Proffering Machine-Readable Personal Privacy Agreements: Pilot Project Findings for IEEE P7012 WG

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#InformationSharingAgreement #Privacy #IEEE_P7012 #IEEE_SSIT_SC

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1. Executive Summary

What if people had the ability to assert their own legally binding permissions for data collection, use, sharing, and retention by the technologies they use? The [IEEE P7012](#) has been working on an interoperability specification for machine-readable personal privacy terms to support such an ability since 2018. The premise behind the work of IEEE P7012 is that people need technology that works on their behalf—i.e. software agents that assert the individual's permissions and preferences in a machine-readable format.

Thanks to a grant from the IEEE Technical Activities Board Committee on Standards (TAB CoS), we were able to explore the attitudes of people and one small business toward having the ability for people to send their own legally binding privacy terms to the business. The project entailed building a prototype "Relationship Manager" webservice called, "MyMe2BAgent", and then performing validation testing with both types of users of the agent: individual users ("Me-s) and the business ("B"). The primary research questions for the validation research were:

For Me-s:

- Do people want the ability to send their own legally binding ISA to service providers?

- Do people want a data management dashboard for managing the personal information that gets shared with all service providers?

For the business (B):

- What was it like to integrate the ability to receive a personal privacy agreement? Is it scalable? Is it something you would want to support going forward?

The following are the key findings from this research:

Is the capability of sending a personal privacy policy/agreement important and valuable to people (Me-s)?
While the number of participants is too small to generalize, the findings do show differing opinions. Of seven respondents, 2 said they wouldn't use the ability if they had today. Participants rated the importance of the ISA sending capability rather low, with moderated participants averaging 2.7 and unmoderated participants averaging 3.6 (where a score of 5 indicated "extremely important"). This is surprising as the participants in this study were all tech privacy afficianados. Clearly, additional research is required.

Multiple respondents noted that enforcement of the PISA is what is really needed to make this capability meaningful, and currently there is no way to know if an agreement is being upheld. What appears to be most important is ensuring and enforcing the terms of the agreement.

We suggest that reporting and enforcement of any agreement—including existing Terms of Service provided by B-s—is urgently needed, even before the ability to send personal privacy terms to a business.

Is a single dashboard to manage Me2B Relationships and the data being shared with vendors important and valuable to Me-s?
This capability appears to be somewhat more valued by our test population, with an average importance score of 4.3 across six respondents. It seems that Me-s may be experiencing a problem of scale relating to managing their Me2B Relationships, and that a "one-stop shop" would be desirable. One respondent suggested that the Me2B Relationship Manager should also manage passwords.

From the B's perspective, what is the greatest challenge?
The B in this project was the Me2B Alliance (Me2BA), a small, non-profit membership organization. Of the funds allocated for the grant, nearly 20% was used in a legal audit of the Pilot Information Sharing Agreement (PISA). Granted, the funding was modest ($10,000), legal fees are typically high, and this type of legal agreement was entirely novel for the lawyer (for all lawyers).

In order to arrive at an acceptable PISA, Me2BA had to assess current and future business and IT processes, to ensure it could sustainably uphold the stated terms. Me-participants said that the PISA felt like it was written for the B and not the Me. And it was, *because it's the B who bears the legal obligations*.

The primary value [for Me-s] of a machine readable privacy policy system is that it would allow for choice between pre-approved policies/agreements. But the allowable policies/agreements will always be highly vetted and amenable to the business and their legal advisors. They have to be in order for a B to sign them.

Generalized learnings for B-s:
- Allowing multiple different privacy policies will be difficult and likely undesirable due to the highly integrated nature of a personal privacy agreement into the business' legal processes, business processes, and IT systems' behaviors. Vetting and allowing a particular privacy policy is a major undertaking.

- Since businesses must scale their services to potentially millions of customers, supporting, tracking, and complying with several different policies is likely untenable for B-s. The pre-vetted and allowed Information Sharing Agreements will always be aligned to the capabilities, risk tolerances, security practices, and IT system behavior of the company.
- While one "Me" respondent desired a real-time negotiated agreement, it seems clear that real-time negotiation of privacy terms is unlikely to be supportable by a business, until every aspect of a business and its IT systems is captured in a machine-readable model.
- From this pilot project, it's unclear that the agreements must in fact be "machine readable"; they may merely need to be "machine identifiable". That is, agreements may not need to be real-time parsed—and may never need to be. Rather, the allowable personal privacy policies must have machine-readable unique identifiers.

This project and the learnings derived from it will help the P7012 WG understand the kinds of changes that will be required in order to better empower people, resulting in better relationships with users of technology. It will also help them better understand and prioritize key needs and challenges in creating healthier relationships between makers and users of technology.

2. Project Overview

2.1. Background

According to the charter of the IEEE P7012 WG (as captured in the Project Authorization Request https://sagroups.ieee.org/7012/wp-content/uploads/sites/308/2018/11/P7012_PAR_Detail.pdf), the Internet is based on protocols for peer-to-peer communication, but the current norm has been for service operators to set the terms of engagement. These agreements typcially take the form of Terms of Service agreements and include the conditions of data privacy that individuals engaging with the service must agree to as a condition to use the service. Current norms leave little room for individuals to assert their own data usage conditions and permissions that are not included in the Terms of Service.

P7012 is a revolutionary standard which enables the future existence of interoperable software agents that work on behalf of the individual. These "relationship manager" agents will issue machine readable, personal Information Sharing Agreements (ISAs) on behalf of the individual user. It is envisioned that people will be able to select from various "authorized" agreements. How this might work in practice is that different, trusted organizations (such as ACLU, Customer Commons, or EFF for example) would produce an ISA that vendors could selectively choose to support and individuals could choose to assert.

In February 2021, Me2BA responded to a call for projects from the IEEE Technical Activities Board Committee on Standards (TAB CoS). The purpose of the call was to provide discretionary seed funding to members of IEEE Societies and Councils to support establishing standards practices. The proposal presented by Me2BA was the following:
- To develop a viable machine-readable personal Information Sharing Agreement,
- To develop a prototype "relationship manager" software agent platform that allows a Me2B member to issue legally binding Information Sharing Agreement in a human- and machine-readable format, and convey these terms for personal privacy to a the Me2B Alliance's membership server, and
- To perform validation research with the Me2BA individual members ('Me-s") who used the relationship manager to issue an Information Sharing Agreement, and also with the Me2BA staff ("B") who integrated the capability into the Me2BA IT infrastructure.

The primary objective and value of the project is the last step: the validation research, capturing insights on usability considerations from both the individual's (Me's) and the organization's (B's) perspective. The prototype was NOT something we originally intended to build and wasn't the primary purpose of the project. We originally planned to work with an off the shelf personal data manager, but when the original partner dropped out, we

chose to implement a prototype service. We were hoping to provide real-world feedback to P7012 to inform and reference in the spec.

It is our hope that these findings will educate people on the unique challenges of integrating machine-readable ISAs on the vendor side, and also to determine whether a dashboard system such as the one we created would be of value to consumers.

2.2. Me2B Relationship Manager: "MyMe2BAgent"

The prototype service supported very limited and crudely implemented capabilities, as follows.

2.3. Me2B Relationship Manager Functions

The Me2B Relationship Manager is a "two-faced" webservice, with two portals for two unique user profiles: (1) Me-s (specifically, Me2B Members) and (1) B-s (specifically, Me2B Alliance staff). In this prototype, only the Me-s portal was functional.

If the MyMe2BAgent's Administrative Portal was fully functional, it would have allowed the B's administrators with:

- A method to upload one or more acceptable Personal Information Sharing Agreements which the B will accept.
  - ○ Due to the constraints of this project, we had only one agreement, called the Pilot Information Sharing Agreement or PISA, which was preloaded into the system.
  - ○ This agreement was based on the [JLINC Standard Information Sharing Agreement](#) (SISA, see Appendix A), but was heavily edited to ensure Me2BA's ability to comply with all the terms in the agreement.

The MyMe2BAgent's user portal (for Me-s) supported the following:

- Me-s were able to select an [the only] Information Sharing Agreement available for the [only enabled] entity [Me2BA]. Upon selecting the agreement ("Pilot Information Sharing Agreement" or PISA), they would "sign it" electronically and it would be "sent" to the Me2B Administrative server [hosted Salesforce instance].
  - ○ The existence of a mutually "signed" agreement would be recorded automatically in the Me2BA membership database in Salesforce.
- Additionally, Me-s were able to modify the information shared by them [under the binding terms of the PISA] with the Me2BA at any time, and these changes were automatically updated in the Me2B Membership database (Salesforce).

2.4. MyMe2BAgent Service Architecture

For this pilot project, MyMe2BAgent was developed as a webservice in HTML, and connected to the Me2BA membership database via standard Salesforce APIs. Participants logged in using an Apple ID.

3. Literature Review

As part of the validation research stage, a literature review was conducted to identify any research around user-proferred privacy terms or agreements. We were unable to find any research that evaluated any prototype or commercially available technology to send user-proffered privacy terms. However, there is substantial research and work published around *consent*. However, consent is only a distant cousin to the idea of a user-issued personal privacy policy.

In "Beyond Consent: A Right-to-Use Licence for Mutual Agency,"[1] published in December 2019, Lisa LeVasseur, founder and Executive Director of the Me2BA and Eve Maler, Chief Technology Officer of Forgerock and a member of the Me2BA Board of Directors, wrote on right to use licenses for personal data. They found that the way most digital apps and services handle data sharing consent is flawed, and proposed a right-to-use license to manage permissions as potential alternatives to consent and contract. Maler has been a leader in developing the User-Managed Access (UMA)[2] standard at the Kantara Initiative, which proposes a business-legal framework that ties machine-readable licenses to permissions and various artifacts produced by the protocol.

The key term in these publications is "permission," which is required for an agreement to be voluntary, as discussed by Nancy Kim in *Consentability*[3]. Permission implies that the person is voluntarily allowing access and use of some attribute about themselves, as opposed to acquiescence to the will of some other entity ("Consent"). This changes the nature of the agreement by restoring agency to the individual, who is no longer simply a data subject but a voluntary agent in their own decision-making.

A challenge to personal agency is how people understand personal data ownership. A study by Norberg et al in 2009 in the *Journal of Consumer Affairs* found that people tend to think of their personal data as something they share socially and not necessarily as personal property. The study concluded that since people tend to overlook or deliberately skip reading data-sharing policies for the technologies they use, they are unlikely to consider such a relationship to be a "property-sharing" one. As more jurisdictions introduce data privacy legislation, such as GDPR in the EU and CCPR/CCPA in California, consumers are becoming more aware of these issues.

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[1] LeVasseur, Lisa & Eve Maler. (December 2019). "Beyond Consent: A Right-to-Use License for Mutual Agency," *IEEE Communications Standards Magazine*, IEEE. (Volume: 3, Issue: 4, December 2019). https://ieeexplore.ieee.org/document/9031549

[2] User-Managed Access (UMA) 2.0 Grant for OAuth 2.0 Authorization. Kantara Initiative. Web. https://kantarainitiative.org/file-downloads/uma-busi-ness-model-0-7e-2018-02-01-pdf/.

[3] Kim, N.S. (2019). *Consentability*., Cambridge Univ. Press.

Much of the public conversation around mitigating consumer data risk is in the form of data protection. Consumer Reports offers a data privacy service, called [Security Planner](4), that is focused on minimizing tracking and securing personal devices. This tool is introduced as a way to make companies accountable for their data sharing practices, but the language continues to point to hacking, phishing and identity theft as the main concern. Another service recently announced from Consumer Reports' Digital Lab[5] is a protocol that provides a way for consumers and technologies to set the terms of data-sharing and has requested input from the public. Unfortunately, input must be made via GitHub repository, which can be intimidating to non-technical people.

We still have some way to go in educating people about their data rights. Our recent research and focus groups on consumer understanding of location awareness[6] and legal policies[7] indicates that while people consider misuse and sharing of personal data by technologies where they have accounts to be "Creepy" or "Annoying," they have a greater fear of "hacking" of their data by an external bad actor or otherwise accept a weaker role in the exchange of data as a price to pay for access to services.

In all, we found very little research, if any, around people's attitudes toward these novel and emerging capabilities.

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[4] Security Planner. https://securityplanner.consumerreports.org/

[5] Greenwood, D. (October 25, 2021) "Watch CRS Data Rights Roundtable Co-Hosted with the MIT Media Lab." Consumer Reports. Web. https://digital-lab.consumerreports.org/2021/10/25/watch-crs-data-rights-roundtable-co-hosted-with-the-mit-media-lab/

[6] Whysel, N., Alexanyan, K. & Little, J. (November 5, 2021). "Spotlight Report #3: Me2B Alliance Validation Research: Consumer Sensitivity to Location Tracking by Websites and Mobile Apps," Me2B Alliance. https://me2ba.org/spotlight-report-3-me2b-alliance-validation-research-consumer-sensitivity-to-location-tracking-by-websites-and-mobile-apps/

[7] Whysel, N., Alexanyan, K. Spaulding, S. & Little, J. (January 18, 2022). Spotlight Report #5: Me2B Alliance Validation Testing Report: Consumer Perception of Legal Policies in Digital Technology https://me2ba.org/spotlight-report-5-me2b-alliance-validation-testing-report-consumer-perception-of-legal-policies-in-digital-technology/

4. Validation Research

4.1. Study Design

4.1.1. Study Objectives
The objective of this study was to conduct quantitative and qualitative research to better understand the perspectives of both the consumer (the "Me") and the business (the "B") on supporting the ability to proffer personal privacy policies/agreements, and to collect that info as guidance/considerations for the development of the IEEE P7012 specification. This information will help inform and guide the IEEE P7012 WG in understanding users' needs for managing their ISAs and what assumptions and application considerations B-s should address in supporting a machine readable personal privacy agreement/policy solution.

4.1.2. Research Questions
The purpose of the pilot project is to understand practical issues realting to the ability to send and receive a machine-readable privacy policy, from both the Me's and the B's perspectives.
For Me-s, there were two key questions:

- How do people respond when given the ability to send their own legally binding ISA to service providers?

- Do people value and would they use a dashboard for managing personal information that gets shared with service providers?

For B-s, we wanted to understand the following from a business and technical/IT perspective:
- What was it like to integrate the ability to receive a personal privacy agreement? Is it scalable? Is it something you would want to support going forward?

4.1.3. Participants
All participants for this study were either members or contract staff of the Me2BA. (People who were not members of the Me2BA would not be able to log into the site due to the choice of using Apple ID as the login credentials.) Out of a total of 78 Me2B Alliance members, 19 or 24%, attempted to log into the MyMe2BAgent.org website. Of these, four were eliminated due to their material work on the agent and one self-reported that they were unable to log in, leaving 14 who completed either a moderated or unmoderated test.

At least 11 people participated in an unmoderated user test, and 7 of these completed the post-test survey for unmoderated users. This included one participant, whom we will refer to as P4, who did a moderated user test after failing to log in during the unmoderated test. Four people participated in a moderated user test, in which Noreen Whysel, Director of Validation Research at Me2BA, observed as the participants used the pilot website while describing their activity aloud. All four of the moderated participants completed a post-test survey after the moderated test. The bulk of our findings come from the four moderated sessions and their post test surveys and seven unmoderated participants, including P4, who completed the post-test surveys.

We did not track logins, so there may be additional people who attempted to use the website, but failed to log in or others who accessed the site but did not select to send the PISA. We were able to determine who logged in if their member record indicated an ISA change.

The pilot website was developed quickly and the User Interface (UI) was quite rough, so participants were asked to focus on the content of the experience rather than the ease or difficulty of the interface itself. Nevertheless, there was some difficulty with Apple ID that is not relevant to the user test, but may be relevant to implementation of the system. These issues will be addressed below.

For the vendor or "B" study we interviewed three Me2B staff members who participated in developing and integrating the pilot software, including Executive Director Lisa LeVasseur, Operations Director Andrea Ausland and developer George Vo.

4.1.4. Informed Consent
Each moderated walkthrough participant gave verbal consent to participate in this study. Prior to the start of the walkthrough, Ms. Whysel, the interviewer, and emailed a copy of the Me2B Alliance consent form. Then at the time of the interview, via videoconferencing, she showed the participant a written consent form (see Appendix B).

Participants indicated verbally that they had read the entire consent form, then the interviewer asked if they had any questions and if they agreed to participate in the study. If the interviewee consented, the audio-recording was initiated, and the interviewee was asked to state his or her name and to state, "I agree to participate in this study."
These audio recordings of participants' verbal consent were saved as separate audio files and are retained by study personnel. We offered to email a PDF of the consent form following the survey to all participants.

For the unmoderated test, we sent an email to the MAIN mailing list for Me2BA with a link to the consent form, which covered both the test and the survey. The survey consent form is in Appendix C.

4.1.5. Methods

This study was a mixed-method (qualitative and quantitative) study, utilizing an online, moderated walkthrough of the pilot test site, one-on-one interviews with both website users and developers who implemented the pilot site at the Me2BA. Those who participated in the pilot as a "Me" also completed an online survey

4.1.5.1. Qualitative Research

We conducted a moderated walkthrough of [MyMe2BAgent.org,](MyMe2BAgent.org) the pilot test website, with four members of the Me2BA over Zoom. Other members explored the pilot website on their own and completed a follow up survey describing their experience. Open ended questions gathered feedback and attitudes regarding the participants' experience using the agent.

4.1.5.1.1.Me-s Moderated User Test

We conducted moderated user tests via videoconferencing using Zoom software. Noreen Whysel conducted the tests, which were audio-recorded using Zoom. During the test, the participants logged into MyMe2BAgent.com and explored the site, which included a dashboard of their relationships, their saved profiles, and "Information Sharing Agreements" which contained the PISA. Four participants completed the moderated user test which lasted approximately 30 minutes. One of these participants, whom we will call P4, completed a moderated user test after having difficulty attempting to complete it alone. Since this participant's observed activity was after an initial self-trial and post-test survey, we decided to treat that observation separately from the other three and will note below when appropriate.

The purpose of moderated user test was to observe as participants used the MyMe2BAgent and get their feedback regarding the concept of a single platform for creating and sharing a legally binding ISA with a technology service provider. These tests were not intended to be usability tests of the system. In fact, the system was built quickly and did have some issues with login at the outset. Instead, the activity was meant to serve as a concept test of the value of a ISA platform.

The Interview Guide for Me-s (see Appendix C) was used to direct the conversation, though open-ended questions were not necessarily asked verbatim or in the order they appear in the guide. The interviewer(s) improvised questions as necessary to follow up with topics introduced by the participants.

4.1.5.1.2.B-s Interviews

We conducted interviews of Me2BA team members who integrated the MyMe2BAgent including MeBA's Executive Director, Lisa LeVasseur, and Director of Operations, Andrea Ausland, and a second interview with Me2BA Developer, George Vo. These interviews were conducted via videoconferencing using Zoom software. Noreen Whysel conducted the interviews. Each interview lasted approximately 60 minutes.

The purpose of open-ended interviewing was to understand the benefits and challenges of supporting the reception of the PISA, from the B's perspective.

The B-s Interview Guide (see Appendix D) was used to direct the conversation, though open-ended questions were not necessarily asked verbatim or in the order they appear in the guide. The interviewer improvised questions as necessary in order to follow up with topics introduced by the participants. A description of the MyMe2BAgent interface with screenshots is in Appendix E and a video walkthrough of the interface can be found here.

4.1.5.2. Quantitative Research – Online Survey

After both the moderated and unmoderated user tests, participants completed one of two Microsoft Forms surveys describing their experience. The two surveys, including one for moderated test participants and one for unmoderated test participants are copied in Appendices E and F. They contain open-ended questions about the experience exploring the MyMe2BAgent pilot website as well as questions about their attitudes and value of such a system.

Due to the small sample size (14) of total population of 78 Me2B Alliance members members, these data should be reviewed primarily as reflecting the attitudes of digital technology users who already have some interest in the Me2B ethos[8], and not as a statistically significant, quantitative study.

4.1.6. Data Analysis

Audio recordings and survey responses from the moderated sessions made up the bulk of data for this research. Audio recordings of the interviews were transcribed verbatim. In addition, the interviewer took extensive notes during each interview. The interview responses and recorded conversations are unstructured data comprised of factual statements, as well as opinions and other statements of sentiment or comparison. Indications of positive, neutral and negative sentiment orientation were noted as well as the

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[8] LeVasseur, L. (September 16, 2020). "Me2B 101: An Ethical Foundation for Respectful Technology." Video. https://me2ba.org/me2b-101-an-ethical-foundation-for-respectful-technology/

degree of confidence of the answers by analyzing response time (subjectively), statements such as "I think", "I'm not sure", "I don't know", etc. and incidents of wavering assertion.

Survey data from the survey projects were downloaded to a Microsoft Excel spreadsheet and analyzed to determine if there were any significant patterns. Demographic information was not recorded as it was irrelevant to such a small population of participants.

4.2. Validation Research Findings

We set out to answer the following questions:

For Me-s:

- Do people want the ability to send their own legally binding ISA to service providers?

- Do people want a data management dashboard for managing the personal information that gets shared with all service providers?

For the business (B):
- What was it like to integrate the ability to receive a personal privacy agreement? Is it scalable? Is it something you would want to support going forward?

4.2.1. User Test Findings

We sent an email to the Me2B Alliance's MAIN email discussion list, which goes to all members of the alliance who subscribed to the general discussion list on Groups.io. Participants representing typical digital consumers self-selected to participate in either a moderated test or an unmoderated test.

Before starting the pilot test, participants reviewed a brief description of the MyMe2BAgent pilot, explaining that it would give people the ability to send their own ISA to service providers, and that the agent includes a dashboard for managing their personal information that gets shared with service providers. The description cautioned that the PISA would be a legally-binding agreement should they sign and send it while exploring the website and that they were not obligated to sign it during the pilot test. In the moderated test, participants were reminded that they did not need to sign the PISA if they did not wish to do so.

Similar to the moderated pilot test, people who participated in unmoderated test received an email describing the MyMe2BAgent pilot. This email also indicated that participants did not need to sign the PISA, if they didn't want to create a binding agreement with Me2B Alliance.

4.2.1.1. The MyMe2BAgent Dashboard

All participants entered the MyMe2BAgent.org website into their browsers and explored the site. Moderated participants were asked to describe their actions and thoughts aloud as they were observed by the researcher. Both moderated and unmoderated participants received a follow-up survey after completing the test.
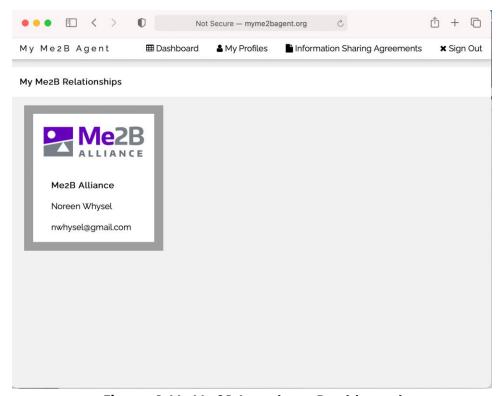

Figure 1 MyMe2BAgent.org Dashboard

4.2.1.2. Signing the PISA

The process for signing and sending the PISA to that technology provider, begins with the relationship card for a listed technology.

Figure 2 Pilot process for signing and sending a PISA

The process begins with an intention to sign the PISA. The user signals their intention by clicking on a relationship in the agent and then clicking the "Sign PISA" button. This opens a copy of the PISA along with a signature box that the individual can choose to sign. After signing, they then can send it by clicking the "Send PISA" button. This returns them to the updated relationship card.

For moderated participants, we noted actions we observed and comments and questions they had during each step. For unmoderated participants we were able to discern who had completed the signing process by the resulting change in their member records, but since we did not observe, we included questions about which actions they took in the post-test survey.

4.2.2. Moderated Test Findings

Four people participated in a recorded walkthrough of the pilot MyMe2BAgent website, observed by and in conversation with the researcher. During this Zoom session, the participants shared their screen and their actions on the website and their verbal comments were recorded to an audio and video file. The researcher requested that each participant speak aloud while using the pilot site.

4.2.2.1. Moderated Observation

The following sections outline the moderated participants' actions, expectations and understanding of the MyMe2BA Pilot. Ms. Whysel observed each moderated participant as they used the pilot website and requested that they speak aloud as they completed the task.

4.2.2.1.1. Actions

All four moderated test participants, including P4 who initially had difficulty in the self-test, were able to successfully enter and explore the website. This section outlines the actions each participant completed, observations about their use of the site and feedback given during the walkthrough.

Table 1: Summary of Actions

Action	Moderated
Logged In Successfully	*4 of 4*
Clicked "My Profiles"	*4 of 4*
Clicked Information Sharing Agreements Page	*4 of 4*
Clicked Me2BA Relationship Card	*4 of 4*
Edited Profile Info on Relationship Card	*4 of 4*
Clicked "Send PISA" Button	*4 of 4*
Clicked "Sign PISA" Button	*4 of 4*

All of the moderated participants clicked on the My Profiles page, the "Information Sharing Agreements" page and the Me2BA relationship card during the observation. All of the participants viewed the PISA on the "Information Sharing Agreements" page, and all signed and sent the agreement to the Me2BA.

4.2.2.1.2. Exploration and Expectations

In the moderated test, the participants described their expectations for the MyMe2BAgent site. Some of these expectations included the following:

- A "layered" ISA
- Multiple ISAs
- An intelligent ISA agent
- A trust mark

Participants noted that it was too confusing and intimidating to see the legal document without some plain language understanding of what it was and suggested a layered approach with plain-English on top followed by the legal document. They also said they expected to see more than one ISA, perhaps created by trusted third party like Consumer Reports. One expected to see some type of an intelligent agent that would say which agreement made the most sense for each relationship and make suggestions. A recognized trust mark would also be helpful.

One moderated participant expressed concern that the agent seemed to have a B-focused orientation.

4.2.2.1.3.Understanding
Each moderated participant said that they understood that the Me2BA card on the Dashboard page was linked to data that was related to that organization. They understood the profile data was their data which they had previously shared with the Me2BA.

Overall, the moderated participants' understanding of what the "Information Sharing Agreements" and "PISA" were was mixed. Most understood that the PISA was an agreement between themselves and the company, but one said very clearly that it was the "Me2B Alliance agreement."

One participant described the agent as follows: "It's evidence sent to both parties that the state changed. It's really like a big, state machine with status for your relationships with all these folks." They also noted that the way the site was designed seemed to be closer to a consent receipt system than a ISA management system.

Another participant, who noted that the PISA seemed to be written by Me2BA, clarified that the way the site was set up, it appeared the PISA was crafted by the organization/relationship that they selected in the dashboard and that they were only agreeing to that document and saving it in the dashboard. In other words, "a DocuSign type of process." Like another participant, they expected there would be more than one PISA to select from, which is indeed what a fully functional MyMe2BAgent would have. This indicates that the user interface for the pilot could have been designed to show more than one PISA to make it more clear to pilot participants that it was a document they selected to send to the technology relationship and not one waiting to be imposed on the user.

The first participant wasn't sure how the relationships ended up on the dashboard, whether they were autopopulated or needed to be added individually. This participant felt there should be a way to add more relationships or delete those that they no longer had a relationship with.

Another participant said: "One thing that occurs to me is there's a lot of sensitive information in this interface, and any browser is generally an untrusted environment …." This participant felt that a decentralized infrastructure could be implemented to secure this very sensitive information. "[T]his gets pretty close to what a lot of the folks in the decentralized identity and identity wallet and digital wallet world are trying to achieve, and think they have achieved. I don't think that's the case yet."

4.2.2.2. Post-Test Survey – Moderated Test

Three of the four moderated test participants completed the Post-Test Survey. The full survey is in Appendix F. Participants' answers and our insights are noted below along with any related insights from the observation.

4.2.2.2.1.Understanding and Expectations

We started by asking moderated participants to describe in their own words what MyMe2BAgent is and who it is for. The following were their responses:

Table 2: Please describe in your own words what MyMe2BAgent is and who it is for?

User Test	Responses
Moderated	"It's a user-centric data sharing agreement manager, representing a key component of user-to-digital-service relationships." "I would assume it is a software agent for recording data sharing agreements, and potentially more than that. It should be for individuals, but this early variant seemed to have more of a B orientation." "The Me2BAgent is for Consumers to manage their 'agreements' with a platform or app - anything that asks for your permission when you sign up with them."

Moderated test participants understood that the MyMe2BAgent is a platform for consumers to record and manage data sharing agreements. One wrote that the website was "user-centric" but another said that it "seemed to have more of a B orientation." This participant did see some potential in being more than just an ISA agent.

Table 3: Was the information and services in the MyMe2BAgent site what you expected to see?

User Test	Responses
Moderated	2 Yes 1 No

In the moderated test, two participants indicated that the information and services on the **MyMe2BAgent** site were what they expected to see, and one indicated that it was not what they expected.

Next, we asked all participants to describe what they had expected to see that was not there.

Table 4: Was there anything in the MyMe2BAgent site that you expected to see that was not there?

User Test	Responses
Moderated	"Key descriptive data on each relationship card (there was only one card to look at) that would help distinguish multiple ones, give an idea of trouble hotspots, and so on. Lots of opportunities for visualization techniques even at that level." "A layered data sharing agreement [that the] Me would countersign" after the B signs. "Option to use more than one email address. A way to search (search bar) through the agreements...[and] to be able to manage passwords...."

At least one participant was aware that the **Relationship Page** would eventually hold more than one relationship. Visualization on the card that summarizes each relationship would provide helpful information about what each relationship contained.

Another idea was to have a layered, data sharing agreement with a summary at the beginning, followed by the legal clauses. The participant who suggested this felt that the PISA did not appear to be written from the perspective of a Me, who is less likely to read long, legalese paragraphs. They also would like to have the ability to signal to a B the Me's willingness to share specific data for specific purposes under the agreement. It would then invite the organization to sign that agreement first, and then the Me would counter-sign. Another participant suggested that there should be a tool for searching through the agreements for specific content.

A participant suggested allowing the ability to assign more than one email address to each relationship. "It would be helpful to be able to manage passwords with this tool as well."

Table 5: In your own words, please describe what the PISA is, who created it and what it is for.

User Test	Responses
Moderated	"It's a template that encourages consistent expectations, (metaphorical) 'persistence of vision' in comparing different agreements, and

| | ultimately making user-centric and business-acceptable configuration (parameterization) possible."

"The one shown was a fairly standard, organization-oriented privacy policy written in legal language, and too long to assume a Me would read it, understand it, and thus be covered by it."

"Personal Info Sharing Agreement - at first I was uncertain what it was when I was in the form, I thought it was a placeholder for what it would look like to have the other agreements, but I understood it to be the master agreement to share with platforms/apps." |

We asked moderated survey participants to describe what the **PISA** is, who created it and what it is for. One called it a "Personal Information Sharing Agreement," and wrote that they were uncertain what it was at first, either a "placeholder" or "master" agreement but expected that there would be other agreements to choose from at some point.

One participant commented that the PISA was organization-oriented and too long to expect ordinary people to read and understand it. And because of the lack of understanding they could not be covered by it.

All three moderated survey participants indicated that they understood what it means to "Sign PISA". But only one of the three said they understood what it meant to "Send PISA." This is a user interface issue but mapping appropriate language to the action where a commitment is made is important for clarity and understanding.

4.2.2.2.2.Value of a Me2B Agent

Table 6: How important is it to you to have a single dashboard to manage the information that you share with your service providers? (Mark level of importance where 1 is Not at all Important and 5 is Extremely Important)

Rating	Responses
1	0
2	0
3	1
4	1
5	1

In the moderated post-test survey, we asked participants how important it is to have a **Single Dashboard** to manage the information that they share with their service providers. They could mark levels of importance from 1-Not at all Important to 5-Extremely Important. Of the three responses the average level of importance of a single dashboard to manage the information that you share with your service providers was rated a 4, with one response each for 3, 4 and 5.

Table 7: Please explain your rating of the importance of having a single dashboard for your ISAs.

User Test	Responses
Moderated	"I think it's important to be able to fully exercise my rights with respect to data sharing. That's my '1/4-inch hole.' I can imagine multiple ways to do it. I'm an organized person and would normally, carefully save copies of all agreements I enter into (so that's one '1/4-inch drill bit'); the current model with digital services doesn't make that particularly practical and I've gotten used to it. This tool holds out the possibility of not just executing and recording them but modifying them individually, which is something way beyond what I can typically do now. So some of the value is theoretical, but tantalizing. (Note: I would not have called this a dashboard to manage 'the information that I share' as it doesn't see the actual information I share. It would be nice if we're co-located with something that did that, though.)" "The agreements themselves are of little importance to most Me's; it is what they enable or prevent that is important." "I think it is important to know what I am sharing to an extent, but uncertain about keeping it in a single location."

The responses to why a dashboard for managing your ISAs would be important ranged from the need to fully exercise one's rights to the ability to modify an agreement individually to having a way to know what they are sharing with technology providers. They also indicated some skepticism around whether the "single dashboard" is sufficient.

Table 8: How important is it to you to is the ISA sending capability? (Mark level of importance where 1 is Not at all Important and 5 is Extremely Important)

Rating	Responses
1	0

2	1
2	1
3	2
4	0
5	0

In the post-test survey, for moderated participants, we asked how important it is to have an **ISA Sending Capability**. Participants could mark levels of importance from *1-Not at all Important* to *5-Extremely Important*. Out of three responses the average rating of the importance of the ISA sending capability was 2.7. This capability was seen as less important than the dashboard itself. Open-ended comments indicate why:

Table 9: Please explain your rating of the importance an ISA sending capability.

User Test	Responses
Moderated	"I am uncertain - I thought that the tool collected the agreements and held them from the other platforms." "'point to' is likely far more important and useful than 'send'; point to would work like Creative Commons." "If its receipt is non-repudiable once sent, and if the agreement reflects true (nontrivial/not just a given) choice, then it would really mean something to be able to deliver it."

In describing their lower ratings of the importance of the ISA sending capability, all three expressed some concern that the presented solution was not quite right. One participant indicated uncertainty directly, stating that their understanding of the tool was that it simply collected agreements from the other platforms. This could be because only one agreement was available in the pilot test. If there were additional agreements with the layered information suggested above describing the agreements in plain language it could be received better.

Another participant also expressed concern that the agreement might be rejected by the technology provider but indicated that if the provider were not able to repudiate the agreement and the individual has "true choice" it would be meaningful.

The participant who rated ISA sending capability lowest (2) wrote that pointing to the agreement rather than sending it is already a practice in Creative Commons licenses and

could be a better solution than "Sending". This also illustrates potential language issues in description of the steps and the process with appropriate terminology.

Table 10: If this were available for all of your current online service providers, would you use it? Why or why not?

User Test	Responses
Moderated	"Yes, I would use it - would be interesting to see all the providers that I have shared/ accepted agreements with. And could then easily rescind." "No, not in its current form with the B-centric data sharing agreement being the primary problem." "If I become an empowered legal party through it by getting to 'negotiate' some aspects, possibly yes. If enforcement of the terms is somehow monitored, stronger yes. Note that it would effectively be 'yet another digital service' in its current form, requiring a login, probably an agreement of its own, and the consequences of exposing to that service the fact of the other services I use. Probably also eventually downloading an app. :) If it provides significant value, none of that is a barrier."

The moderated test group differed on whether they would use an ISA-sending dashboard that is similar to the pilot MyMe2BAgent for all their current online service providers. One wrote that they would, one wrote that they wouldn't, and one effectively responded with Maybe. The participant who said they would use the tool wrote that it would be interesting to see all the agreements they had with technology providers and liked the idea of being able to rescind them. The one who said "No" felt that the PISA was still oriented toward the business' needs rather than the consumer's needs.

The third response, "possibly yes," indicated that they would need to be assured that enforcement of the terms would be monitored. They also cautioned that the agent itself is yet another service that could communicate with any other tool they use so it would require an ISA of its own.

Finally, the moderated post-test survey asked how the agent could be made more useful.

**Table 11: What would the MyMe2BAgent need to do
in order to be more useful to you?"**

User Test	Responses
Moderated	"I would use it, then likely forget that I had it. But find it useful when I went back and could easily view, manage and end giving my permission/ agreement." "Be a control panel for actual data sharing and purposes. The agreement themselves is just an attribute of the sharing and purposes." "Hints appear above and in my pilot usage!"

Knowing it was available would be important to effective and repeated use. If the agent served as a Control panel for actual data sharing and purposes," as one participant said, then it would have value. This participant felt that control was more important than the agreement, which is "just an attribute" of the process.

4.2.3. Unmoderated Test Findings

Based on signin information available in the Me2BA member database, we were able to determine that 15 people signed into the MyMe2BAgent.org website. We eliminated four due to their significant role in research and development for the MyMe2BAgent. Of the remaining 11 members, four participated in the moderated test and seven were unmoderated, having visited the website unobserved.

4.2.3.1. Post-Test Survey – Unmoderated Test

Based on database activity and one self report, we know that at least eleven people completed the unmoderated pilot test. We asked these partipants asked to complete a post-test survey after their trial, and seven completed the survey. One participant self-reported that they were not able to log in. There may have been others. Given the low number of participants in a total population of 73 Me2BA members, this is not a statistically significant sample, but it provides insight about the activity, expectations and understanding of the study group.

On the post-test survey, the unmoderated group answered questions regarding their click behavior, expectations, comprehesion and value feedback about the MyMe2BAgent pilot site. The survey questions are in Appendix G and were similar to the questions in the moderated participant after-test survey, except that unmoderated participants were also asked if they clicked on certain parts of the site as this detail is not apparent when the test is not observed and recorded.

One of the unmoderated survey participants (P4) completed the unmoderated post-test survey, then reached out to the research team and agreed to participate in an moderated test. In the findings below, we highlighted the survey answers from P4, who was not able to log in and, where relevant, provided insight from the subsequent interview. Since this participant subsequently completed a moderated test, P4's moderated activity is described in the Moderated Test Findings section above.

4.2.3.1.1.Actions

Below is a list of questions about the participant's click behavior on the pilot website. We wanted to know whether the unmoderated participants clicked through to the area of the site so that we could confirm that their anwers regarding that part of the website were based on actual behavior and exploration of those pages rather than their own conjecture.

Table 12: Summary of Actions

Action	Unmoderated
Logged In Successfully	6 of 7
Clicked "My Profiles"	6 of 7
Clicked "Information Sharing Agreements" Page	6 of 7
Clicked Me2BA Card	6 of 7
Edited Profile Info on Relationship Card	2 of 7
Clicked "Sign PISA" Button	6 of 7

All unmoderated survey participants indicated that they were able to log into the MyMe2BAgent.org website, except one (P4), who subsequently completed a moderated test. One person who completed the unmoderated survey initially emailed to say that they were not able to access the site. Based on the error code, this participant was having the same Apple ID private relay issue that P4 had, but was able to overcome the difficulty and complete the unmoderated test and the post-test survey without further assistance.

All unmoderated participants (except P4) clicked on the My Profiles page, the "Information Sharing Agreements" page and the Me2BA Relationship card on the dashboard during the self-trial. Since they all clicked the ISA page, we can infer that these participants had the chance to view the PISA on that page, but since we didn't measure the time each participant spent on page it is unclear if any of these participants had a chance to read it completely.

Two of the seven unmoderated participants who were able to log in indicated that they edited their information on the Me2BA relationship page. And all six of the unmoderated participants who were able to log in clicked on the on the "Sign PISA" button.

4.2.3.1.2.Understanding and Expectations

We asked the unmoderated test participants to describe in their own words what they saw when they used the **MyMe2BAgent**. This question helps us understand if each participant was able to get past the login to the MyM2BAgent interface.

Table 13: Please describe in your own words what you saw
when you used MyMe2BAgent?

User Test	Responses
Unmoderated	"The error message above" (P4) "A simple page that said I had a relationship with the Me2B Alliance as myself with my main email address.... My understanding is that all of these [Dashboard, My Profiles, Information Sharing Agreements] are spaces that can have more relationships, information in the Dashboard, Profiles and agreements." "Dashboard with Me2BA logo & my info. Also menu bar with options" "Choice to login or use Apple ID. Used Apple ID. Logo full size (filled much of upper screen) square (Alliance Card?) w/my name and the Me2B association splash plate/button listing my ▮▮▮▮▮▮▮* email (not same as Apple ID) Filled out info. Sent PISA iPhone / Firefox." "A relatively smooth user experience with very few hiccups, also pretty easy to understand." "A 'Dashboard' tab that shows my Me2B relationships, a 'My Profiles' tab that displays my personal and professional information, an "'Information Sharing Agreements' tab that shows the PISA, and a sign out option." "I saw my own account that I had to click on."

*Identifying information has been redacted and will appear as a black line.

Four of the unmoderated participants described either the Apple login box or the MyMe2BAgent dashboard with the Me2BA card and global navigation. P4, who was not able to log in, described the error message. One participant called it "A relatively smooth user experience with very few hiccups, also pretty easy to understand." One called it "simple" and one said that they recognized that the dashboard eventually could have more than one relationship.

**Table 14: Was the information and services in the MyMe2BAgent
site what you expected to see?**

User Test	Responses
Unmoderated	3 Yes 3 No (including P4) 1 Blank

As in the moderated test, unmoderated participants were similarly split about whether the **MyMe2BAgent** was what they expected to see, with three indicating that it was as expected and three indicating it was not. One of the unmoderated participant left the answer blank. We asked the participants to describe what they had expected to see.

**Table 15: Was there anything in the MyMe2BAgent site that
you expected to see that was not there?**

User Test	Responses
Unmoderated	"Everything" "Not really. This is a good start toward a proof of concept." "Don't know how to answer #4 above b/c I did not have expectations - did not know what to expect. " "The hamburger upper right was not populated or responsive but I believe that is to be expected at this point? " "Having been absent for so much of the ▮▮▮▮▮▮▮ it's hard for me to respond. I really didn't know what to expect." "Not really because I didn't know what to expect going into the agent."

From the answers to this question it seems that none of the unmoderated participants had any real expectations for what would appear on the MyMe2BAgent website. One person did describe it as a "good start toward a proof of concept" and one focused on a small detail of the user interface. The other two simply didn't know what to expect. (One of the comments above was redacted since the comment contained potentially identifiable information).

Table 16: The Dashboard page lists relationships that you have in the MyMe2BAgent. Did you click on the Me2B Alliance card?

User Test	Responses
Unmoderated	6 Yes 1 No (P4)

All six unmoderated participants who were able to log in clicked on the **Me2B Alliance Relationship** page. The only partcipant who said they did not click on it was P4, the one who could not log in. This participant did click the card during the subsequent, moderated test and their reaction is included in the Moderated Test findings above.

Table 17: What did you expect to see on the Me2B Alliance relationship page? What was missing?

User Test	Responses
Unmoderated	"nothing/everything" (P4) "A possible way to edit that after I signed and sent the PISA. But I understand that that shouldn't be edited." "Not certain I know the page you're referring to but I felt that what I was asked was in line with the minimalist build/philosophy of the org." "??? I suspect it would have been companies that I've shared data with or pushed an agreement to."

The survey asked what the participants expected to see. Two left the question blank, three seemed uncertain or mixed, and one indicated that it was not as expected. What appeared to be missing was a way to edit the PISA after signing, for example changing from the PISA back to the original ISA. The participant who left the previous question blank expressed confusion, but guessed correctly that it is a list of companies that they might have sent an agreement.

Table 18: Did you edit your information on the Me2B Alliance relationship page?

User Test	Responses
Unmoderated	2 Yes 5 No (including P4)

Only two unmoderated participants confirmed that they edited their profile information on the Me2B Alliance relationship page.

Table 19: Was the information on the Profile page what you expected to see?
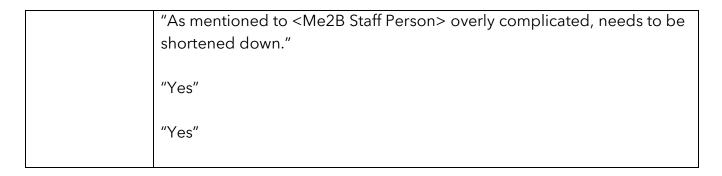
User Test	Responses
Unmoderated	5 Yes 2 No

Table 20: If not, what did you expect to see and what was missing?

User Test	Responses
Unmoderated	"? seemed in order as to a basic start" "This is likely due to my being a layperson when it comes to technology and data-sharing, but I figured that the data profiles would include such information as age/birthdate, address, gender, and the like. That said, I'm glad that the only information that is included is my name and email address."

All unmoderated test participants (except P4) indicated that the **My Profile** page was as expected. Two partipants answered the question asking what they expected to see on the My Profile page. One wrote that it "seemed in order as to a basic start" but led the response with a question mark indicating that they weren't sure either what to expect. The other wrote that as a technology and data sharing "layperson," they didn't know what to expect but were happy to see that the data only included a name and email address as opposed to other personally identifiable information.

Table 21: Was the information on the Information Sharing Agreements page what you expected to see?

User Test	Responses
Unmoderated	"nope" (P4) "Something like a sample PISA." "The PISA is relatively straightforward but I didn't know how to sign it b/c I didn't know WHAT the end goal was - in other words, WHAT am I doing that justifies sharing my info." "Pretty much"

	"As mentioned to <Me2B Staff Person> overly complicated, needs to be shortened down."

"Yes"

"Yes" |

Six unmoderated participants clicked on the **Information Sharing Agreements** page. All of these participants wrote that it was as they expected it to be. One expected it to contain "Something like a sample PISA." One particpant wrote that "The PISA is relatively straightforward," but wasn't sure if the end goal justifies sharing their information. Another wrote that the PISA is "overly complicated" and should be shortened.

Table 22: If not, what did you expect to see and what was missing?

User Test	Responses
Unmoderated	*"Everything" (P4)*

"I really need more context and description - what is my ultimate goal here?"

"na"

"N/A" |

One participant who indicated that the ISA page was not what they expected to see wrote that they would need more context around what their ultimate goal with the agent is. Given that the pilot invitation and the consent form outlined what the agent is it appears there needs to be more information about the context for using such an agent.

Table 23: Did You Notice/Understand the "Sign PISA" Button?

User Test	Noticed "Sign PISA" Button	Understands "Sign PISA" Meaning
Unmoderated	5 Yes
1 No (P4)
1 Blank	5 Yes
2 No (including P4)

The survey asked whether the unmoderated particpants noticed the "Sign PISA" button on the relationship page and whether they understood what it means to "Sign PISA." Five participants noticed the Sign PISA button and all of them indicated that they understand what it means. (P4 did not notice or sign the "Sign PISA" button during the unmoderated test since they were not able to log in).

We found that some of the participants had difficulty with identifying what part of the process they were in based on the label terminology for the Sign and Send functions. While it was not our intention to test the user interface, the confusion gave us some insights on whether participants understood the underlying processes involved in delivering a signed ISA to a technology provider through the agent.
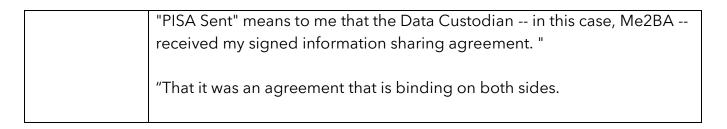
Table 24: Did You Notice/Understand the "Send PISA" Button?

User Test	Noticed "Send PISA" Button	Understands "Send PISA" Meaning
Unmoderated	5 Yes 2 No (including P4)	6 Yes 1 No

The survey asked whether the unmoderated participants noticed the "Send PISA" button on the "Sign PISA" page and whether they understood what it means to "Send PISA." Five participants noticed the "Send PISA" button, and six including one that didn't notice it indicated that they understand what "Send PISA" means. (P4, who could not log in, did not notice nor click the "Send PISA" button).

Table 25: After you clicked Sign PISA there is a notice that says "PISA Sent." What does "PISA Sent" mean to you?

User Test	Representative Quotes
Unmoderated	"It meant that the Me2B Alliance and I had the same agreement. " "Sent somewhere - not sure where. I signed it btw in order to see if anything in the dashboard changes afterwards. But the biggest thing is - I didn't know WHY I was signing it. Hard to make a decision when you don't know the goal." "The info is in the hands of the relationship record." "I would think what is sent on my terms of a relationship."

	"PISA Sent" means to me that the Data Custodian -- in this case, Me2BA -- received my signed information sharing agreement. " "That it was an agreement that is binding on both sides.

Only two of the unmoderated participants fully understood that "Send PISA" meant they sent their agreement to the relationship establishing a mutual relationship, using the phrases "same agreement" and "binding on both sides." One participant wrote that the information is "in the hands of the relationship record" which is unclear. It could mean the technology company's record but it also could mean the record on their own agent dashboard. One wrote that it means they sent their terms for the relationship. Still, this does not necessarily imply they understood that they now had an agreement with the company for that relationship.

Another participant indicated that they are not sure where it was sent. They noted that they signed it primarily to see if the dashboard changes, possibly expecting confirmation details of what exactly happened. This particpant did not know why they were signing it and wrote that it is "hard to make a decision when you don't know the goal."

4.2.3.1.3. Value of a Me2B Agent

Table 26: How important is it to you to have a single dashboard to manage the information that you share with your service providers? (Mark level of importance where 1 is Not at all Important and 5 is Extremely Important)

Rating	Responses
1	0
2	0
3	1
4	2
5	3

In the unmoderated post-test survey, we asked participants how important it is to have a **Single Dashboard** to manage the information that they share with their service providers. They could mark levels of importance from 1-Not at all Important to 5-Extremely Important. Of six responses the average level of importance of a single dashboard to manage the information that you share with your service providers was 4.3, with three responses rating it a 5, two rating it a 4 and one rating it a 3. This implies that this group of participants has a high level of importance for a single dashboard for managing these relationships.

P4 participant left this answer blank, but in the following question indicated that a single dashboard had "Zero" importance. If we add back this response as a "1-Not at All Important" the average is 3.9, still above the middle rating.

Table 27: Please explain your rating of the importance of having a single dashboard for your ISAs.

User Test	Responses
Unmoderated	"Zero" (P4)
	"I think it's important to have a way to control that stuff."
	"I think it would be cool to have this - but first I would need to understand the levels of sharing available to me, and then consider what context those different levels would apply in, and then consider how often there would be variability. In other words - if I always shared at the same level, then a dashboard isn't really needed. It's only needed if I share at different levels with different groups - and that tbh is unlikely and sounds like a burden to have to manage. It's like creating a different password for each interaction - I'd want a password manager... "
	"Panopticons are pretty cool for lots of reasons if the central view isn't at a cost unexpectedly high or surprising! "
	"Like any application, an easy-to-use intuitive dashboard is paramount to keeping individuals engaged on a regular basis. While some may think this application is a set it and forget it, it really isn't, especially when your personal data is in motion and not at rest."
	"I appreciate the ease and accessibility of having one dashboard to manage the output of my information, especially as a tech layperson. I am much less likely to manage this information if it is located on several different platforms. When talking to people about the kinds of information that tech companies receive about us, it's my impression that not only have many of us accepted/resigned to the idea that tech companies know everything about us -- but to the extent that we can manage our data output, it would require too much effort for any layperson to manage. I think that having a single dashboard for ISAs is one way to subvert this layperson's narrative."
	"It was not very important"

The responses to why a dashboard for managing your ISAs would be important ranged from the need to control access to personal data to the importance of an easy-to-use interface. Simplicity would also need to be important to encourage people to use it frequently, which would be important as "your personal data is in motion and not at rest." One participant wrote, "I am much less likely to manage this information if it is located on several different platforms," and noted that managing our own data output is more than any layperson would care to manage. They continued to write that "...having a single dashboard for ISAs is one way to subvert this layperson's narrative." A comment on "panopticons" may have been tongue in cheek but appears to reference being able to surveil how companies use one's data as opposed to always being the subject of surveillance. This response also indicated the need for the dashboard to be low cost and predictable.

Two participants did not feel that the single dashboard was important.

Table 28: How important is it to you to is the ISA sending capability? (Mark level of importance where 1 is Not at all Important and 5 is Extremely Important

Rating	Responses
1	1
2	0
3	3
4	0
5	3

In the post-test survey, for unmoderated participants, we asked how important it is to have an **ISA Sending Capability**. Participants could mark levels of importance from *1-Not at all Important* to *5-Extremely Important*. The results were mixed with one rating it 1, three rating it 3 and three rating it 5, for an average rating of 3.6. Open-ended comments reflect these responses.

Table 29: Please explain your rating of the importance an ISA sending capability.

User Test	Responses
Moderated	"couldn't do it" (P4, rated it 1) "I honestly don't know. I certainly don't want to have to figure out how to send it. But whether the dashboard does that - or the org I'm signing with - is sort of irrelevant" (rated it 3)

	"For me it's all about adherence from the receiving party just because I send an information sharing agreement I really don't have any way of knowing if it will be adhered to." (rated it 3) "One should have the sense that an agreement goes somewhere both parties have it and can visit it later. This system does not convey that, especially, but it points in that direction." (rated it 5) "Information Sharing Agreement right? Fundamental to knowing what/where I do is going and how used." (rated it 5) "For me it's all about adherence from the receiving party just because I send an information sharing agreement I really don't have any way of knowing if it will be adhered to." "Assuming I have a proper understanding of ISA sending, it's a necessary function of the agent because how else might the Data Custodian receive the contract?"

In describing their ratings of the importance of the ISA sending capability, the unmoderated participants who rated it a 3 expressed skepticism that it would either be difficult to figure out how to send it or impossible to know if the organization they shared it with will adhere to it: "[J] just because I send an information sharing agreement I really don't have any way of knowing if it will be adhered to." The same might be said of any agreement that a person signs that the technology company gives them whether it is a PISA or the company's contract.

Those who rated it 5 wrote that it is good to have a place to return to so they can read and understand what is in it and how it is used. Two also noted that it would be good if both parties could return to this dashboard to confirm an agreement has taken place. One of these participants suggested that there may be room for improvement in this regard.

Table 30: If this were available for all of your current online service providers, would you use it? Why or why not?

User Test	Responses
Unmoderated	Yes 5 No 2 (includes P4)

The unmoderated test group leaned toward the concept of using an ISA-sending dashboard like the pilot MyMe2BAgent for all their current online service providers. Five wrote Yes and two (including P4) wrote No.

Table 31: Explain why or why not.

User Test	Responses
	"Single honey pot" (P4, No)
	"I say yes to it being available to those providers as a new Me2B (aka VRM) instrument under the individual's control, and not something each of them have that's like their current icky "consent" systems. By the way, talk to Nitin Badjatia about how willing SAP might be to get involved in helping this work from the CRM side." (Yes)
	"There is not a MAYBE option - it really depends. But I think the most likely reason is that its (1) one more thing to deal with and (2) I would likely set all ISA's on the same level so won't need a dashboard to monitor " (No)
	"Secure one stop management is a holy grail thing." (Yes)
	"This one would really depend on your definition of a service provider I think the question needs to be a little deeper regarding the definition of a service provider does that include apps does it include infrastructure what's the real meaning of service provider." (Yes)
	"It's important that everyday people are aware of and in control of their data output. This agent appears to make that very possible and very painless." (Yes)
	"It would just depend on the provider." (Yes)

One of the unmoderated participants who wrote "Yes," they would use the tool indicated and that it would be preferable to the "icky" consent systems that are currently in use. Two others said it depends on the definition of a service provider, suggesting that these agreements could be used to cover more than just the app but also the underlying infrastructure that the system runs on. One said, "It's important that everyday people are aware of and in control of their data output. This agent appears to make that very possible and very painless."

P4 who did not use this type of dashboard said that it was a "single honey pot," indicating some concerns that there could be security issues in keeping all of one's agreements in one place. Another qualified their "No" response as a "Maybe," stating that people may not want to have yet another thing to manage and that they (the survey participant) personally would want to set all ISAs to the same level and therefore wouldn't need a dashboard to monitor it.

For the last question in the unmoderated post-test survey, we asked how the agent could be made more useful.

Table 32: What would the MyMe2BAgent need to do in order to be more useful to you?"

User Test	Responses
Unoderated	"not sure " "Be an app on the home page of my phone and the home screen of my computer, and something I can use and go to easily whenever I need to." "The UI is good. More context is needed. And WHY do I need this added responsibility?" "Not sure at the moment…" "A true enter and agent would be able to not only understand what data I share but the ebbing and flowing of that data once I've shared it. It should also adhere to the GDPR and others from a jurisdictional perspective." "I'm assuming much of this will be included once it's commercial-ready, but the agent would be more useful to me if it had specificity on what sending PISA means, an information tab explaining what the agent is and how to use it effectively, and a blurb on each tab that states what the page is for - even if it seems redundant - to make it abundantly clear for users." "Better UI."

For the agent to be more useful, participants suggested making it very accessible such as putting the app icon on their home screen; having more details on what Send PISA means; including information about the context for what they termed "added responsibility" (which was a theme that runs through the previous responses) and then having a picture of how the data flows through the system once they share it; and how and whether it is adhering to

jurisdictional requirements, such as GDPR and CCPA. One mentioned "Better UI." Of course, this is an issue but as noted, this wasn't something we had time to get perfect for this test.

4.2.4. B-s Interview Findings

We invited Me2BA staff members to discuss their experience of modifying their IT systems to support an individual proffered privacy policy. The findings will give a view of what needs, questions and problems a company might encounter when deploying a system that allows users to choose and send their own, legally binding PISA. Those who participated in these interviews included Executive Director, Lisa LeVasseur, Director of Operations, Andrea Ausland, and Developer, George Vo. Ms. LeVasseur and Ms. Ausland participated in the first interview to discuss decision-making process and a separate interview with Mr. Vo focused on the technical development aspects of the implementation. (Note that integration of this capability in the future would NOT require the kind of development that was required in this prototype. Instead, off the shelf technology would be integrated into a company's IT infrastructure.)

The framework of the interview followed a modified structure for technology implementation interviews introduced in *Control Engineering* by Lindsey Kielmeyer.[9] It covers questions on the use case for the MyMe2BAgent, Underlying data and processes, implementation and required training.

4.2.4.1. Use Case

The overall goal for the MyMe2BAgent pilot was to institute the practice of allowing technology users, in this case Me2BA members, to select and send their own legally-binding PISA to the Me2BA. We discussed the use case for allowing this process.

Describe what MyMe2BAgent is and what isn't. What needs or pain points does it address?

The objective, said Ms LeVasseur, is a machine readable, personal privacy policy. We asked what need is being filled by completing the project. Ms. LeVasseur mentioned two potential reasons why an entity like a business or other entity ("B-s" in Me2BA parlance) might wish to allow people to send a personal information sharing agreement. First, the B may simply wish to show that they care about their customers' autonomy. The second reason might be compliance with eventual regulations. "The heart of the problem with surveilance capitalism is that there are no pain points [for B-s]. Only compliance with regulations," she said.

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[9]Kielmeyer, K. (April 5, 2019). Ask 11 questions to simplify system integration.Control Engineering. Web.
https://www.controleng.com/articles/ask-11-questions-to-simplify-system-integration/

Who does this affect? Which B-s will adopt this?

When asked, "Which types of companies will adopt apersonal privacy policy system?" LeVasseur suggested that B-s that want to go the extra mile and give customers more autonomy and control will want this. She said that "It will never be a free for all," noting that most likely the agreements that consumers will be able to choose would be one that is created by a trusted organization like the Electronic Frontier Foundation, ACLU, or Customer Commons. A major question for B-s is how to ensure that they can comply with the requests, since it would be difficult to scale for individualized ISAs.

Another issue is that because the system would support only the collection of ISAs that a B will accept, it would require different business processes and IT system behavior for each agreement. This could be a barrier to adoption by B-s. See Appendix A.

The agent could change over time as to adapt to maturing technology, business practices and infrastructure. "Deployment is the first step," LeVasseur said. "And on the other side, auditing and monitoring processes would need to be developed to ensure that these agreements are being followed."

4.2.4.2. Data and Processes

LeVasseur described the Process for implementing the pilot as follows:

- Modified version of JLINC Standard Informaiton Sharing Agreement (SISA), see Appendix A
- Sent to lawyer for redlining
- Finalize PISA
- George [Vo] built the tool
    - High level requirements and data flows,
    - Wireframes
    - Implementation
    - Testing
    - Deployment

What format is the profile data and ISA sorted or sent as?
Where does the data live and how will it be accessed?

We turned to discussing the data format that the profile data and ISA is sent as. LeVasseur said, "Sending the agreement is separate from the data connection." On the B side, the agent is not reading the agreement, only noting which one it is. The profile info comes from what the B already has on the consumer. In the case of the Me2BA, this is the member record in SalesForce. The relationship card for Me2BA would only contain the subset of

profile data that is related to the ISA.

What does the B-side interface look like?

Implementing the agent required changes to the Me2BA SalesForce member database, so that the member record can point to the PISA that a member sent to it. Me2BA added a checkbox to the member record to indicate that the PISA was sent. It would be possible to Implement the ISA text into a record, Vo said, but "since Me2BA only used one PISA, we opted to only implement the checkbox." For the pilot we did not include a way for the member to remove the PISA either via the agent or the member record.

Who manages the PISAs the B receives?

Whoever is assigned to managing the Relationship Manager admin portal would manage the received PISAs. For Me2BA, indication of a mutually signed PISA is automatically stored in the SalesForce database, which is managed by Ms. Ausland, the Director of Operations.

4.2.4.3. Supporting PISAs
Who's Responsible for IT to Support Receiving PISAs?

Normally, we would expect an IT procurement team to vet and select the Relationship Manager platform, and the IT department would be responsible for integration and support. At Me2BA, the combined team of Ms. LeVasseur, Ms. Ausland , and Mr. Vo collaborated to build and deploy the Relationship Manager.

Other roles would be important, in particular, the B's Chief counsel. "We may be grossly underestimating what legal counsel's influence is," said LeVasseur. A sizable portion of the budget for this project went into to producing the PISA, which was built off an existing JLINC Standard Information Sharing Agreement. First Ms. LeVasseur and Ms. Ausland edited the document, ensuring what the Me2BA business practices and IT systems could support.

The lawyer was unfamiliar with the concept of allowing a user to select their own ISA, so Ms. LeVasseur had to explain to him what it is: "Pretend it's a reverse EULA." Then he edited and sanitized it for Me2B Alliance, from a legal perspective.

Other roles that might manage or instigate a Relationship Manager platform include the Chief Marketing Officer (CMO), Chief Executive Officer (CEO) or Chief Product Officer (CPO).

Did you have all the information (drawings, programs, standards, etc.) needed to implement MyMe2BAgent? What did you need to get that you didn't have?

Yes. The MyMe2BAgent required linking to an existing database/CRM via an existing Salesforce API. No additional programs or tools were required to implement.

What did you know about your existing systems? Was any technology obsolete or no longer supported?

The SalesForce platform had a set of APIs that connected the MyMe2BAgent to member data needed to support the agent. The only thing they needed to add to the member record was a field (checkbox) indicating that the member sent the mutually signed PISA via the MyMe2BAgent. There was nothing that was obsolete or no longer supported and it appears that a similar SalesForce database would not have additonal requirements.

Was everyone on the integration team in agreement on assumptions being made concerning the project?

This question elicited a strong reaction. LeVasseur said "This [agent] is so bizarre, so out of the norm. There is a substantial onboarding of what are we even doing." In particular, educating legal counsel took many hours.

Vo said that his assumptions about the implementation evolved as the project went forward. He said, "We weren't sure where it was going to go in the beginning. There was some talk of either expanding it or using it as a benefit for Me2BA members. But closer to the end it was more just a test to see how people would react to it." Indeed, design decisions such as using Apple ID for login reflect the original intention to keep this service up even after the pilot project.

What are all the deliverables in the implementation package the B should expect?

Custom integration would include a plug-in(s) for the backend system. For example, MyMe2BAgent currently only integrates with SalesForce. Other CRMs would likely need customization to existing APIs to read/write the new PISA status/information into the system.

What quality controls measures are in place?

This was a very small pilot and we were able to address any problems like login difficulties very quickly. In practice, quality control and monitoring measures will need to be architected to ensure that the ISA recorded in the system is the same one that the Me chose. Additionally, notification and receipt of any changes would be important to both the Me and the B.

There is also the question of whether a person can change the agreement, either deliberately or inadvertently. Would the B get notification that the terms of their agreement have changed?

To resolve this, there would need to be a historical tracking system that maps the states before, during and after a PISA is sent to ensure that the B is complying with the PISA. There would also need to be a third-party auditing process that recognizes changes to the ISA that happen while they are processing a request.

What would you tell someone who is thinking of implementing this from a technical standpoint?

Vo said that teams considering implementing a personal privacy policy system should be prepared to deal with the potential ramifications of changes to the database that could affect user authentication into their systems. "If people are allowed to play around with their identity, he said, "it could allow the users to completely change their contact information making it difficult to reach them in the future." For example, someone changing their email to one that they don't check or have access to. IT teams may also need to integrate the system with user authentication processes.

Scalability was an open question, so Mr. Vo didn't want to assume that another entity would be using SalesForce, necessarily. It is possible that the agent design could be expanded to include multiple types of database systems, but this would involve compatibility issues. A lot of the backend algorithms in the current agent design were specific to SalesForce.

In any case it should not be noticeable what the underlying system is to the individual. It should be seamless.

Was there anything that you would have done differently?

This was Mr. Vo's first project building a web app like this so he said he would have appreciated some experience before diving in. Me2BA had originally intended to build a system where a user could create an identity profile for multiple business relationships. When he was wireframing the UX, scalability was what he had in mind. The pilot software UX design supported multiple relationships, but it was not supported in the working prototype and the the Me2B Alliance relationship was hardcoded as the only available B in the system.

4.2.4.4. Training
How much experience does the B have with the technology being used?

Relationship management and the reception of user-proffered privacy agreements is novel and unusual to all current service providers. No service provider will have implemented this type of service. They will most likely, though, have implemented a consent management platform, which may not typically connect with vendor customer databases.

How much training was required?

As for the SalesForce instalation, Ms. Ausland said the APIs were tricky. Most were standard, but some were nonstandard and required some learning to understand. If someone were implementing it on a system that is not a SalesForce platform there likely would be additional training. Otherwise, Vo said they would need training on the ISA and Me2B vocabulary and general programming skills. These could be included in the technical documentation.

4.3. Validation Research Insights

In this study, we focused our insights on perceptions of value of the ISA sending capability of the relationship manager of Me-s and the value and usefulness for integrating and managing such as system for Bs. We avoided drawing conclusions about the design of the pilot website, though there were findings that we compiled in Appendix X, for those who may be interested.

4.3.1. Insights from Me-s

In our Interviews and surveys with Me-s, we discussed whether they would value and use a relationship manager system like MyMe2BAgent.

4.3.1.1. Perceived Value of ISA Sending Capability

The study participants had few expectations for the website prior to using it, so their perception of the value of the ISA sending capability was based on a rather novel experience. Participants rated the importance of the ISA sending capability rather low, with moderated participants averaging 2.7 and unmoderated participants averaging 3.6. Part of this stems from an incomplete understanding of whether they actually sent the ISA to the relationship in the first place and whether the ISA was not binding on both sides and uncertainty about who authored the ISA. It was also unclear that the technology provider would accept the PISA, if it did not originate from them. Otherwise, it seemed to be "pointing to" rather than "sending" the agreement. In fact, in the database, this is exactly what happens. A checkbox for the PISA flips on.

The key requirements were the ability to edit or revoke the agreement and to have additional, Me-oriented ISA choices. A better user experience would be to include more explanation copy and choices..

4.3.1.2. Perceived Value of Single Dashboard for Data Management

Participants valued the single data dashboard more than the ability to send an ISA. Of six responses the average level of importance of a single dashboard to manage the information that you share with your service providers was 4.3, with three responses rating it a 5, two rating it a 4 and one rating it a 3.

There was also a suggestion that the dashboard would be useful not only for the applications and websites that run services, but also the underlying infrastructures that the systems are built on and possibly even a picture of how the data flows through the system after they share it.

4.3.2. Insight from B-s

Writing or Vetting a User-Proffered ISA is Nontrivial: Writing or vetting ISAs is necessarily time consuming and complex due to the legal obligations that result. It could be difficult to accept outside agreements. This is nontrivial as compliance with an externally written ISA could be difficult to manage, as it could require radically different business and IT system behavior for each agreement. It raises the question: who is best poised to write legally binding agreements: external entities or the owner of the business processes and IT systems? Which raises the observation that perhaps the best solution is meaningful regulation, with machine-supported, scalable auditing and compliance measurement.

Effort and Staffing is Heaviest in Planning and Legal: Given the legal obligations and liability of these agreements, integrating the ability to receive user-proferred ISA will require extensive planning and legal review. As in this pilot where if we had used an off the shelf relationship manager (and not built it from scratch), the highest cost/effort was in arriving at a viable ISA, and much of that effort was educating legal counsel in the concept of a user-asserted ISA. Since lawyers have a fiduciary duty to assert their client's interests, and there is no US-wide regulation to allow this type of agreement, it is likely to be unfamiliar to most lawyers. It helped to describe it as a "reverse-EULA" and could be helpful to reference data privacy legislation, like GDPR and CPRA, that requires companies to abide by the data handling wishes of it's users.

B Side Integration with Identity & Access Management (IAM) System is Biggest Unknown & Challenge: Technology integration—assuming non-machine-readable ISAs—wasn't that complicated. The most difficult integration will be with the IAM system, and it will be non-trivial. Complexity will also arise depending on how the IAM system relates to other user databases.

Security Risks: Teams considering implementing a personal privacy policy system should be prepared to deal with the potential effects on user authentication into their systems. For example, if data required for authentication is blocked in the PISA or altered by profile changes the user makes, it may lock the user out of the system or introduce a vulnerability.

Will the Me2B Alliance continue to support user-proffered privacy policies/agreements? Based on the results of this pilot project, LeVasseur says, "Probably

not. As a start-up, our business processes and IT systems are fairly brittle, and the overhead of vetting and tracking multiple legally binding agreements isn't viable at this time. We likely wouldn't be able to support externally-produced legal agreements."

5. Overall System Considerations & Recommendations

In this prototype, we were required to develop several things that won't be necessary in a future where there are multiple "Relationship Managers" commercially available. In that envisioned future, we expect there to be multiple commercially available Relationship Managers (software agents) working on behalf of the individual, and multiple authorized machine-readable Personal Privacy Policy Agreements for businesses and users to select from.

5.1. Personal Information Sharing Agreement/Policy Vetting

An organization will require substantial legal, business practices, and technical platform review for each Personal Information Sharing Agreement/Policy they wish to support. This is likely the most challenging aspect of adoption of machine-readable personal privacy agreements/policies.

Implementation Note: For a small startup organization such as the Me2BA, the legal review of the PISA was fairly expensive—about 10% of the overall project budget. This is likely for two reasons: (1) these kinds of policies are completely novel, and were new to the lawyer, and (2) we had to take great care to ensure that we could satisfy the terms in the agreement, including business policies and processes.

5.2. Consumer Trust & Compliance Monitoring

Participants noted that it would be impossible to know if the organization they sent an ISA to will adhere to it.

> *"For me it's all about adherence from the receiving party [business] just because I send an information sharing agreement I really don't have any way of knowing if it will be adhered to."*

The same could be said of *any* agreement that a person signs with the service provider, whether it is a personally proffered ISA or the company's Terms of Service agreement. What's really needed is a machine-readable "Record of Processing Activity" (ROPA), automatically generated by all services. From this, Relationship Manager agents could automatically determine compliance with agreements and alert users to violations.

5.3. Adoption Considerations

Given how intertwined the Personal Information Sharing Agreement/Policy is with the organization's:

- Legal & risk management disposition,
- Business practices (data security and privacy), and
- Actual Technical Platform behavior(s).

It seems unlikely that a business would want to support more than one or two different Personal Information Sharing Agreements/policies. It will likely be too expensive to audit and ensure compliance with more than 1-2 policies/agreements. Moreover, it may be the case that an organization tiers agreements based on the level of service—i.e., better accounting for the different Me2B Commitments taking place over time.

5.4. PISA Wasn't "Machine-Read" and Didn't Need to Be

In this implementation—and possibly in near-term implementations—it wasn't required to develop and implement machine readable and parsed agreement syntax. Since there was only one viable agreement (the PISA), if the Me2B membership database received an indication that "the" PISA was signed, the member's record was updated to reflect the fully executed PISA. In the near term, it's conceivable that agreement "identifiers" and versions are all that's required, since, as noted above, it's unlikely that a business could realistically support a large number of different agreements and versions. Thus, one might expect a more gradual evolution of the richness of the machine readability capabilities over time.

Note that H.R. 4801, a proposed amendment to the Children's Online Privacy Protection Act of 1998 (COPPA), Section 1303 (a)(2) includes the following (emphasis ours):

"(2) TRANSPARENCY.—An operator of a children's service shall develop and make publicly available, at all times and in a **machine-readable format**, a privacy policy, in a manner that is clear, easily understood, and written in plain and concise language"

While this is referring to the business's privacy policy, any machine-readable format could apply to personal privacy policies as well. It's unclear what the intention is here in calling out machine-readable, and it could simply be HTML, for example. The point is that it appears to be in the minds of at least some policy makers and it's conceivable that future regulation could make machine-readability a requirement.

5.5. Identity Management

We chose to use the Apple credentials for this pilot due to an over-sensitivity to credentials management and safety. In systems like JLINC, identification of both parties is a key piece of the underlying fabric, providing integrity in the overall personal privacy policy system. If a business wants to support a wide array of consumers, they'll need to use multiple such systems, with varying identification schema. Integration with core corporate IAM is likely to be tricky.

5.6. Importance of Compliance Monitoring

With the regulatory environment around managing users' personal data in flux, compliance with state, national and international requirements will be an important, and costly, endeavor. As some participants suggested, a relationship manager like MyMe2BAgent could serve as a way for Me-s to assert and for both Me-s and B-s to store and monitor user-proffered requirements over time. It could also notify Me-s and B-s and provide a receipt of any changes to the record as part of this process.

Appendix A: Pilot Information Sharing Agreement

PILOT PROJECT INFORMATION SHARING AGREEMENT

This Pilot Program Information Sharing Agreement (this "**Agreement**") is an agreement between you ("**you**", "**your**", "**yours**") and Me2B Alliance Inc., a Delaware non-profit corporation ("**Me2B Alliance**"), and shall govern the participation, rights, and obligations of you and Me2BA Alliance in the Me2BA Alliance information sharing agreement pilot project (the "**Pilot Project**"). Each of you and Me2BA Alliance is a "**Party**" (together, the "**Parties**").

1. DEFINITIONS

"Data Custodian" means an entity which processes Personal Data as received from and/or as directed by a Rights Holder. During the Pilot Project, Me2B Alliance shall be a Data Custodian.

"Data Processing" (including references to "**processing**" or "**processed**") means the gathering, processing, or use of Personal Data by the Data Custodian. Where not otherwise required by regulation, the determination of allowable data processing will be asserted by the Rights Holder through this Agreement.

"**Data Processor**" means a third party that conducts Data Processing at the direction of the Data Custodian.

"GDPR" means the European Union's General Data Protection Regulation. https://gdpr-info.eu/

"Personal Data" means information about a particular natural person, which alone, or in combination with other information, can be used to identify that particular natural person.

"Privacy Legislation" means the privacy laws and regulations that apply to the Data Custodian's collection of Personal Data under this Agreement. For the purposes of this agreement, the jurisdiction shall be the state of California in the US, where the Me2B Alliance conducts business.

"Rights Holder" means the natural person who supplies Personal Data and/or related permissions, directly, or via a software agent operating on behalf of the natural person, to the Data Custodian to enable the Data Custodian to process that Personal Data and/or related permissions. Under this Agreement, you are a Rights Holder. Note that this is similar to the *Data Subject* in GDPR.

"**Services**" means the services provided by Me2B Alliance to you as part of your membership.

1. PURPOSE

The purpose of this Agreement is to enable processing of your Personal Data with your ongoing knowledge, permission, and control as the Rights Holder in the context of the terms, conditions, and policies established by the Data Custodian. This is accomplished by the various means as described herein.

1. INFORMATION SHARING AND PROCESSING

Permission for Processing: An underlying assumption in the Pilot Project is that the Data Custodian will not process any Personal Data from the Rights Holder without some form of permission received from the Rights Holder directly or derived from a regulatory or legal obligation that is binding on the Data Custodian.

Data Processors: The Data Custodian shall disclose the names and Data Processing needs of all third party Data Processors; this information will be included in the Privacy Policy and Terms of Service documents, to be updated promptly, including notification to the Rights Holder, with the introduction of any new Data Processors.

Data Processors engaged in Data Processing of Personal Data collected pursuant to this Agreement during this Pilot Project are not parties to this Agreement, and such Data Processing shall be conducted pursuant to any separate agreements between you and such third parties, between Me2B Alliance and such third parties, and/or the obligations of such third parties under applicable law and regulations, including, but not limited to, as Data Processors under the European Union's General Data Protection Regulation, will *not* be bound by the obligations in this Agreement during the Pilot Project.

1. CONFIDENTIALITY AND PRIVACY

Without prejudice to any existing contractual arrangements between the Parties, the Data Custodian shall treat all Personal Data as strictly confidential, shall not disclose Personal Data to third parties (except to Data Processors as permitted under this Agreement), and shall inform all its employees, agents and/or Data

Processors of the confidential nature of the Personal Data. The Data Custodian shall ensure that all such employees, agents, and Data Processors have signed an appropriate confidentiality agreement, are otherwise bound to a legally-enforceable duty or obligation of confidentiality, whether contractual, fiduciary, statutory, or otherwise.

Personal Data which you have already disclosed, or later choose to disclose, publicly shall not be considered confidential under this Section 5, for example, your status as a member of Me2B Alliance, which is reflected on publicly available membership lists.

1. SECURITY

During the Pilot Project, the Data Custodian shall implement reasonable technical and organizational measures to ensure a level of security of the processing of Personal Data appropriate to the risk. You are advised that no technical or organizational measures can be guaranteed to be one hundred percent effective against unauthorized access or use of Personal Data.

1. DATA PROCESSING TRANSPARENCY

The Data Custodian shall make available to the Rights Holder information about the uses and disclosures, including data transfers to other countries, of the Personal Data of the Rights Holder in the Privacy Policy and Terms of Service.

1. RETURN OR DESTRUCTION OF PERSONAL DATA

Upon termination of this Agreement, upon the Rights Holder's written request, or upon fulfillment of all purposes agreed in the context of the Services whereby no further processing of Personal Data is required, the Data Custodian shall, as applicable, delete or destroy all Personal Data to the Rights Holder and destroy any existing copies, except Personal Data which is incorporated into reasonable and traditional records maintained in the normal conduct of business of Me2B Alliance, including, but not limited to, membership agreements, invoices, and correspondence related to your membership.

1. DISPUTE RESOLUTION

Any claim or dispute arising from or relating to this Agreement (a "**Dispute**") shall be governed by the substantive laws of the State of California without regard to principles of conflict of laws. Any Dispute shall be finally settled in the state or federal courts of San Diego County, California, and the parties hereby consent to the jurisdiction of such courts.

1. LIMITATION OF LIABILITY

Neither Party, including each Party's respective directors, officers, and employees, shall be liable to the other Party for any indirect, punitive, exemplary, multiple, or similar damages with respect to any Dispute, whether under theory of contract, tort, indemnity, product liability, or otherwise, regardless of whether any such person or entity was advised of such potential damage.

In the event a court of competent jurisdiction awards damages to a Party, notwithstanding this Section 11, the other Party's aggregate liability shall be limited to an amount equal to the membership fees paid by you to Me2B Alliance during the twelve (12) months preceding the date on which such claim is made.

1. DURATION AND TERMINATION

This Agreement shall come into effect upon the date of the cryptographically signed exchange of a copy of this ISA between the Rights Holder and the Data Custodian, and shall continue in full force and effect for so long as the Rights Holder is a paid member of the Me2B Alliance, or until this agreement is revised, or terminated by either Party by written notice to the other Party.

Termination or expiration of this Agreement shall not discharge the Data Custodian from its confidentiality obligations set out above, and such obligations shall survive termination or expiration of this Agreement indefinitely.

The Data Custodian shall process Personal Data until the date of termination of the agreement, unless instructed otherwise by the Rights Holder, or until such data is returned or destroyed on instruction of the Rights Holder.

1. PRIMACY OF THE ISA

In the event of any inconsistency between the provisions of this Agreement and the provisions of any other agreement between you and Me2B Alliance pertaining to the processing of personal data, the provisions of this

Agreement shall prevail, unless specifically and explicitly overridden by a signed direction from the natural person who is the subject of the Personal Data or their authorized representative.

1.   ELECTRONIC SIGNATURE

This Agreement shall be deemed to be signed with legal effect when both Parties complete electronic signing and both Parties have received a copy of the mutually signed Agreement.

_____   _____

Me2BA Member Signature   Executive Director, Me2B Alliance

<full name>   Lisa LeVasseur

_____   _____

Date   Date

Appendix B: Informed Consent for Interviews

Me2B Alliance

Participant Confidentiality and Informed Consent for Interviews

CONSENT TO ACT AS A RESEARCH SUBJECT

MyMe2BAgent

Me2B Alliance is conducting a study to understand the behavior of people when they are given a chance to create and send their own Information Sharing Agreement to digital technology providers. The MyMe2B Alliance prototype was built with a grant from the IEEE to support the work of the P7012 Machine Readable Personal Privacy Terms Working Group. It's important to note that the user experience is **not** "commercial-ready"; this is a pilot project.

Noreen Whysel, Director of Validation Research for the Me2B Alliance will lead the study. You have been asked to take part because you are a consumer or user of connected products and services.

If you agree to be in this study, you may expect the following to happen:

- You will be asked to use the MyMe2BAgent while talking aloud about the experience.
- The interview will last about 20-30 minutes.
- The interview will take place over videoconference and will recorded. Your agreement to participate in this study will also be recorded.
- The interview will be conducted by Noreen Whysel, Director of Validation Research for the Me2B Alliance.

There will not be any direct benefit to you by participating in this study aside from helping the Me2B Alliance understand digital technology behaviors. There will be no cost, and you will be compensated for your participation. The investigator may learn more about how people want to be treated by Internet-enabled businesses.

Participation in this research is entirely voluntary. You may refuse to participate or withdraw at any time. You will not be compensated if you withdraw.

Audio recording:

Audio recording you as part of this project will help our research team better analyze your responses. We will not retain any video recording or imagery of your likeness beyond the analysis and preparation of the report, after which any video will be destroyed. We will take the following steps to ensure your privacy:

1. Except to confirm your consent, we will not record any names, personal data, or obviously identifying characteristics. If recorded, such information will be permanently deleted using audio editing software.
2. All identifying details will be concealed in the presentation of data.
3. The researcher will remind you when you are being recorded.
4. The audio recording and original transcript will not be made available to anyone outside our research team.

Risks: There is the possibility of loss of confidentiality. However, research records will be kept confidential to the extent allowed by law. Because this is an investigational study, there may be some unknown risks that are currently unforeseeable.

Ms. Whysel has explained this study to you and answered your questions. If you have other research related questions or problems, you may reach Ms. Whysel at noreen.whysel@me2ba.org.

Appendix C: Informed Consent for Survey

Me2B Alliance

Participant Confidentiality and Informed Consent

CONSENT TO ACT AS A RESEARCH SUBJECT

MyMe2BAgent Pilot Online Survey

Me2B Alliance is conducting a study to understand the behavior of people when they are given a chance to select and send their own legally binding Information Sharing Agreement to digital technology providers. The MyMe2B Alliance prototype was built with a grant from the IEEE to support the work of the P7012 Machine Readable Personal Privacy Terms Working Group. It's important to note that the user experience is **not** "commercial-ready"; this is a pilot project.

Noreen Whysel, Director of Validation Research for the Me2B Alliance is leading the study. You have been asked to take part because you are a member of the Me2B Alliance.

If you agree to be in this study, you may expect the following to happen:

- You will be asked to use the MyMe2BAgent.org website on your own time.
- While using the MyMe2BAgent you may see profile data with your name, email address or other information that is part of your current Me2B Alliance membership record.
- If you edit profile information, your data will be saved to your existing record in Me2B Alliance's membership system in SalesForce.
- You will have the opportunity to review an Information Sharing Agreement designed for this pilot project (I.e. the Pilot Information Sharing Agreement), and to sign and send it to Me2B Alliance. This is a legally binding agreement on top of any current agreements you have with Me2B Alliance. You do not need to sign it if you do not wish to.
- After you view the MyMe2BAgent website, you will receive a link via email to a confidential survey. No personal information will be recorded in the survey. We are using it to get your impressions of your visit to the website.

There will not be any direct benefit to you by participating in this study aside from helping the Me2B Alliance understand digital technology behaviors. There will be no cost, and you will be NOT compensated for your participation. The investigator may learn more about how people want to be treated by Internet-enabled businesses.

Participation in this research is entirely voluntary. You may refuse to participate or withdraw at any time.

Risks: There is the possibility of loss of confidentiality. However, research records will be kept confidential to the extent allowed by law. Signing the PISA adds a legally binding dimension to your relationship with the Me2B Alliance so be sure to read the PISA carefully before signing. Because this is an investigational study, there may be some unknown risks that are currently unforeseeable.

The above information explains this study to you and hopefully has answered your questions. If you have other research related questions or problems, you may reach Ms. Whysel at noreen.whysel@me2ba.org.

Appendix D: Interview Guide – Questions for Me-s

This study was an unscripted, moderated walkthrough of the MyMe2BAgent website. As such there were no specific questions, though we did incorporate the following questions and prompts where needed.

We'd like to have you walk through the process of sending your information sharing agreement to the Me2B Alliance through this system.

1. We're not really looking to understand the usability we just want to get your reaction of this as as a potential option.

2. As you go through this, site if you could just say what you're doing. Feel free to speak aloud as you explore the website if there's anything that you are thinking.

3. Can you describe what you're looking at? (For each new page or interaction)

4. What is your understanding of what this information sharing agreement is and what it's for?

5. Whose agreement is this? Who's the originator?

6. Do you have any thoughts or comments or critiques that you'd like to share?

Appendix E: Interview Guide - Questions for Bs

1) Describe what MyMe2BAgent is and what isn't?

2) Who does this affect?

3) Which Bs will adopt this?

4) What need of is being filled by completing the project? Of the B? Of their customers?

5) What pain point is being alleviated for the B? For the Me?

6) What format is the profile data and ISA sorted or sent as?

7) Where does the Data live and how will it be accessed?

8) What would the B-side interface look like?

9) Who manages the ISAs the B receives?

10) Did you have all the information (drawings, programs, standards, etc.) needed to implement MyMe2BAgent? What did you need to get that you didn't have?

11) What did you know about the your existing systems? Was any technology obsolete or no longer supported?

12) Was everyone on the integration team in agreement on assumptions being made concerning the project?

13) What are all the deliverables/implementation package the B should expect?

14) How much experience does the B have with the technology being used?

15) How much training was required?

16) What quality controls measures are in place?

Appendix F: MyMe2BAgent Pilot Integration

The Me2BA has developed a prototype "Me2B Relationship Manager" which will allow people to perform two functions:

- Send a legally binding PISA to the Me2BA, and

- Manage the information the member shares with the Me2BA.

We integrated the MyMe2BAgent pilot in three key stages:

- Creating the PISA.

- Building the prototype MyMe2BAgent platform, which had both Vendor Agent functionality and Individual Agent functionality (for "Me-s").

- Measuring and assessing the utility of user-proffered ISAs from both the individual's perspective and the vendor's perspective through moderated user testing, interviews and surveys.

Legal Documents: The team used the JLINC Standard Information Sharing Agreement as the baseline.

Vendor-side Modifications: In this project, the Me2BA, served as the vendor, which has a database of members to whom it offers services. Modifications included various APIs for connecting the agent to the SalesForce member database that are discussed below in the **B-s Interview Findings** section.

Individual-side Agent Modifications: Using SalesForce simplified the project, since it is frequently used by organizations for member, workforce and customer management. Additionally, the JLINC Standard Information Sharing Agreement ("SISA") was a key input in developing the draft P7012 ISA schema, so alignment should be straightforward.

Appendix G: Post-Interview Survey – Moderated Test

IEEE P7012 - MyMe2BAgent Pilot Interview Follow Up

Thank you for participating in the MyMe2BAgent.org interview and service walkthrough. We would like to ask you a few follow up questions about your experience with the Pilot Information Sharing Agreement (PISA) and relationship management tool.

1. Please describe in your own words what MyMe2BAgent is and who it is for?

2. Was the information and services in the MyMe2BAgent site what you expected to see?
   Yes
   No

3. Was there anything in the MyMe2BAgent site that you expected to see that was not there?

4. In your own words, please describe what the PISA is, who created it and what it is for.

5. Did you understand what it means to "Sign PISA"?
   Yes
   No

6. Did you understand what it means to "Send PISA"?
   Yes
   No

7. How important is it to you to have a single dashboard to manage the information that you share with your service providers? (Mark level of importance where 1 is Not at all Important and 5 is Extremely Important)
   1
   2
   3
   4
   5

   Please explain your rating of the importance of having a single dashboard for your ISAs.

How important is it to you to is the ISA sending capability? (Mark level of importance where 1 is Not at all Important and 5 is Extremely Important)

1

2

3

4

5

10. Please explain your rating of the importance of the ISA sending capability.

11. If this were available for all of your current online service providers would you use it? Why or why not?

12. What would the MyMe2BAgent need to do in order to be more useful to you?

Estimated time to complete: 5 mins

Appendix H: Post-Trial Survey – Unmoderated Test

IEEE P7012 - MyMe2BAgent Pilot Test Follow Up Survey

Thank you for participating in the MyMe2BAgent.org interview and service walkthrough. We would like to ask you a few follow up questions about your experience today.

1. Were you able to log into the MyMe2BAgent.org website?
    Yes
    No

2. If you answered No, please indicate what kind of problem you encountered.

3. Please describe in your own words what you saw when you used MyMe2BAgent?

4. Was the information and services in the MyMe2BAgent site what you expected to see?
    Yes
    No

5. Was there anything in the MyMe2BAgent site that you expected to see that was not there?

6. Did you click on the MY Profiles page?
    Yes
    No

7. Was the information on the Profile page what you expected to see?
    Yes
    No

8. If not, what did you expect to see and what was missing?

9. Did you click on the Information Sharing Agreements page?
    Yes
    No

10. Was the information on the Information Sharing Agreements page what you expected to see?

11. If not, what did you expect to see and what was missing?

12. The Dashboard page lists relationships that you have in the MyMe2BAgent. Did you click on the Me2B Alliance card?
    Yes
    No

13. Did you edit your information on the Me2B Alliance relationship page?
    Yes
    No

14. Was the information presented on the Me2B Alliance relationship page what you expected to see?
    Yes
    No

15. What did you expect to see on the Me2B Alliance relationship page? What was missing?

16. Did you notice the "Sign PISA" button?
    Yes
    No

17. Did you understand what it means to "Sign PISA"?
    Yes
    No

18. Did you notice the "Send PISA" button on the "Sign PISA" page?
    Yes
    No

19. Did you understand what it means to "Send PISA"?
    Yes
    No

20. Did you click on the "Sign PISA" button?
    Yes
    No

21. After you clicked Sign PISA there is a notice that says "PISA Sent." What does "PISA Sent" mean to you?

22. How important is it to you to have a single dashboard to manage the information that you share with your service providers? (Mark level of importance where 1 is Not at all Important and 5 is Extremely Important)
    1
    2
    3
    4
    5

23. Please explain your rating of the importance of having a single dashboard for your ISAs.

24. How important is it to you to is the ISA sending capability? (Mark level of importance where 1 is Not at all Important and 5 is Extremely Important)
    1
    2
    3
    4
    5

25. Please explain your rating of the importance of the ISA sending capability.

26. If this were available for all of your current online service providers would you use it?
    Yes
    No

27. Explain why or why not.

28. What would the MyMe2BAgent need to do in order to be more useful to you?

Estimated time to complete: 7 mins

Appendix I: Relationship Manager Product Design Recommendations

The purpose of this research was NOT intended to focus on recommendations for implementing relationship managers, but much was learned. As noted in the **4.1 Study Design** section, the pilot website was built quickly and had significant flaws. If we really want to see adoption of this type of personal software agent, below are some key design considerations.

MyMe2BAgent General Observations

The unmoderated participants described the MyMe2BAgent as simple and easy to understand, with one calling it a potentially proof of concept.

Roughly half of the participants felt that the MyMe2BAgent met their expectations and described it as a way to manage agreements, though a few told us they didn't have any specific expectation.

Access

All but one participant were able to access the MyMe2BAgent dashboard, though three reported problems getting past the Apple ID/Okta login, one of whom did not complete the pilot. While the Me2BA instance connected to a SalesForce database and did require an Apple ID to login, the team that implemented this project noted that integrating a system like this one would likely involve some customization to access data on various backend platforms.

Relationship Page

Both moderated and unmoderated participants noted that the relationship page could eventually hold multiple relationships. In fact, that was the idea. They suggested that some type of icon or visualization would be helpful to show what each relationship held, such as a scorecard of information asociated with each relationshop.

Another idea was to have an ability to signal to the B which data they want to share for specific purposes under the agreement. The ability to add or update information, such as a second email address or other data would be useful. An interesting suggestion was that the Me should only send the ISA and countersign after receiving a signed copy from the B.

The unmoderated participants had differing experiences. One participant who clicked the card, wasn't sure they remembered what the Me2BA relationship page held. They expected

to see a way to edit their information on the relationship card or change the agreement from that page back to the original ISA.

My Profile Page

The My Profile page shows two different user profiles. Participants described these profile pages and offered suggestions. Unmoderated participants largely had no expectations. One wrote that they were happy to see that it did not have many data fields containing personally identifiable information. Some of the suggestions stemmed from an expectation that the profile page was editable:

- Ability to add more profiles than the two that were included in the "My Profiles" page.
- A way to see at a glance which relationship each they connected to.
- A way to select from this list of profiles for each relationship.
- Ability to edit the profile fields, assuming they arent as one participant assumed, were autofilled from some other source.
- Ability to compare the data on the My Profile page with the data that the technology provider holdsl.

There was a question about whether you could change the email address, which was also brought up by Mr. Vo in the B interview. Mr. Vo felt that changing the email address could introduce a login error at best or a security vulnerability at worst if the new email didn't match and existing email identified at the B account.

Unmoderated participants largely had no expectations. One wrote that they were happy to see that it did not have many data fields containing personally identifiable information.

Information Sharing Agreement Page

Participants described the "Information Sharing Agreement" page as an overly complicated document and lacks information about why they were signing it. More information is required to show that the end goal justifies sharing one's information (even though this was explained in the pilot invitation—it should be in the agent website, also).

Some of the things that participants expected to see that could be included:

- A layered structure for the ISA where there is a high-level, plain language description of the document followed by the formal agreement.
- A way to revoke a signed ISA or otherwise change their options, add and delete relationships, etc.
- A trust mark of some type to indicate that the ISA was credible and safe.
- A selection of ISAs from different trusted entities, ie not just the Me2BA PISA.

There also appeared to be some labeling confusion about what the PISA was for both moderated and unmoderated participants. One of the moderated participants described the PISA as a "Personal Information Sharing Agreement" which is noted in the literature review as signaling "personal Information," i.e., that personal information is being shared and not necessarily that the agreement originated from a person wishing to establish terms for the relationship. Another referred to it as a "placeholder" agreement and expected to be able to choose from other agreements at some point. Unmoderated participants struggled with identifying which part of the process they were in based on the label terminology. Only two understood that what they sent was, in fact, a mutually signed agreement. It was not clear that many of the participants understood this.

In addition, the concept of "Sign" and "Send" were not understood the same way by all participants. In some cases, participants didn't seem to equate "Sign PISA" with actually signing it until the "Send PISA" action was complete. In other cases, "Send PISA" was unclear. Only two of the seven unmoderated participants indicated they had a mutual agreement after clicking "Send PISA" and two wrote that they didn't know where the PISA was sent. As noted, this is a user interface issue, but mapping appropriate language to the resulting action and including descriptive copy would be helpful.

Value of a Single Dashboard
Participants displayed some skepticism that it would be sufficient. Unmoderated participants would like a simple, easy-to-use interface for controlling access to personal data. One called it a "honeypot," which has security implications.

The value of a MyMe2BAgent single dashboard could be even higher if there were a way to modify the agreements from the dashboard and if the process was more completely and plainly communicated. As for the security issue, it could, as one participant noted, serve as a pointer to an agreement and a lookup to a set of personal data rather than hold the data itself. That way it would always show the current information held by that technology provider and the consumer could push updated information to the relationship through the edit function.

[Following paragraphs are insights from both the interviews and the surveys. While much of the insight is related to the relationship management design, the key insight was a difficulty in understanding that the PISA was something the data subject could choose and the need for a trusted solution that was separate from the technology they were sending the PISA to.]

Because the invitation email described what participants would find on the MyMe2BAgent pilot website, we had a minimal assumption that their expectations for the website would be clear. In fact, what we found was some confusion about exactly what the "PISA"represented.

Understanding the PISA: Participants were mixed in understanding of what the PISA was. All said it was an agreement between themselves and the tech company but only one said it was specifically an agreement with Me2BA. One assumed the PISA was simply a document that Me2BA enforced on the user rather than something that was supposed to come from the data subject. The fact that the PISA was in fact created by Me2BA for this pilot may be the source of the confusion.

Understanding the Sign and Send PISA Process: Not all participants understood exactly what was meant by "Sign PISA" or "Send PISA." There was some indication that the actions were interchangeable. Ultimately most understood that they were sending an agreement somewhere but

2 of 3 participants in the moderated survey understood what "Send PISA" means. In discussing the importance of a Sending capability. Only one indicated that it seemed to create an agreement, rather than simply pointing to an existing one.

6 of 7 participants in the unmoderated survey understood what "Send PISA" means. Of these, four wrote that it was sent to the relationship technology, but only two of them wrote that it was a mutual agreement. Two wrote that they understood it was sent somewhere, but did not state where they thought it went. One of these wrote that they not only weren't sure where the PISA was sent, but also did not understand why it was sent. This partipicant indicated that they expected more information about the sending process and a clearer acknowledgement that they now had a mutual agreement.

Value of a Single Dashboard: Most indicated that a single dashboard for managing online relationships would be useful, though there were mixed opinions about whether they or ordinary users would actually use it. One expressed concern that, like password managers, such a dashboard could be a "honeypot" or major security issue if it were hacked.