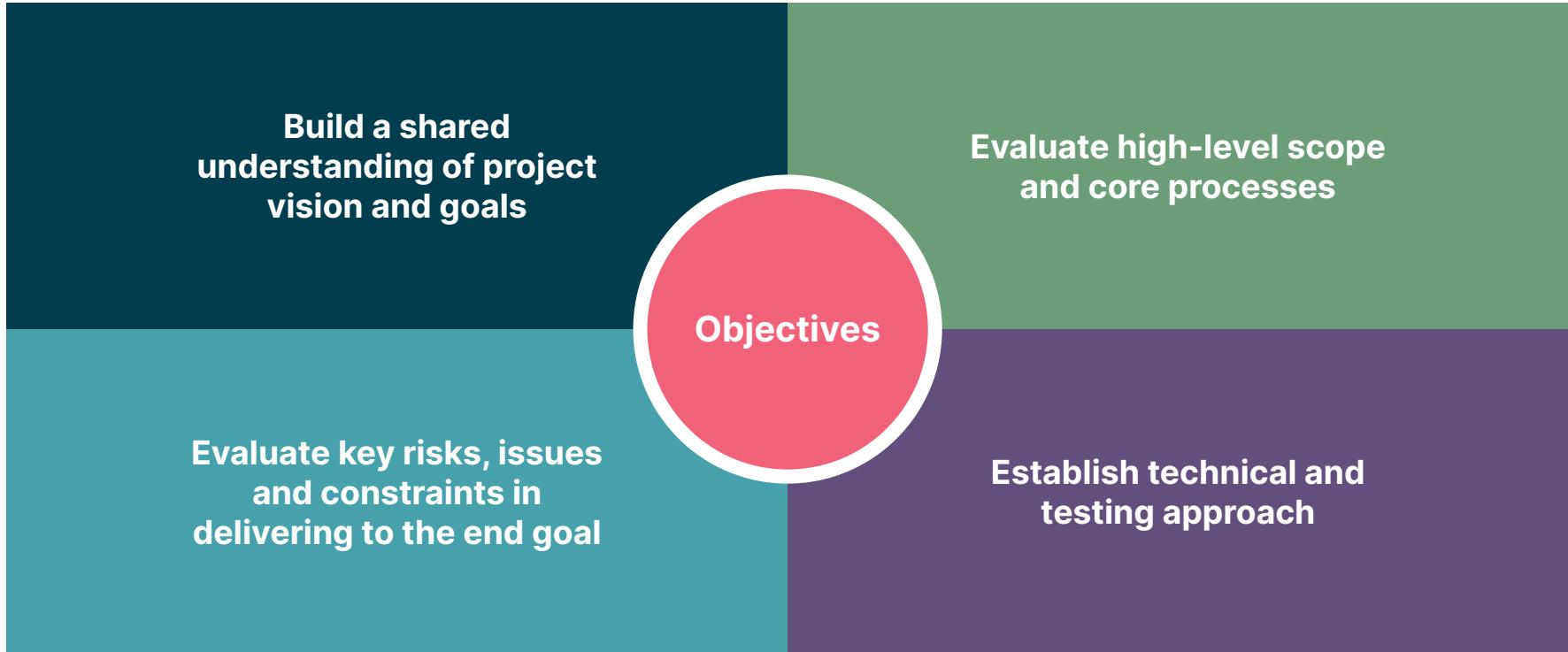
- Research & Discovery (Thru 2021) - Understanding, testing with users, and building four features we believe deliver high value to Veterans:
 - Authenticated Claims and Appeals experience
 - Automated Pulling of Drupal Content
 - Displaying Phone Number and Contact Information
 - Displaying Facility Information
- Phase 2 Proof of Value (Q1 2022)
 - Wider usability testing of the four features
 - Live Agent Transfer
 - Preparation for Pilot Launch
- Phase 2 Pilot Launch (Q2 2022)
 - Launch to a percentage of VA.gov traffic

We also surfaced other questions that will need to be answered prior to our Pilot Launch:

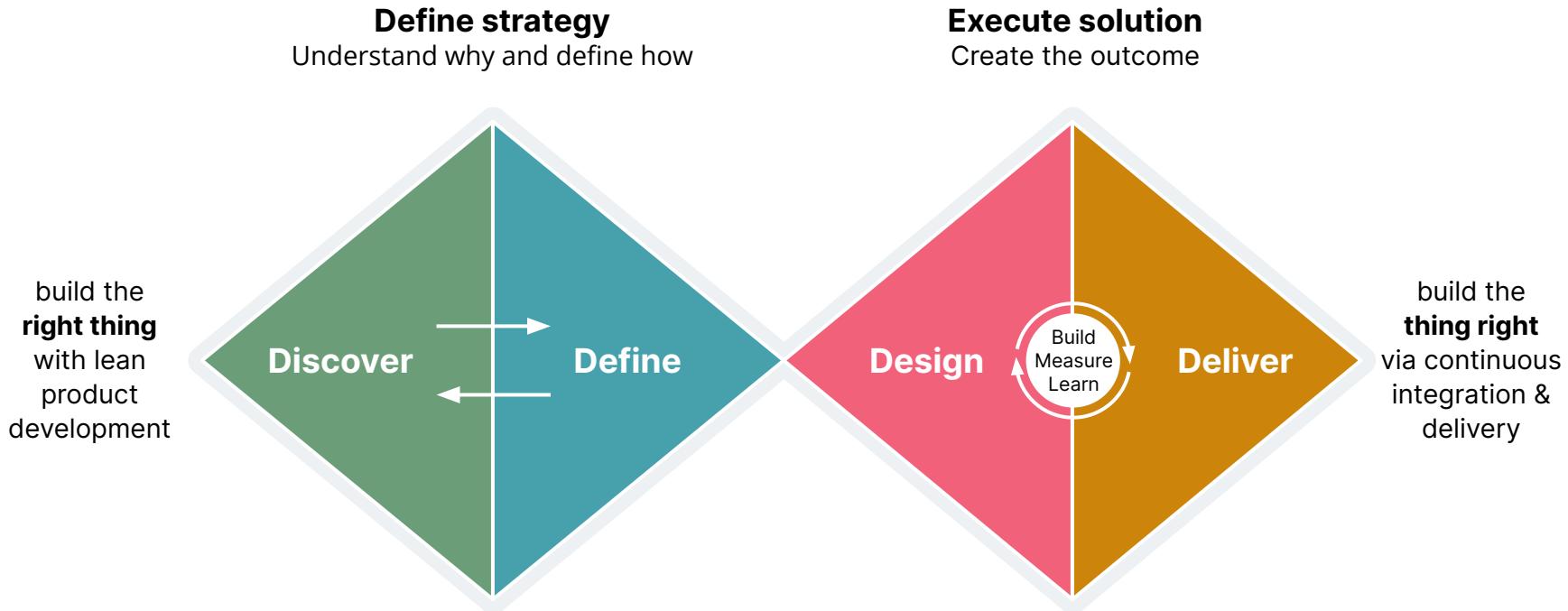
- Technology considerations (PVA vs. Bot Composer vs. Bot SDK) and working through the TRM and ATO process
- Understand the implications of Microsoft's per conversation pricing structure
- Crisis management within the chatbot, security concerns, and addressing accessibility

This presentation will elaborate on these items, but we are confident that because of this thorough workshops, we are well underway in mitigating these risks, and are well equipped to handle anything that may come our way.

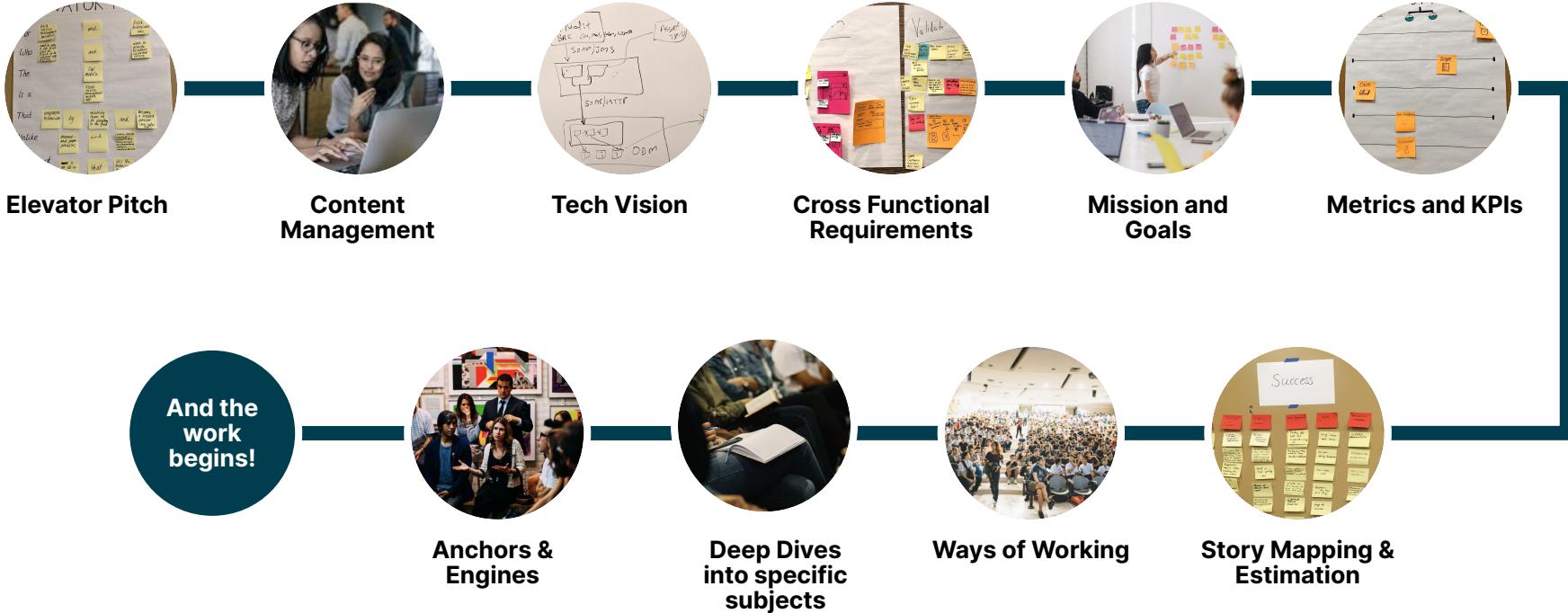
Discovery and Inception objectives



Discovery and Inception



Our Journey



Elevator Pitch

/thoughtworks



Elevator Pitch

Objective

To crisply articulate the reasons behind this engagement.

Method

As a group, we brainstormed and discussed each element of the Elevator Pitch template until we formulated a coherent statement that reflected the vision of the product, for Phase 2 and beyond. During the course of the Discovery and Inception, we referred back to the Elevator Pitch as necessary and also paused to see if further refinement was needed throughout the workshops. None was needed.

Output

A cogent elevator pitch that core team members and sponsors can use to explain the project to the broader organization.

FOR *<target customer>*

WHO WANT *<statement of the need or opportunity>*

THE *<product name>*

IS A *<product category>*

THAT *<key benefit, compelling reason to use>*

UNLIKE *<primary competitive alternative>*

OUR PRODUCT *<statement of primary differentiation>*

Elevator Pitch - Phase 2 and beyond

FOR *Veterans and the people who support them*

WHO WANT *A digital way to provide quick, accurate, personalized answers to their questions*

THE *Chatbot*

IS A *Support Channel*

THAT *Reduces the time it takes to find actionable information by allowing users to ask questions in a human, conversational tone*

UNLIKE *Other Veterans Affairs support channels*

OUR PRODUCT

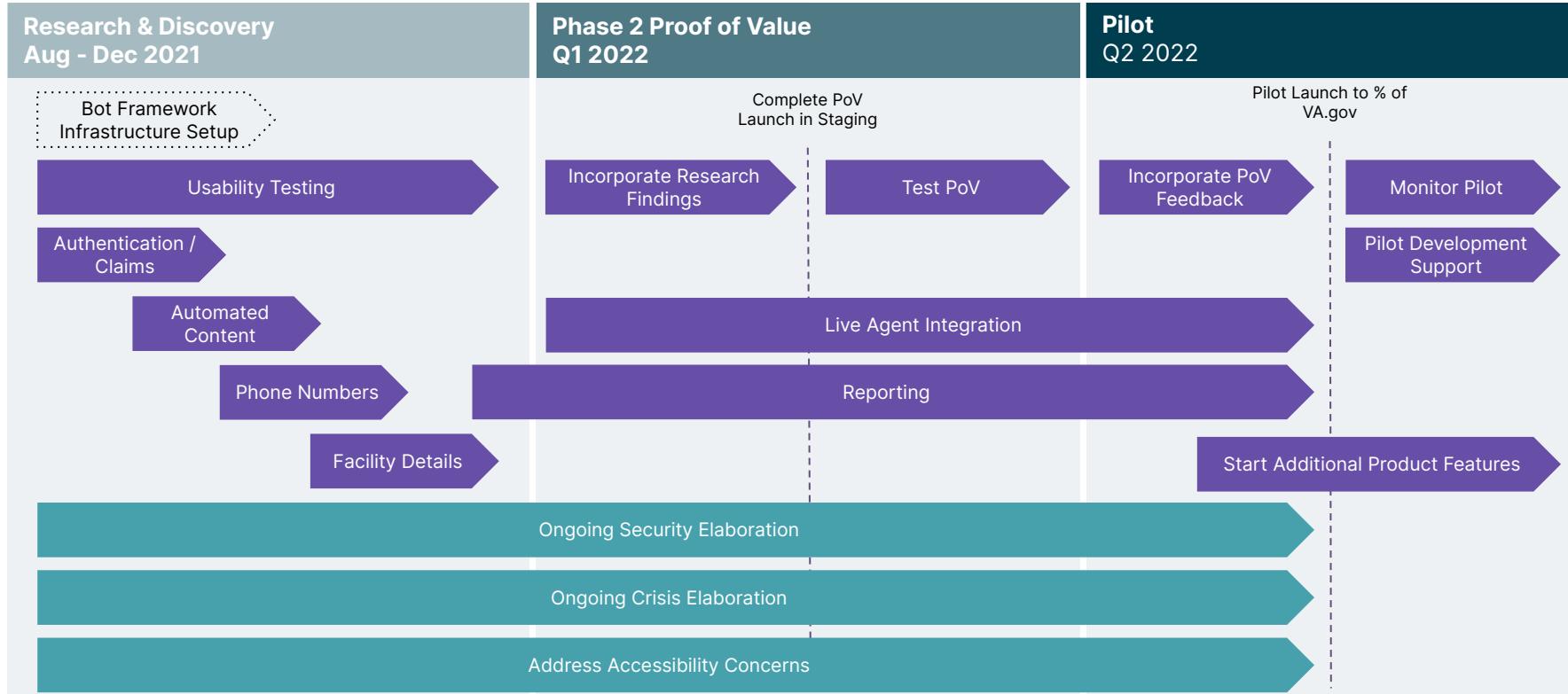
- *Is available 24/7 with no wait times*
- *Requires no prior knowledge of the VA.gov website and org structure to use*
- *And allows a seamless handoff to another support channel*

High-level Product Roadmap and Timeline

/thoughtworks



High-level Product Roadmap



Research and Discovery, Aug. - Dec. 21



This plan shows the features is not meant to reflect how long each feature will take to build

MILESTONE 1	MILESTONE 2	MILESTONE 3	MILESTONE 4	MILESTONE 5
<p>Develop the ability to display or hide the chatbot depending on the user's authentication status. Display a single claim / appeals status. Begin work on displaying the most valuable details of a claim.</p> <p>Authentication</p> <p>Claim Status</p> <p>Claim Details</p> <p>Claims Details examples:</p> <ul style="list-style-type: none">• Who's my rep?• Estimated date of completion?• Disability Rating• Evidence already provided• Requests for additional evidence• Payment history• Has an exam been scheduled?• Etc.	<p>At the end of this Release we will gain the ability to display a list of all the user's claims and appeals. Begin spikes to understand how we can pull content out of the existing Drupal CMS into the chatbot in an automated fashion. Continue working on Claims Details.</p> <p>List all Claims</p> <p>Spike: Drupal Integration</p>	<p>Complete claims and appeals by allowing users to follow a link to a claims record on the Claim Status tool on VA.gov. Begin building pipelines and logic to surface Drupal content automatically in response to user queries. Run a spike to see if phone numbers can be pulled from Drupal in a similar fashion.</p> <p>Link to Claims</p> <p>Build Drupal to Chatbot Pipelines</p> <p>Display Drupal content for a given query</p> <p>Spike: Pull phone numbers from Drupal</p>	<p>Using the learnings from the previous spike, build the appropriate pipelines and logic to display phone numbers and other contact information from Drupal based on user chatbot queries.</p> <p>Pull phone numbers from Drupal</p>	<p>This release focuses on a solution that will surface facility information to users. With previous work on using APIs for claims and appeals, and pulling in content from Drupal, the hope is that this feature will be much easier.</p> <p>Display Facility Details</p>

Project information radiators

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Decisions

During the course of our Discovery and Inception, the following decisions were reached:

- **Style Guide:** Rather than a separate chatbot style guide, we will incorporate a separate complementary section in the current Style Guide to address how to write in the conversational tone that the chatbot requires. We will add a chatbot checklist ("Here's what to think about when writing chatbot content").
- **Dedicated Content:** Content written specifically for the chatbot, and the processes required to support it, will be tackled in Phase 3.
- **Transcripts:** For 2021, the Virtual Agent Team will focus on understanding the compliance requirements for storing and transferring chat transcripts. From a program perspective, we would also determine if we should have feature parity with Live Agent. We will test with users to see if they would find this feature beneficial. If so, we would add this to our requirements for the Pilot.
- **Multi-language Support:** Chatbot will not address multi-language support in Phase 2

Executive Asks

Challenge	Recommendations	Ask / Actions
Bot Framework SDK is prohibited by TRM - Working with proven PVA limitations	<ul style="list-style-type: none">Move forward with PVA to build out 2021 product with transition plan in place and reduced risk scopeSubmit Bot Framework SDK and Composer through TRM process	<p>Ask Support with building new SDK case and gathering evidentiary documentation to prove meets previously rejected requirements</p>
Current ATO does not reflect architecture/transcript changes nor is there clarity on which ATO Virtual Agent will live under	<ul style="list-style-type: none">Submit Phase 2 architecture to Delwin for review and ATO placementDetermine ATO cycle to prepare for amendment plan	<p>Ask Support in unblocking path to bring team under OCTO ATO - or - support for bringing team into future Omnichannel ATO discussions to ensure that we are adequately covered</p>
Conversations are still ongoing whether the Virtual Agent will function as a "Relay bot" and act as an operator, transferring users between Live Agents	<ul style="list-style-type: none">Before the end of 2021, summon all the necessary parties and finalize the architecture, deciding whether it's the Virtual Agent or Omnichannel's responsibility to relay users from bot to bot	<p>Ask Drive all parties to meet and provide the oversight necessary to allow this high level architectural decision to be made</p>

RAID log

RISKS	ASSUMPTIONS
<ul style="list-style-type: none">• Current conversational cost estimates might not be sufficient to launch to 5% va.gov traffic• Depending when/if we get the go ahead for Bot Framework, affects the timeline for the POV and MVP• No shared collaboration & communication tools between BAH/Live Agent/MCT & Virtual Agent• Open Phase 1 accessibility tickets risk PVA not passing accessibility standards, including the VA's adoption of newer WCAG 2.1 standard• Responsibility of "Relay Bot" requires immediate decision as it would impact deliverables	<ul style="list-style-type: none">• API driven content will require less original content creation and edit loops/approvals• We will pull in covid content/features from Phase 1 with no adjustments• We will pull in crisis management implementation from Phase 1 with no or minor adjustments• VEIS endpoints are available to us and have what we need• We will build a prototype in PVA for usability testing and host it on va.gov using the same URL from phase 1
ISSUES	DEPENDENCIES
<ul style="list-style-type: none">• ATO - Current ATO does not reflect architecture recommendations nor is there clarity on which ATO Virtual Agent will live under. Unknown full Omnichannel ATO• Bot Framework SDK is prohibited by TRM• Bot Framework Composer is not approved/reviewed by TRM• Bot Framework Composer is not approved by ATO• Working with PVA limitations (lack of automated testing, version control, content mgmt, troubleshooting ownership and insight) for our POV	<ul style="list-style-type: none">• Perigean - accessing marginalized groups• Compliance Team• Live Agent - integration• Microsoft - Reporting• Microsoft - Troubleshooting

Open questions

During the course of the workshops we answered many questions (documented in the Mural) but these questions remain open and we will be working on obtaining answers:

- How can we stay consistent with other VA teams on language used re: notifications etc?
- Do Microsoft development tools support mobile first responsive design?
- Will AI be intelligent enough to differentiate between VBA disability claim vs. VHA claim?
- Is A/B testing possible?
- Are PowerBI and PVA compatible?
- For mobile, what's the bare minimum links we can display from the VA website?
- What is the MyVA411 Conversational AI?
- How will the Chatbot handle authenticating users?

Next Steps, Virtual Agent Team

How you can help

Product Development Next Steps

- Conclude our feasibility investigations into the use of PVA and Bot Framework Composer
- Begin refining Claims and Appeals stories (Virtual Agent Team)
 - Validate which Claims details features are most valuable with the Call Center
 - Conduct Veteran outreach for priority assessment
 - Start work on Authentication, Claims Status, Listing all Claims, Linking to Claims on Claim Status Tool
- APIs
 - VEIS walkthrough of APIs to clarify data available to surface
 - Exploration of Claims Status and Disability Rating APIs
- Create research plan for usability testing
- Sync with Microsoft to kickoff reporting creation and Ways of Working alignment

Program Administration Next Steps

- Submit Bot Framework SDK for TRM re-review
- Determine correct ATO and prepare amendment
- Work with Trisha Dang on conversational cost

Omnichannel Coordination Next Steps

- Reach out to Live Agent team to review each other's requirements
- Collaborate with Omnichannel leads to refine Ways of Working
- Further relay bot concept discovery discussions to understand Phase 3 roadmap and beyond

Thank you!

The Virtual Agent Core Team



Luciana Morais
Product Owner



Shane Strassberg
Design Researcher



Alina Murphy
Project Manager



Ian Santarinala
Product Manager



Jacob Gacek
Developer



Kha Huynh
Developer



Paul Phillips
Developer



Rachel Murray
User Experience Designer

Questions or comments?

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Appendix

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Technical Vision

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Technical Vision

Objective

Validate our architectural plans with platform experts, especially towards how the bot will handle authentication, and uncover any new areas to explore.

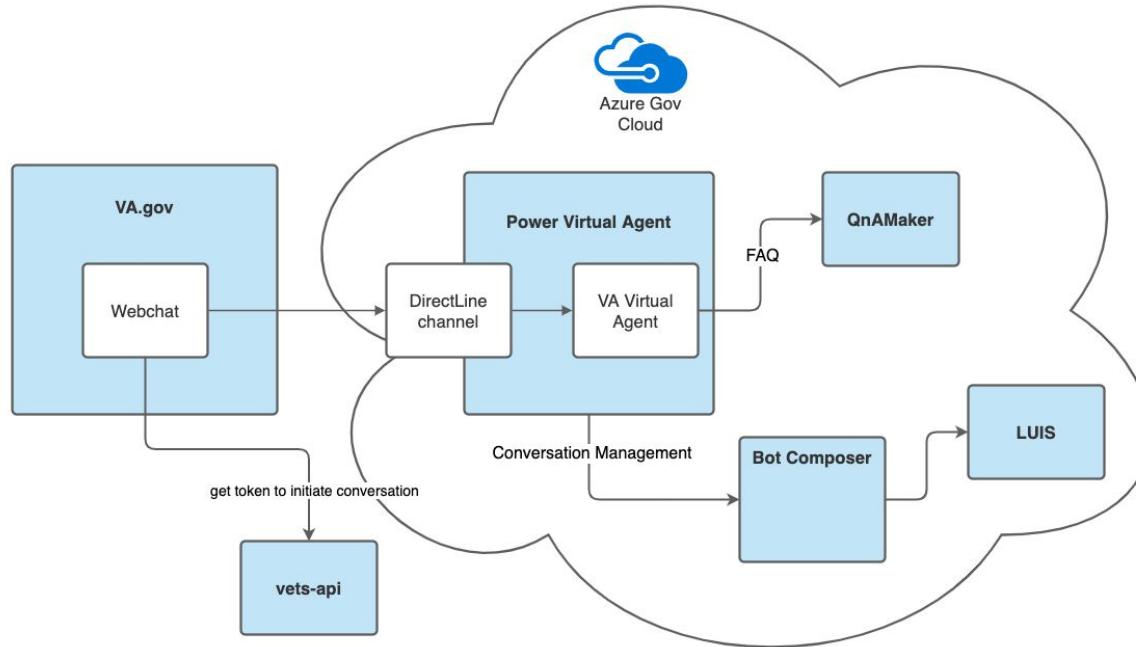
Method

- List & explain relevant cloud services to be used
- Walk through diagrams showing relationships between services, including to current VA.gov systems
- Walk through sequence diagrams

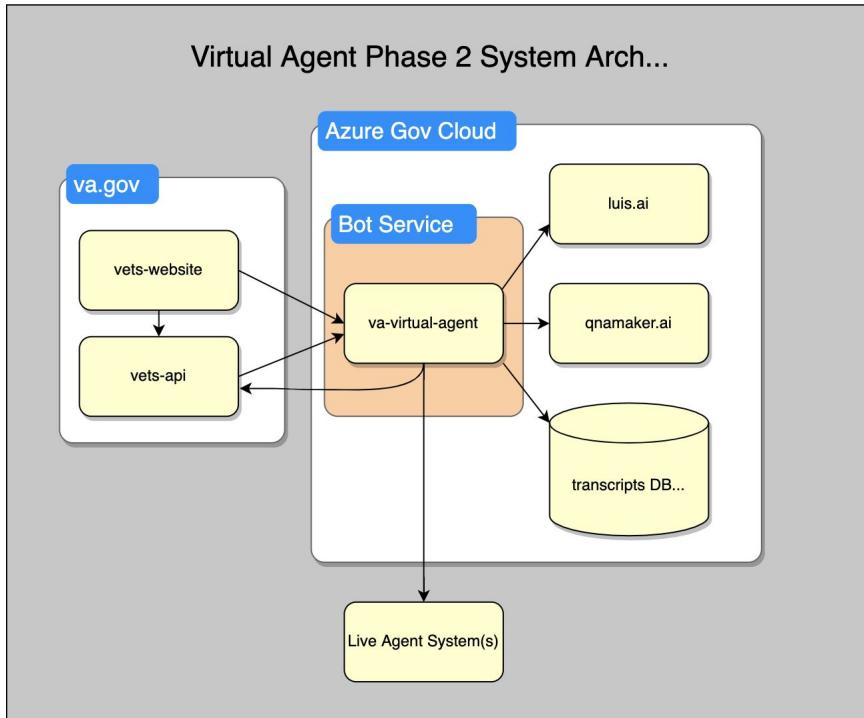
Output

No concerns found with authentication. The higher-code solution will require significant scrutiny around the transcripts database and ensuring all privacy regulations are respected.

Technical Vision without Bot Framework SDK



Technical Vision with Bot Framework SDK

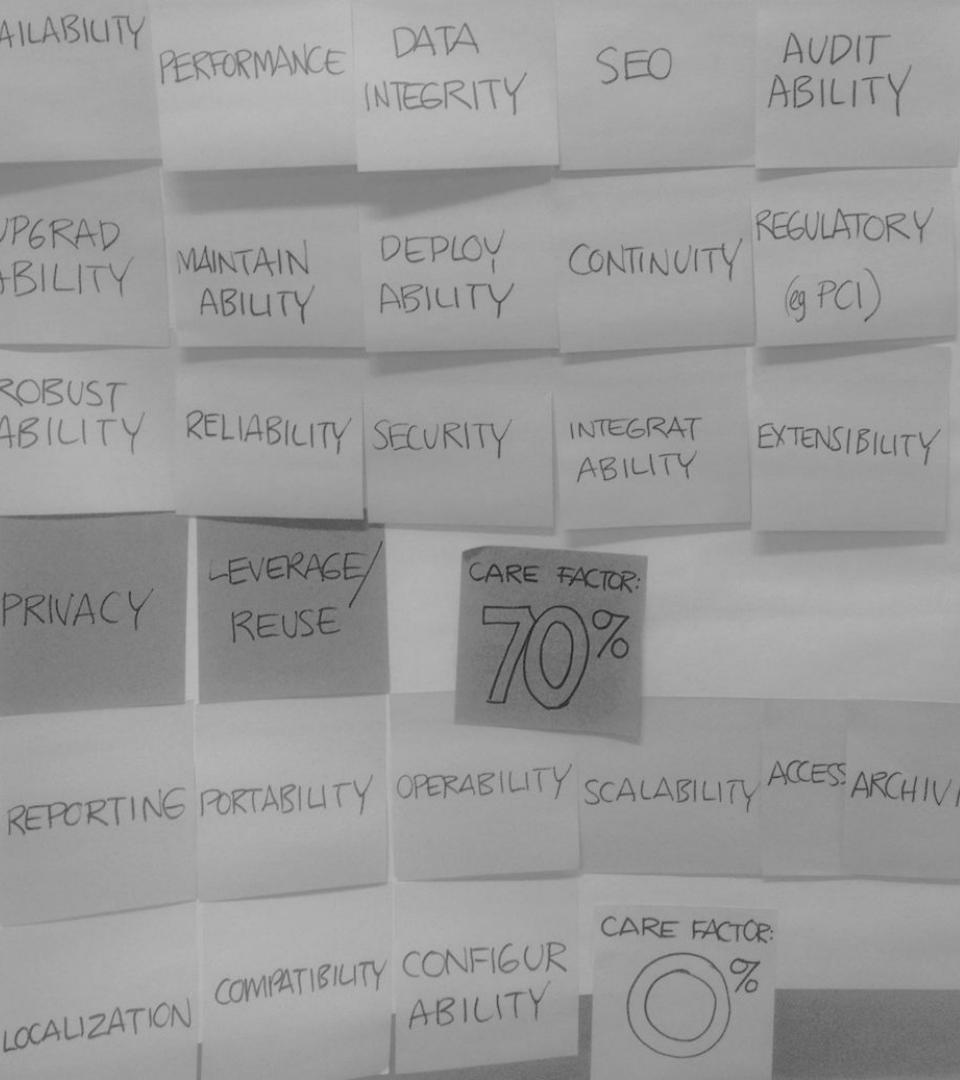


Architectural Obstacles

- We discovered our preferred option, Bot Framework SDK, is currently prohibited by TRM
 - We are looking into reopening the Bot Framework SDK TRM evaluation
- We looked into Composer as a middle ground that would potentially be reusable once we transitioned into SDK
- The existing short term omnichannel ATO does not extend to Bot Framework SDK
- The existing short term omnichannel ATO does not extend to Bot Framework Composer
- We are investigating if there are any ATOs that will cover us, or if a new one is necessary
- The path with no compliance issues is to use PVA but we do not think this is a long term solution. A large percentage of this work risks becoming throwaway once other barriers are removed. We are still investigating how much would be transferable to another solution.

Cross Functional Requirements

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Cross Functional Requirements (CFRs)

Objective

Understand CFRs, how to measure them and any actions as a result

Method

- Use a card exercise to first identify the key cross-functional requirements (CFRs; aka NFRs) for our product. Once we've done that, we'll identify the key outcomes for each of the identified CFRs.
- Vote on CFRs they feel are most relevant to the product in the near term.
- Once identified, we discuss them and brainstorm measurable outcomes for each of the selected CFRs.

Output

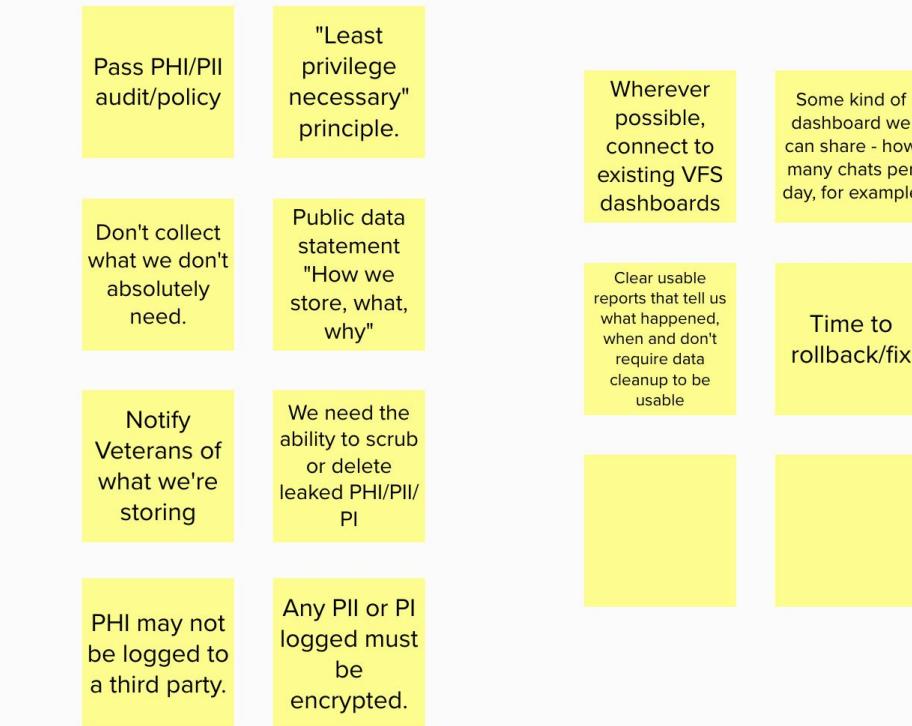
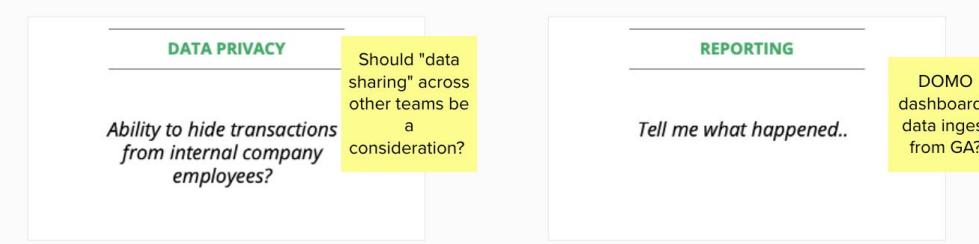
Clear understanding of CFRs that will be added to our backlog and SMEs to reach out to confirm details

Category	Requirements
Archiving	
Availability	
Scalability	
Reliability	
Support	
Performance	
Capacity	
Configurability	
Reporting	
Usability	
Audit	
Internationalisation	
Security	
Privacy	
Maintainability	

CFRs (cont.)



CFRs (cont.)



CFRs (cont.)

CONFIGURABILITY

Ease of managing content within the bot

Central Knowledge base that we can use to edit specific bot content in and pull from

Track how long it takes to make an update to content; some kind of SLA?

A content management system? (not Drupal)

Version control to roll back something?

LEGAL COMPLIANCE

Under what legislative constraints is the system operating?

ACTION ITEM:
Speak with Faith Owusu-Sekyere (on Platform operations) can help with ATO

6-months retention HIPAA - can get redacted transcripts for non-health data.
Dependent on ATO process

Including Slack messages in DSVA slack.
Yes

Newbie question: can we get FOIA'ed

Legal impact in cases of crisis management

Maybe combine with Ethics?

The platform Privacy, Security, & Readiness review will prompt y'all w/r/t HIPAA, PII, etc. Though there are likely other constraints too.

What approvals are required - by whom and when?

What do we need to inform up front?

What is the protocol for informing of incident?

MAINTAINABILITY

How do we keep it running?

What happens when a handoff point is down - fail gracefully

Q: If we integrate with Live Agent, how do we keep them informed if we're up / down?

Long-term team allocation

What if we build feature parity with va.gov for feature X and then feature X changes

CFRs (cont.)

AUTHENTICATION

How do we ensure "you are who you say you are"

We have mechanisms for this in existing VA services (vets-api, LaROTA, etc)

CONTINUITY

Ability for business processes to continue in the event of system downtime

Look at how Vetext & LaROTA work.
Ping that team for intel. PR link in corner of this sticky.

Auth for caregivers - speak to Caregivers team

What happens to live agent chat if the bot is down?

Include in playbook

Auth for Dependents

ACTION ITEM: Get playbook for support, as part of security review, think about status page if something goes down and create it

Product Roadmap creation

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Product Roadmap Process

Mission & Goals
Metrics & KPIs

Value vs. Effort Matrix

Story Mapping

Estimation

- Align the hypotheses we want to test in Phase 2, and their Measures of Success, with OCTO-DE Goals

- For the hypotheses we want to test, rank each according to the business value it would deliver versus the technical effort to implement

- Using the Value vs. Effort rankings, decide which hypotheses we want to pursue and start decomposing them into the stories required in order to test them

- Conduct a rough t-shirt sizing exercise (Small, Medium, Large) to forecast a high-level timeline for the Product Roadmap

Mission and Goals

Objective

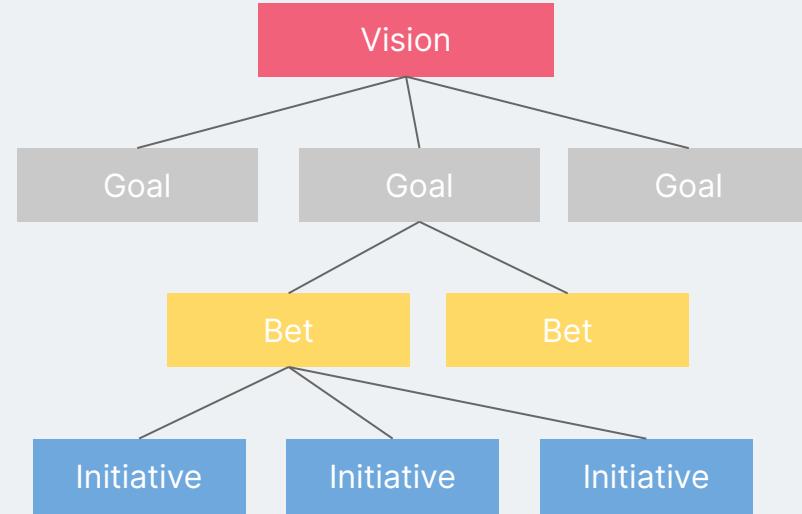
For the breadth of our findings in the Phase 1 PoV, formulate hypotheses (bets) that would achieve OCTO-DE's 2021 Goals and the experiments (initiatives) we could conduct to test the value they'd deliver to veterans.

Method

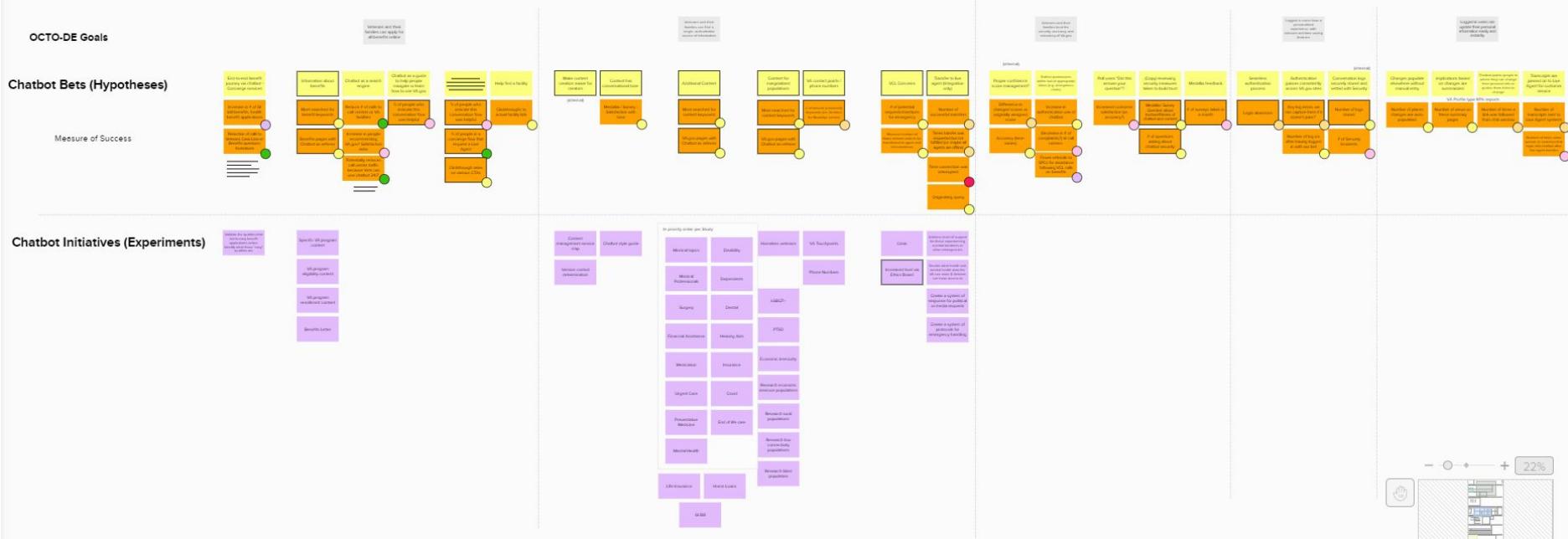
Keeping in mind what veterans told us during our Phase 1 PoV research, we categorized their desires for a chatbot according to which 2021 OCTO-DE strategic goals it supported. These would become hypotheses (bets). For each bet, we then listed the experiments (initiatives) to validate that these features actually provide value to veterans.

Output

A tool (a Lean Value Tree) to visualize and communicate business strategy, facilitate funding decisions and enable team alignment.



OIC Vision: To become a world-class organization that provides a seamless, unified Veteran experience through the delivery of state-of-the-art technology.



Lean Value Tree created in Mural

OIC Vision: To become a world-class organization that provides a seamless, unified Veteran experience through the delivery of state-of-the-art technology.

OCTO-DE Goals

Veterans and their families can apply for all benefits online

Veterans and their families can find a single, authoritative source of information

Chatbot Hypotheses

Users would like ...

- an end-to-end concierge service in the chatbot to know who they are and guide them through their benefits journey, giving them intelligent recommendations
- to see more information about available benefits to them
- to use the chatbot as a search engine to find VA.gov benefits pages
- to use the chatbot as a guide to learn how to navigate VA.gov
- help finding a facility that offers a particular benefit

Users would like ...

- content pulled wholesale from Drupal
- content that is written in a conversational tone
- to see more content topics that they mentioned during Phase 1 research
- content that specifically addresses their needs if they are part of a marginalized group
- the chatbot to surface addresses, phone numbers, and other contact points correctly
- the chatbot to handle crises in an appropriate manner, making sure we provide veterans as much help as we can
- to be transferred to a live agent when they've exhausted the resources on the chatbot or when they request to be transferred

Chatbot Admins would like...

- an easy workflow and tools to be able to create, manage, approve content

OIC Vision: To become a world-class organization that provides a seamless, unified Veteran experience through the delivery of state-of-the-art technology.

OCTO-DE Goals

Veterans and their families trust the security, accuracy, and relevancy of VA.gov

Chatbot Hypotheses

Chatbot Admins would like...

- reports to see the confidence scores being assigned to answers so they can manage the content appropriately
- the Chatbot to display the appropriate disclosures and prompt the user to accept certain security permissions at the proper times
- to be able to gather feedback on Chatbot performance by polling users “Did this answer your question?”
- to gather user satisfaction metrics via Medallia

Users would like...

- an easy to understand privacy statement and other articles if they were to ask the Chatbot how VA is keeping their information secure

Logged-in users have a personalized experience, with relevant and time-saving features

Users would like ...

- a seamless authentication process using the same patterns used elsewhere on VA.gov
- If they were prompted to log-in by the chatbot, that their authenticated state be passed elsewhere through VA.gov
- access to their conversation logs with the chatbot

OIC Vision: To become a world-class organization that provides a seamless, unified Veteran experience through the delivery of state-of-the-art technology.

OCTO-DE Goals

Logged-in users can update their personal information easily and instantly

Chatbot Hypotheses

Users would like...

- the chatbot to point them to where they can change their personal info or guides them to change it inline within a chat
- changes made to their personal profile to populate throughout the VA.gov ecosystem
- to see a summary of changes made to their personal profile or the implications of any other changes prior to committing
- their chat transcripts to be passed on to a Live Agent so that person can understand previous conversations and provide better customer service

Logged-in users can easily track applications, claims, or appeals online

Users would like ...

- to be able to ask for a claim or appeal status, get more details about a specific claim, and understand next steps

OIC Vision: To become a world-class organization that provides a seamless, unified Veteran experience through the delivery of state-of-the-art technology.

OCTO-DE Goals

Veterans can manage their health services online

Chatbot Hypotheses

Users would like...

- to manage appointments
- arrange transportation to a facility
- pick or check doctors
- to get intelligent suggestions when recommending specialists
- pay their bill
- request lab reports
- refill prescriptions

VFS teams can build and deploy high-quality products for Veterans on the Platform

Chatbot admins ...

- would like to pursue a mobile-first strategy to acknowledge the large number of users using mobile devices and more easily translate mobile web designs to desktop web designs

Users would like...

- to interact with the chatbot via SMS

Metrics and KPIs

Objective

For each of the hypotheses (bets) in the Lean Value Tree come up with a Measure of Success that we can use to determine if the bet is achieving the Goal it is aligned to.

Method

After speaking with the Analytics VPS team, to understand current practice and capabilities the Core Team together wrote Measures of Success for all the bets in the Lean Value Tree. We then tied these MoS to the OCTO Digital Experience measures to increase and decrease.

Output

For each bet in the Lean Value Tree there is at least one MoS tied to it, which is in turn tied to Digital Experience measure.

Relevant Phase 2 Measures of Success

CHATBOT HYPOTHESIS	MEASURE OF SUCCESS	DIGITAL EXPERIENCE MEASURE
A seamless authentication process using the same patterns used elsewhere on VA.gov	1. Decreasing login abandon %	Completion rate of online transactions
If prompted to log-in by the chatbot, the authenticated state is passed elsewhere through VA.gov	1. Decreasing token related log errors 2. Increasing number of successful handshakes with other VA.gov sites after users login with our bot	1. Completion rate of online transactions 2. Usage of digital, self-service tools
Be able to ask for a claim or appeal status, get more details about a specific claim, and understand next steps	1. Increase in number of claims and appeals status checked 2. Measure time-reduction for claims that had a chatbot interaction	1. Usage of digital, self-service tools 2. Time to successful complete and submit online transactions
Users would be OK with content pulled in its entirety from Drupal	1. Increased satisfaction according to Medallia and other surveys 2. Increased satisfaction according to inline "Did this answer your question?" metrics	1. Usage of digital, self-service tools 2. Veteran satisfaction with VA.gov
Find VA contact points / phone numbers	1. # of missed (untrained) keywords (e.g. Number for Brooklyn center?)	Completion rate of online transactions
Help find a facility	1. Clickthroughs to facility page 2. Increased satisfaction according to inline "Did this answer your question?" metrics	1. Usage of digital, self-service tools 2. Veteran satisfaction with VA.gov

Value vs. Effort Story Mapping

Objective

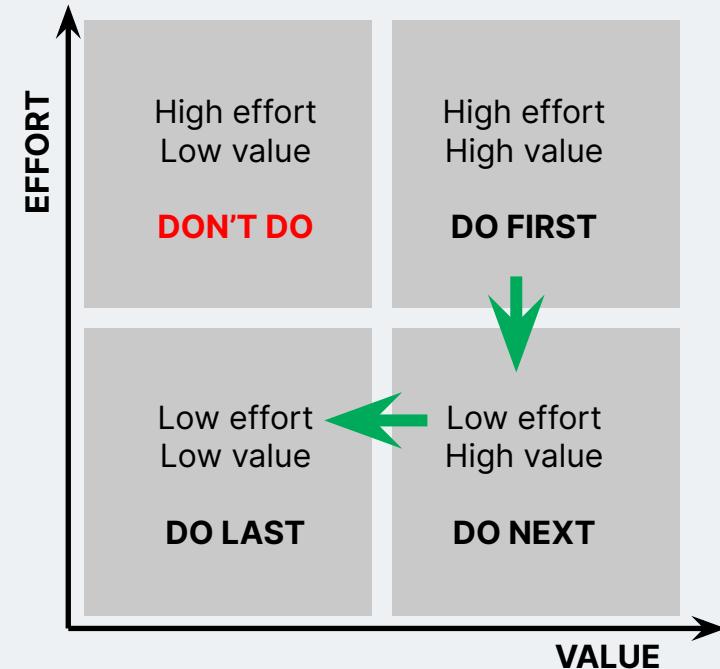
Create a Product Roadmap forecast.

Method

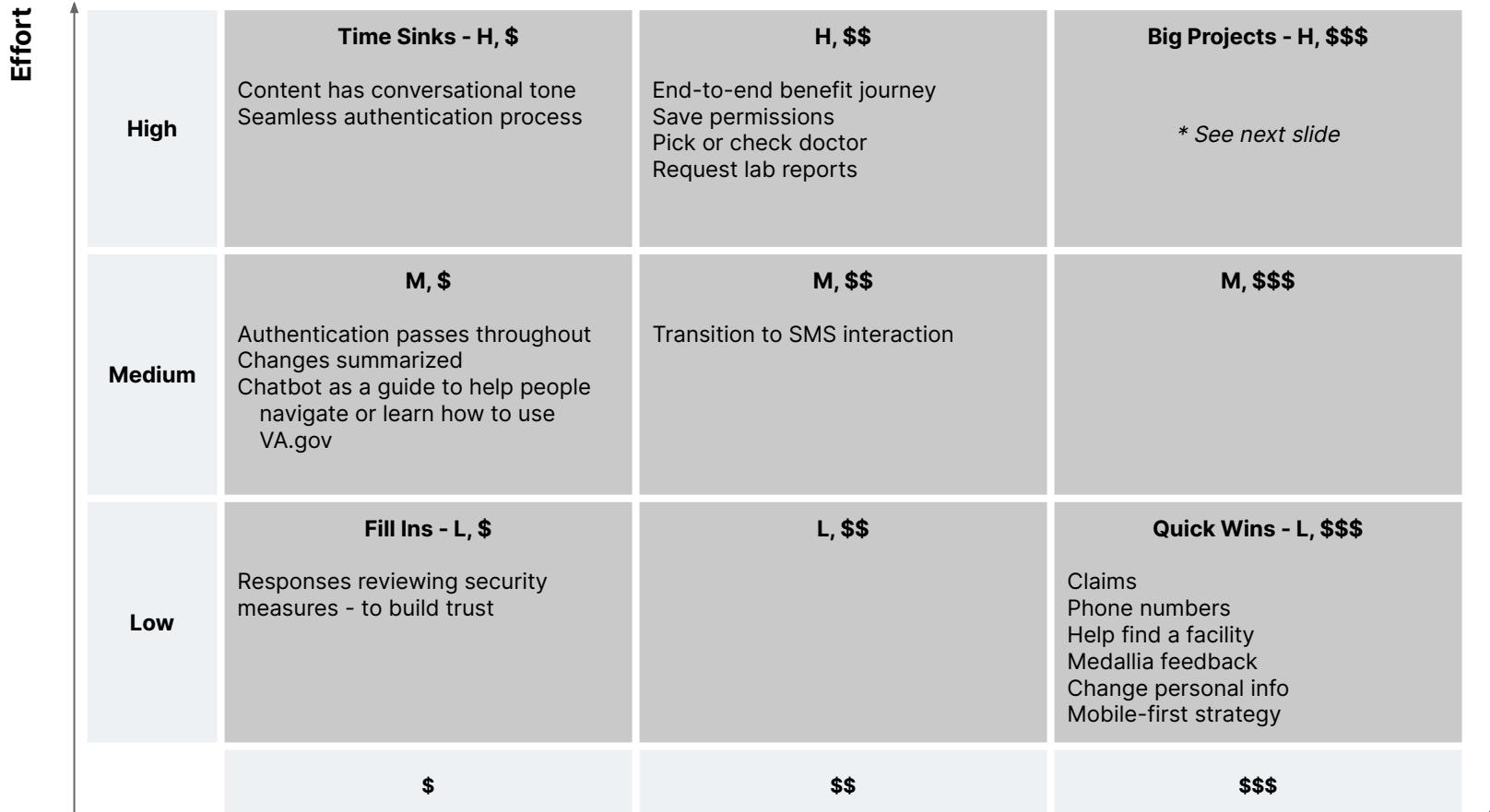
For each bet (hypothesis) in the Lean Value Tree, give it a relative effort ranking of high, medium, or low effort, and a relative business value score of high value, medium value, or low value. Taking this Value vs. Effort Matrix into account, we conducted a story mapping exercise by decomposing each bet into its component stories and then organizing it into logical releases. We then did a rough tshirt sizing exercise to determine rough timelines. This informed the high-level Product Timeline.

Output

Value vs. Effort Matrix, User Story Map, Story T-shirt Sizes, Product Roadmap



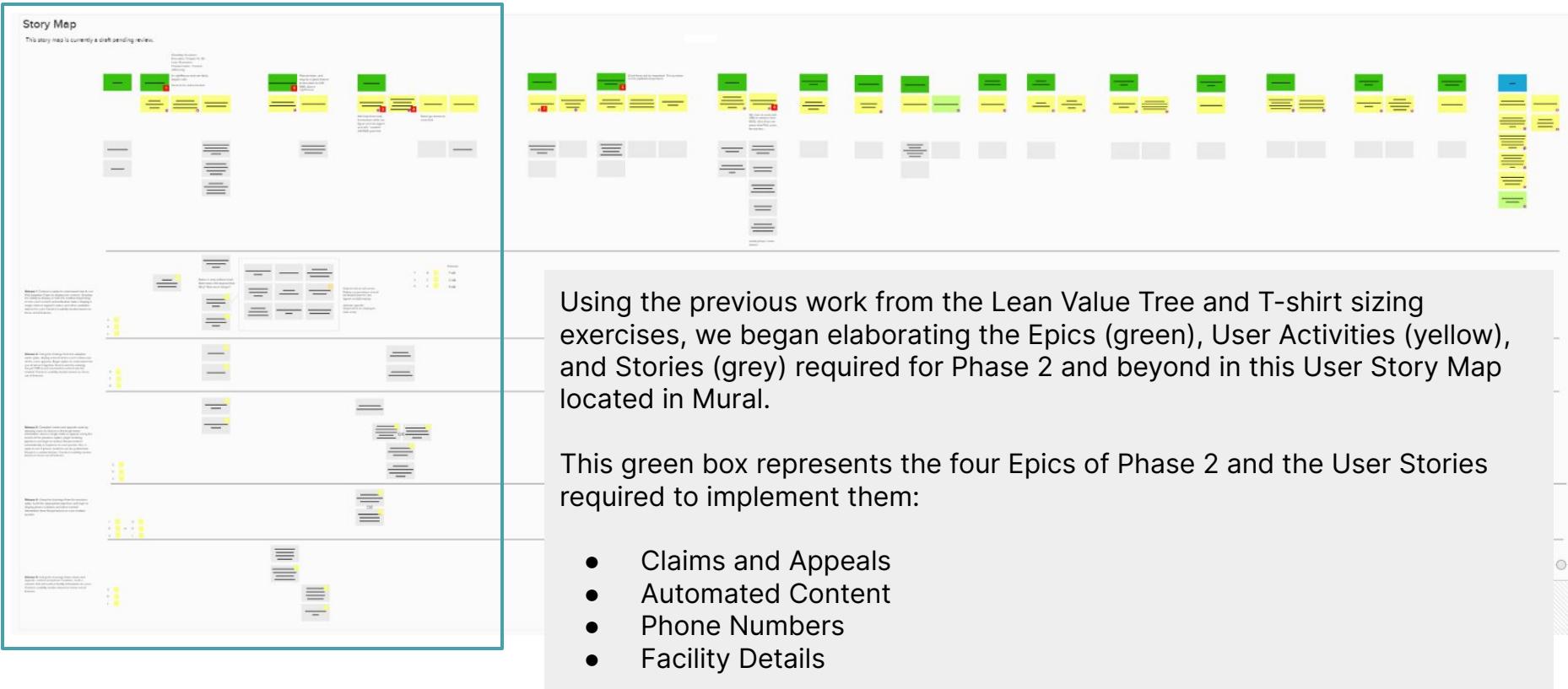
Value vs. Effort Matrix



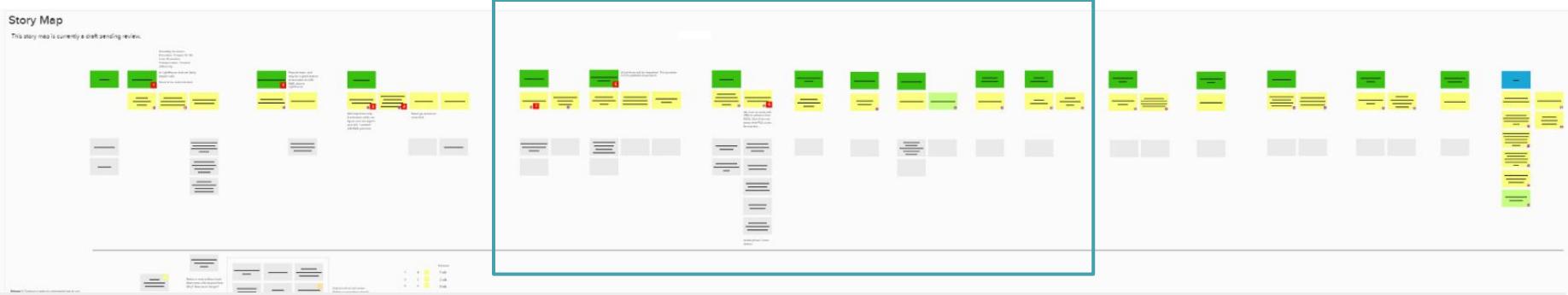
Big Projects - High Effort, High Value

- Information about benefits
- Chatbot as a search engine
- Chatbot as a concierge
- Additional content
- Transfer to Live Agent
- Transcripts passed to Live Agent
- Poll users “Did this answer your question?”
- Changes to personal info populate throughout VA.gov
- Manage Appointments
- Arrange transportation to facility
- Pay your bill
- Refill prescriptions
- Intelligent recommendations for specialists
- Content for marginalized populations

User Story Map



User Story Map



This next grouping of Epics and User Activities constitute the next highest priority items. However, we will be constantly reassessing and reprioritizing as we continue to learn.

No Stories have been written for these as we will be currently scheduling Deep Dive Discovery meetings as part of our progressive elaboration of requirements.

This Epics in this green box are:

- Transfer to Live Agent
- Monitoring, Logging, Reporting
- User Feedback
- Content Management
- Pay Your Bill
- Medical Records
- Prescription Management
- Manage appointments

User Story Map

Story Map

This story map is currently a draft pending review.



This final grouping of Epics and User Activities include:

- Finding Benefits online
- Applying for Benefits online
- Benefits status
- Finding/Choosing a Doctor
- Existing Provider information
- Confidence Score Management
- User Profile Management
- Additional Content
- SMS Integration
- Miscellaneous smaller ideas

T-shirt Sizing

Given the desired scope of the work for 2021, we asked the developers to estimate the 14 stories identified as either Small, Medium, or Large. Given conservative efforts of how long a development pair would take to finish each story size, we arrived at 28 Development weeks or seven months. This estimate would be reduced by adding an additional pair.

Story Size	Estimates (1 Pair)	Sub-totals
8 Smalls	1 Dev Week	8 Dev Weeks
2 Mediums	2 Dev Weeks	4 Dev Weeks
4 Larges	4 Dev Weeks	16 Dev Weeks
	Total:	28 Dev Weeks

Deep Dive Sessions

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Deep Dive sessions

We held a number of discovery sessions to help refine our Product Roadmap around key features and topics. We spoke to subject matter experts on topics such as:

- Transcript features
- Claims and Appeals
- Responsible Tech - Crisis Management
- Content Management
- Research methodologies and recruitment

Transcripts & Data Retention

Objective

Gain alignment as a business/omni-channel program on chatbot transcript features (such as saved transcripts and transcript handoffs between virtual/live agent) based on user research findings, compliance requirements, and data retention requirements.

Output

- Group consensus and user research points to wanting to tackle transcript features in some way.
- For 2021, Virtual Agent can focus on understanding compliance requirements and the possibility of adding something lightweight to our POV to get data on if a feature would be used/beneficial. That would inform us if it's a full fledged feature we should add to our 2022 deliverable. And from the program perspective, if we should have feature parity in Live Agent.
- Compliance and legal requirements will inform which transcript feature we will implement first
- Beyond POV, Trisha Dang will be the key approver for pursuing these features

Claims and Appeals

Authenticated VBA Chatbot Feature

Objective

First **authenticated** feature for the chatbot that will allow us to:

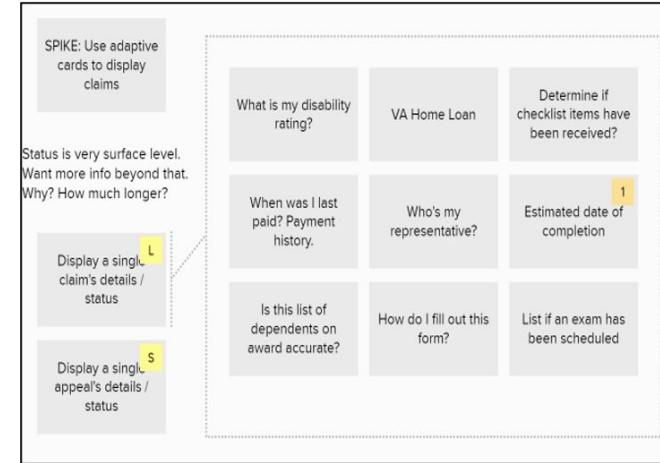
- Begin collaborating with VBA toward incremental communications, and collaborative iterative feature creation
- Map specific chatbot interactions to potential call center impact
- Quickly validate the quality of responses with Veterans & caretakers
- Start the process of feature roadmap (growing features over time)
- Test technical limitations (e.g., displaying multiple claims)
- Test API information limitations (e.g., what questions can we not answer)
- Designate points of transfer to Live Agent
- Designate points of transfer to other resources

Method

- Workshop with VBA representatives (including Regina Yount)
- Met with OCTO claims & appeals team

What's next

- Collaboration with Booz Allen Hamilton HCD team to dig deeper into NCC call center transcripts
- Identify what claims & appeals “stories” the chatbot can be of most help and have the most confidence
- Continued and closer communication with VBA as needed
- Start developing and preparing for usability tests



Source: [Virtual Agent Discovery and Inception Mural](#)

Building Responsible Chatbots

Ethics & Crisis Management Workshop

Objective

According to the 2020 National Veteran Suicide Prevention Annual Report, in 2018, an average of 17.6 Veterans die from suicide per day. There is always a risk that an artificial intelligence will misunderstand or misdiagnose a Veteran experiencing a crisis. As an agency we must:

- Understand how chatbots can help, but also hurt
- Identify what is the “right” crisis for a chatbot
- Identify the right level of information to share with a Veteran during a crisis
- Identify what actions we can take to protect Veterans if the chatbot fails or is unavailable
- Decide when it’s appropriate to turn off the chatbot
- Decide how we respond to media or political inquiries around this subject

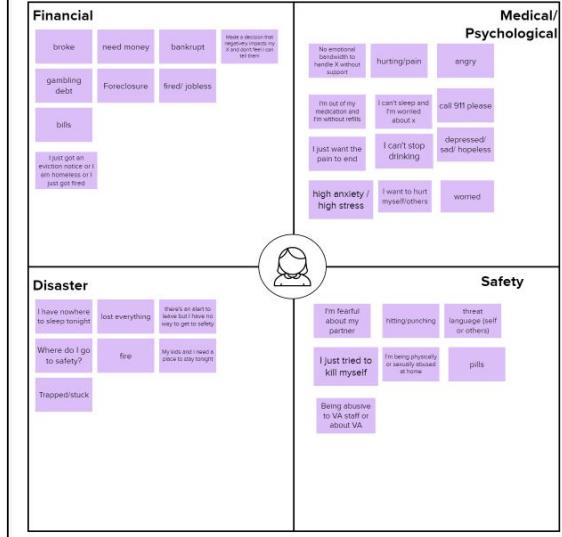
Method

1- hour initial workshop with representatives of VCL, OCTO and VEO to kickstart the discussions

Output

- Expanded discussions with a larger group of representatives as identified in the workshop
- Decide what crisis the bot will handle and at what level of response in Phase 2
- Build an “Ethics Council” to handle these and future crisis-management decisions for all existing and future emerging technologies

What could our Veteran say to the bot during any of these?



Content Management Deep Dive

/thoughtworks



Content Management

Objective

Content is the user experience of the Virtual Agent and creating content that is valuable to users is central to Phase 2.

Method

- We brought together content experts for an open session with directed questions on topics like styleguide, Drupal, authentication and APIs.
- The attendees discussed the top challenges and identified strategies to address the challenges as well as considerations to think of going forward.

Output

We identified a need for a deep dive for content with the va.gov content team and arranged follow up sessions.



Content management topics we explored

1. We know that content must be Veteran facing, but existing web content is too cumbersome for chatbot responses (especially for 508). How might we best rework existing content for a chatbot experience?
2. How many dedicated content writers are necessary to rework the existing web content for a chatbot?
3. Do we have the time and resources to hire a dedicated chatbot content team?
4. If we don't have the resources, how might we install a process to refine web content for a chatbot with existing content and chatbot team members?
5. Do we need to create chatbot content writing guidelines?
6. If we establish guidelines, is there a script that could be created to automatically refine existing web content for the chatbot?
7. If not, do we need to have our own drupal segment for chatbot content?
8. What other technical challenges are there for implementing chatbot content?
9. How do we write authenticated content for a chatbot?
10. What technical systems do we need to connect with to create an authenticated content experience?

Challenges remaining for phase 2

- Lack of dedicated content writers, but is a priority with future funding secured
- Still no easy way to auto-refine existing content, but fixing bad content can be more expensive than writing good content
- Chatbot needs its own styleguide but must tie into current web-styleguide
- Having Drupal is good, but still need writers for utterances
- Editorial Notifications in Drupal don't exist, which complicates review process

Content actions we could take

- Individual lines of business could furnish their own content writers.
- Have our own chatbot drupal content
- Control 80% personalization that we get via API (Who is my doctor? And write wrapper around answer “Your doctor is [insert name here].”
- 20% would be shorter drupal search engine type answers. “Here’s what I found on [topic name] + [info summary]. You can learn more by going [here](#).
- Add a Chatbot checklist to styleguide (“Here’s what to think about when writing Chatbot content”).

Content actions we will take

- Content displayed will be based on your level of authentication
 - Level 1 - won't get much info. Everyone pretty much gets Level 1.
 - Level 2 & 3+ - will get more personalized data. If authenticated can assume you're at least Level 2.
- Connect to Vets-API (200 +).
 - Each api will be different based on team who maintains it, but...
 - Will integrate to many other systems (e.g., prescriptions is a json api in vets-api)
- Work with various VFS teams who know their customers, know the functionality, know their solution.
- Stakeholder buy-in has to happen often (schedule recurring meetings)

Anchors and Engines

/thoughtworks



Anchors and Engines

Objective

This session helped us identify success and risk factors that will drive the project forward, what will hold it back and external events that will influence/shape it

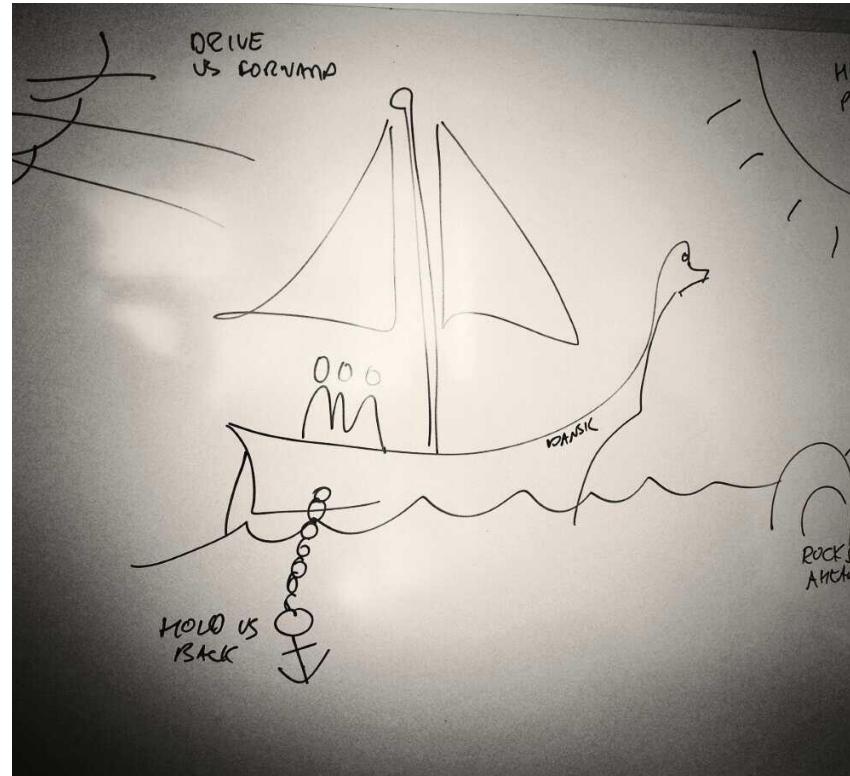
Method

Participants wrote one idea per sticky on the following topics:

- Anchors: What holds you back?
- Engines: What moves you forward?
- Winds of change: External forces
- Rocks: Risks to watch for

Output

Clearly defined RAIDs that can be monitored and mitigated via a RAID log



The findings

In order to prepare for the work ahead for phase 2, we documented:

Anchors: What holds you back?	Engines: What moves you forward?	Winds of change: External forces	Rocks: Risks to watch for
<ul style="list-style-type: none">Alternative or duplicative systems including chatbotsCovid might continue to prohibit in person user research/outreach for marginal groupsHealth care chatbot/related systemsInternationalization (translation)MSFT making deals with VA we can't controlUrgency for launch - focused on claims now, but could shift to Presidential directivesUse of chatbots common as support channelVEO priorities (may not change)	<ul style="list-style-type: none">Bot Framework SDK not acquiredContinuation of fundingOIT/OCTO collaborationOmni channel effort assumptions - number of bots on certain pages per LOBs; CRM AVA page as starting place?VA Silos/figuring out who to speak with to build momentumVastness of topics/intents, focusing on specified deliverables	<ul style="list-style-type: none">Partnership with VBA NCC leadership, focus on pilotClear and up to date communication with Live Agent/OmniVeteran outcome metricsValidating features with VetsOpen conversations with SMEs to inform the bigger picture/longer roadmapSet expectations with business and others what a bot is capable ofRegular demos with key stakeholders	<ul style="list-style-type: none">Accessibility of chatbotsAvoiding unnecessary complexity for phase 1 pilot launchCrisis managementDefining the intake process for team interested in collaboratingDiverse use cases across VA business lines - can be a distractorFalse urgency (i.e. deadlines, congressional mandate etc.)No system level overarching technical architectNot setting clear expectations of what the bot can do and in what timeframeNot testing with marginal groups that couldn't target in Phase 1Paperwork Reduction Act and conversational impactPrivacy - Richard Ivy is "FOIA?" contactStorage limitations? (NARA, transcripts and hosting)View that AI will 'solve' complexity