Decision summary

Decision needed:

Should TTS develop a notifications service as a new shared service? If so, how should it go about doing so?

We recommend that:

- TTS develops a notifications service as a new shared service, pilots it via the Benefits Studio, utilizes a URL like notify.gov, and looks to the OMB Life Experience teams for initial partners.
- In addition to a notifications service, TTS funds the Benefits Studio for ongoing advising and discovery work to facilitate knowledge sharing, identify future bets, and foster business development opportunities across TTS.

To do that we'll need:

Fiscal Year	Est. funding*	Staff/Contractors
FY 23	$4,000,000	9
FY 24	$5,500,000	12
FY 25 + outyears*	$8,700,000 annually	20

* In the long term, the Studio will need support from TTS to find another home for the Notify platform. If Notify is offered government-wide, it will grow beyond the scope of the Benefits Studio. The estimates for FY25 and the outyears are likely applicable to any team in TTS running this service. Estimates will be tested as we pilot + expand.

The potential impact:

An affordable, timely, and easy-to-implement multi-channel messaging platform could help benefits programs **reduce the cost and burden of program churn up to 20%.**

In the first few years we anticipate a limited number of customers, pilot/control populations, and messages could demonstrate the following impact:

Fiscal Year	Customers	Messages	Potential cost savings	
			10% reduced churn	**20% reduced churn**

FY 23	3	120,000	$155,500	$311,000
FY 24	10	400,000	$518,000	$1,035,000

As we expand out of a limited roll-out stage, programs might send messages to their entire case load. Using the numbers from a 2014 USDA report as an example of potential impact, if we partnered with the Illinois SNAP program *on an annual basis for just one state,* text messaging could*:*
- Result in 61,200 more people successfully renewing their benefits
- Save $2.8 million in recertification costs
- Result in $49 million in previously foregone benefits delivered

For the SNAP program at the national level this could result in 1.7 million more people successfully renewing their benefits and $136 million in saved recertification costs annually. While we do not expect every state to use Notify (either because they already have a tool or do not fit the target market), we believe that estimates for national use in the SNAP program provide a rough model for the impact of use in 10 states across 5 programs or a few federal partners (like SSI). We are not yet sure what the total addressable market is, but multiprogram use across multiple levels of government is one of our primary goals.

Measuring impact

We will need participation from our customers in order to measure program impact. We also plan to work with the GSA Office of Evaluation. Churn rates are one example of a way to measure impact. Churn reduction would be measured by using a pilot and control group and measuring successful enrollments for each group over a specific period of time (current plan is 3-6 mo).

We also plan to track specific metrics to inform TTS's continued investment in Notify. The metrics and indicators are different at different levels of product maturity (outlined in Appendix C), and include:
- Use-case match (impact)
- Uptime
- Send attempt success rate
- Customer satisfaction
- Use-case conversions (impact)
- Customer satisfaction
- Cost and time savings to partners
- Load capability

For most of the metrics that are specific to TTS, we will also get advice from GSA's Office of Evaluation, but can collect and monitor them without dependence on external data sources.

Signatures of agreement

Signatures below represent TTS leadership's intention to support this effort, given the expected impact, plan, cost, and staffing needs as outlined above. The funding plan and staffing/hiring plans will be developed next, after which there will be a *second* round of approvals inclusive of those details.

Who	Approved by ↓	Date ↓
TTS Public Benefits Studio Lead (author)	Amy Ashida	10/14/22
TTS Chief Product Officer	Nina Mak	10/17/22
Director, Business Operations, TTS	Jackie Xu	10/17/22
Director, Accelerators Division, Office of Solutions	Sarah Crane	10/19/22
Acting Assistant Commissioner, Office of Solutions	Ashley Mahan	3/1/23
Director, TTS	Ann Lewis	3/1/23

After this initial sign off, the Studio's next steps will include:
- ☑ ~~Working with TTS leadership to secure requested funding for FY24 & 25 via ARP & appropriations requests~~
- ☑ ~~Working with the BizOps team to outline a more detailed staffing/hiring plan, factoring in Talent hiring priorities and contracting timelines~~

Rationale

Why invest in notifications

The need & public impact

Timely and clear communications are key to government operations and a core part of building trust with the public. According to Pew, 97% of US adults with an income of less than $30,000 have a cellphone, and successful pilots and similar product offerings from the UK and Canadian governments have shown promising outcomes like:

- Recipients being up to 36% more likely to become certified across Medicaid and WIC
- Up to 67% increased annual renewal approvals and 21% improved case management rates
- 55% of recipients reported using tips received through texting at least once a week

Despite numerous promising pilots, supplementary SMS notifications are currently underutilized by public benefits agencies. In April of 2022, only 11 state Medicaid agencies were planning to use SMS for PHE unwinding. Contributing factors include: lack of funding, personnel, technological capability, procurement timelines, and other limiting factors.

Alignment with administrative priorities

The Benefits Studio spent the latter half of FY22 ensuring alignment across OMB, GSA, TTS, and potential pilot partners like WIC and DOL. We are listed as a key implementation partner for improving government communications via multichannel notifications in the Facing Financial Shock and 0-5 OMB Life Experience proposals and implementation plans. Notifications are explicitly listed on TTS's Roadmap for Shared Products and Services and will help TTS deliver GSA's 2022-2026 Strategic Plan as well as GSA's Customer Experience Executive Order commitments.

Advising and potential participation from the Benefits Studio has also been requested by the Facing Financial Shock Life Experience team to support their work creating reusable resources for states that is approved by the President's Management Council.

Why a TTS shared service

We believe that by lowering the barrier to entry, TTS could help raise the floor when it comes to the number of programs utilizing text messaging.

The market for SMS products is mature, but the fact that so many programs do not use available tools suggests that there are obstacles that remain unsolved. While available features change often, preliminary market research by the TTS Public Benefits Studio and 10x identified that **the largest barriers to getting started using SMS is the high operational cost of procurement** (even via existing GSA vehicles like the GSA Contact Center Services and GSA's Multiple Award Schedule) **and limited in-house technical capacity** necessary to utilize existing market tools.

Notify vs the market

Unlike the market, TTS is in a unique position to offer a low-lift, low-feature starting point for programs without a mature engagement practice or technical team. In addition to lowering the barrier to trying SMS in the first place, Notify would allow agencies to move faster in cases of emergency than negotiating the process to utilize market tools. As programs mature through their use of Notify, they will have the data they need to justify the staff and procurement efforts required to use more fully-featured market products.

From (current state)	With Notify
>1 year for a new procurement or **$300,000 contract mod + 3 months of admin time** for *one program in one state* to start sending messages	**$0 and 10 minutes** to start sending messages (as long as they have consent and content ready)

To illustrate the gap in the market here is how Notify compares with a few market tools that are already in use by government programs:

	Notify US	Twilio	Amazon SNS	Tatango	Trumpia
Procurement burden	Low	High	High	High	High
SME requirements	Low	High	High	Low	Low
Technical requirements	Low	High	High	Medium	Medium
Wrap around services	High	Low	Low	Low	Medium
Set up + ongoing costs	Low	Medium	Medium	Medium	Medium
Government-centered vs market-centered	Gov	Market	Market	Market	Market + Gov

Notify is a tool that has already been successfully executed with great success in Canada and the UK. In those countries Notify has reduced barriers to adoption by leveraging:

- Federal security processes to ease partners' vetting requirements
- Federal infrastructure to create affordability and decrease technology needs for partners
- Federal agreements to decrease partners' procurement burden
- A simple, government-minded design for minimal partner personnel burden

More details on how these tools have removed obstacles are listed in Appendix A.

The program ROI of a shared service

Building from a report from USDA and the Urban Institute and data from successful pilots, we project the following savings in annual recertification costs and reduction in foregone benefits if the Illinois SNAP program utilized Notify to support their renewal process:

From	With 20% renewal improvement	With 50% renewal improvement
$14,000,000 additional dollars spent to recertify churned participants in 2014.	**$2,800,000 saved**	**$7,000,000 saved**
$246,000,000 in annual foregone benefits due to program churn.	**$49,000,000 in previously foregone benefits delivered**	**$123,000,000 in previously foregone benefits delivered**

Although this is an example of savings at the state level, this represents a large amount of cost savings for the federal government as well. Approximately 50% of all SNAP expenditures at the state level are paid with federal dollars.

For federal programs, this could play out in a similar way. Through the pilot process we plan to collect data from federal partners on their costs when people churn out of benefits or application processes. While we do not have this data yet, we anticipate that the costs are similar (recertification being 2x the cost of a successful renewal) and will update this section of the document when we have more data.

Why the Benefits Studio

We believe that the Benefits Studio is uniquely positioned within TTS to stand up and pilot US Notify for the following reasons:

- Public benefit programs are a high-impact sector to start with and aligned with administrative priorities.
- The Studio has immediate capacity to pilot and deliver.
- The Studio is intended to be a system owner that offers services to agencies.

More specifics about our rationale can be found in Appendix B.

Proposed Roadmap

We recommend a conservative path to production that will allow TTS to support the OMB Life Experience efforts and test assumptions about what will be required to offer this system at scale before offering the service government-wide. Over the course of the next few years, we plan to move through the product maturity stages of Pilot, Alpha, Beta, and wide-release following the roadmap outlined in Appendix C.

Prioritized features

Although the UK Notify feature set is large (CSV uploads, APIs, bi-directional messaging, SMS, email, and physical letters), we are intentionally starting with a smaller feature set and scope for TTS pilots. We will decide what features sets to offer, when, based on:
- the capacity of our team (technical support and ability to measure impact)
- the potential impact as demonstrated by previous pilots
- the biggest gaps in tools currently utilized in the public benefits space

In order to have a reasonable scope, the Benefits Studio team has decided on the feature priority in the table below. We will determine whether our assumptions about customer priorities are correct or not based on the feedback we get from potential customers and our pilot partners.

Pilot Launch Features	Priority Future Features	Possible Future Features
By Jan 2023	By October 2023	TBD
Bulk, individually customizable SMS sending via web UI	SMS sending via API integration	Email sending via UI and API
Organization permissions settings for various team members to edit/send	Single-level decision bidirectionality (e.g. reply "YES" if, or "NO" if…)	Multiple-level decision bidirectionality (greater than one layer decision-tree)
Reusable message templates	Self-service account creation	Open-text reply bidirectionality (rather than reply yes or no, 1 or 2, etc.)
Scheduled send option	Application status page	Multilingual interface and content library options
1-day records deletion		7-day records deletion
Message send/failure analytics		Recurring scheduled send (e.g. "Send each Monday

		for 3 weeks")

Pilot process

In addition to validating feature priorities, we will use pilots to test the following hypotheses:

- **Market fit:** A federally-provided tool and service will be easier to set-up and provide unique value to partners when compared to market offerings.
- **Product fit** (for TTS and for our customers): This specific tool is easy for people to use, has the right features, and TTS can evolve it over time.
- **Impact fit:** This specific tool will provide value to individuals & families. Benefits programs and TTS can track what's working and why.

More details on how we will test these hypotheses can be found in the Notify Pilot Scope. We plan to engage with the GSA Office of Evaluations to assess pilot impact.

With the projected size of the Benefits Studio team over the next year, we anticipate that we will be able to support 3-4 staggered pilots. In order to make sure we challenge the hypotheses above, these pilots will be hands on for all involved. We anticipate pilots will follow this overall timeline and process:

Phase	Identify partners	set conditions	co-design	co-run	co-analyze	scale and exit
estimate	**As long as it takes**	**As long as it takes**	**6 weeks**	**12 weeks**	**6 weeks**	**4 weeks**
Goal	**Outreach:** Use OMB Life Experience teams, TTS Market Development and existing relationships to connect with potential partners **Research:** Use outreach as an opportunity to stress-test initial assumptions	**Agreements:** align on legalize of piloting including any data sharing agreements **Kick-Off:** Get comfortable working together, align on working norms and project timelines	**Scope:** Identify a specific use case, participant sample, and geographic context. **Track:** Define intended outcomes and develop methods for tracking. **Operationalize:** Configure product to meet specific use case	**Onboard:** Get product into the hands of the correct staff. Ensure we have a working service. **Run:** Launch the pilot and watch as it is used **Collect data:** Track product analytics and conduct user feedback sessions	**Synthesize:** review product feedback in relation to intended outcomes **Iterate**: Turn feedback into enhancements for product and improvements to implementation experience	**Reflect:** Understand what worked, what didn't, and what is worth scaling **Transition:** Support transition out of pilot and/or to long-term tool usage

Business model

We believe TTS's investment will be most impactful if Notify is free. We recognize this could seem counterintuitive; however:

- This would dramatically reduce administrative time + costs for ourselves and our customers.

- Implementation time + cost requirements are barriers to adoption for the current market options.
- Cost savings from this product will come back to the federal government.

If we need to charge, we should offer a free tier. We recommend TTS follow the existing models from the UK and Canada to maintain administrative cost savings for both us and our customers and keep barriers to adoption low. For reference:

- Free tiers in other countries are set at the point where admin costs for collecting payment would be more than what would be paid by the client. At TTS, annual admin costs per customer are $1700 for the IAA process and $300 for billing.
- The UK sets aside $450,000 annually to fund the free text allowance.
- An estimated fund of $500,000 for free text allowance is included in the budget estimates in this proposal.

A model of what a free tier could look like at different TTS break even points could be:

Tier	Messages included	Cost to TTS per customer	Cost to customer
Free - break even for TTS billing only	40,000	$312 for messages ($0.0078/message)	$0
Free - break even for TTS admin	250,000	$2,000 for messages ($0.0078/message)	$0
Paid	Unlimited over free allowance	The cost for free messages + $2,000 annually for TTS admin	$0.02 per message (what the UK charges)

Assuming pilot success, what TTS would need to be prepared for

Assuming success and use across government, we can base projections off of the usage of similar product offerings in Canada and the UK. TTS should be prepared for this product to send hundreds of millions of notifications annually, have a customer service arm that may need to be on call 24/7, and have a large team dedicated to product and customer success.

In addition to supporting the product, Notify may also open doors for additional service offerings or pairings across TTS. For example, a Notify customer may also be interested in content design services from 18F or a Notify message could link to a Touchpoints survey.

Financial and staffing projections

Detailed financial and staffing projections can be found here. Overall, we anticipate the following financial and staffing needs to deliver the Notify product roadmap and support Benefit Studio ongoing advising + discovery work.

Estimates are based on team sizes for similar products and services in the UK and Canada. Funding estimates include costs for ATO and technical infrastructure.

	Product maturity	Customers	Staff	Funding
FY23	Pilot	3-4	2 Designers 1 PM 4 Engineers/Compliance 2 Ops/engagement support 3 SMEs for advising work	$4,000,000
FY24	Alpha	10-15	2 Designers 1 PM 6 Engineers/Compliance 3 Ops/engagement support 3 SMEs for advising work	$5,500,000
FY25 + beyond	Beta + wide release	TBD	4 Designers 2 PMs 10 Engineers/Compliance 4 Ops/engagement support 3 SMEs for advising work	$8,700,000 annually

We anticipate the FY23 team will likely be federal employees and staffed with a mix of Benefits Studio staff and 18F support. In FY24 and FY25 we plan to utilize the Agile BPA or other contract vehicle to bring on additional talent that will be managed by Benefits Studio staff.

Known risks & mitigations

Because we are forking a product that is already in use in Canada and the UK, many of the risks associated with moving this service forward are around TTS's ability to support and implement the tool and navigating the unique context that federalism creates in the US.

Risk	Mitigation
TTS cannot financially support a free model or free tier	• Use pilot period to collect input on the impact of potential price points and administrative burden added by requiring billing and IAAs • If the cost or administrative burden is too high for the tool to fill the gap of current market offerings, do not proceed with scaling the tool
The Benefits Studio does not get IGCA Approval	• Partner with federally funded programs to offer the tool to states through them • Partner with only federally administered programs
Studio cannot pass security clearance even just for piloting	• Have a compliance expert on the team early to work with GSA OCISO • Do not proceed if TTS/GSA cannot reach an agreement on privacy, ATO, and usage agreements
Partners have implementation roadblocks (ex. Accessing data or collecting consent)	• Test and offer implementation support. Potentially partner with other TTS teams to support partners.
We cannot hire a large enough team	• Utilize contractors and/or vendor support • Adjust timeline to what the team size can accomplish
We over promise in pilot / cannot scale to production, even if successful	• TTS needs to start preparing for what is needed to offer the service long-term • Set clear and realistic expectations with partners about the maturity and trajectory of the product
The technical debt from adopting and adapting UK's codebase may be large	• Prioritize our technical work to focus on incremental feature roll-out, building in time for codebase cleanup

What else the Benefits Studio is planning

The mission of the Benefits Studio is to simplify the public experience of navigating government programs that help low-income individuals and families. We'll do this by collaborating with benefits agencies to build shared technology tools and spread best practices that work across programs to support a simpler, less burdensome experience for low income individuals and families.

In addition to building out the Notify product and supporting services, we'll be conducting ongoing discovery and advising. This includes activities like maintaining relationships and subject matter expertise in the benefits space, supporting and coordinating work between OMB Life Experience and TTS teams, supporting TTS's CX EO commitments around USA.gov and Benefits.gov, identifying opportunities that could become Studio bets or TTS business, and lending our benefits domain expertise to other TTS teams and beyond.

Appendix

Appendix A - Ways a TTS service could reduce barriers to adoption

Our research revealed the following barriers to adoption, as well as the following ways a TTS-provided service would overcome those obstacles:

Obstacle	*Hypothesis*
Gov't specific feature set	• A **bulk messaging platform** designed specifically for the government with minimal set-up and integration requirements (e.g. a well-designed web interface, .csv upload, and personalizable message templating) will fill key market gaps and decrease reliance on overly complex and costly tools.
Cost model	• A **freemium model** (meaning free to send messages up to a certain threshold) will increase likelihood of adoption for partners with small budgets and limited bandwidth to navigate procurement processes.
Tool sanctioned by the Fed	• A **federally-offered tool**, with legal, technical, and compliance "blessings" will increase adoption across benefit programs by decreasing emotional uncertainty and the fear of trying something new.
Additional set-up support	• **Offering set-up support**, such as data-wrangling, navigating consent, and supplying effective messaging content will increase adoption across benefits programs and our ability to serve future partners.

Appendix B - Why the Benefits Studio

We believe that the Benefits Studio is uniquely positioned within TTS to stand up and pilot US Notify for the following reasons:

Rationale	*Justification*
Public benefit programs are a high-impact sector to start with and aligned with administrative priorities.	• These programs are lifelines for millions of Americans and access depends on catching multiple paper notices per household each year. • The Studio has deep domain expertise and existing relationships in the public benefits space. We are already plugged into the intra-agency OMB Life Experience work that will connect us to pilot partners and help TTS deliver on administrative priorities.
The Studio has immediate capacity to pilot and deliver.	• Adding this to any other TTS team at this point in time would dramatically impact established roadmaps and commitments. • The Studio's team size will force us to scale responsibly and allow TTS to test assumptions about what will be required to offer this system at scale before committing to offering the service government-wide.
The Studio is intended to be a system owner that offers services to agencies.	• Because Notify requires agencies to input data it will need an ATO before going to pilot. The Studio will pursue the compliance and policy authorizations needed to pilot where 10x is not incentivized to do so.

Appendix C - Full detail roadmap

	Pilot/Alpha	**Beta**	**Wide-release 1**	**Wide-release 2**
Timeframe	~12 months	~12 months	TBD based on previous stages	TBD based on previous stages

Key activities	• Clear bureaucratic hurdles: ATO, consent, IGCA, etc. • Run pilot with 2-3 pilot partners • Gather data from pilot to improve the product • Answer the questions: ○ What unique value does a federally-managed product provide the target audience? ○ How does this tool fit into real-world use cases?	• Onboard additional high-impact partners • Develop wraparound guidance & services to complement Notify as needed • Continue to iterate on product to better serve our target customers & users • Hone measurement to quantify impact based on a year's worth of accumulated data • Answer the questions: ○ How much impact/cost savings can this product provide? ○ How does the infrastructure handle scaling at this level? ○ What can we do to improve impact?	• Expand the team and infrastructure to accommodate broader usage • Grow the feature set as needed • Answer the questions: ○ What features should be added/ expanded to add value? ○ What resources do we need to become the premier notifications product in government? ○ Where should the product live permanently?	• Offer Notify for any government use (no longer limited to benefits) • Position Notify as the primary tool for government notifications in the US • Answer the questions: ○ How can we iterate to expand to new use cases?
Feature set	• Individually customizable message templates • Bulk unidirectional SMS sending via .csv upload • Team level access and permissions	All of the column to the left, and potentially: • Bulk SMS sending via API • One decision level bidirectionality (press 1 if, press 2 if…)	All of the column to the left, and potentially: • Bulk email sending • New features that may arise as result of feedback	All of the column to the left, and potentially: • New features that may arise as result of feedback
Target market	• Current authority: Federally administered public benefits programs • After IGCA approval: State, local, territorially administered public benefits programs	• Federally administered public benefits programs • State, local, territorially administered public benefits programs • Possibly: organizations who deliver programs on behalf of the government	• Additional agencies on an invitation basis	• Open to Federal agencies writ-large • Open to state, local, territorial agencies writ-large

Expected outcomes	• Prove market fit • Validate or negate pre-pilot assumptions • Gain feedback for feature adjustment • Hone impact measurements	• Prove impact • Gain feedback for feature adjustment	• Prove scalability	• Solidify value as a federally managed shared service
Success metrics	• Use-case match (impact) • Uptime • Send attempt success rate • Customer satisfaction	• Use-case conversions (impact) • Customer satisfaction • Cost-savings to partners	• Load capability • Customer satisfaction	
Resources needed	• Est. cost: $4,000,000 • Est team: 9 total (2 designers, 1 product manager, 4 engineers, 2 opps support members)	• Est. cost: $5,500,000 • Est. team: 12 total (2 Designers, 1 PM, 6 Engineers/Compliance, 3 Ops/engagement support)		• Est. cost: $8,700,000 annually • Est. team: 20 total (4 Designers, 2 PMs, 10 Engineers/Compliance, 4 Ops/engagement support)