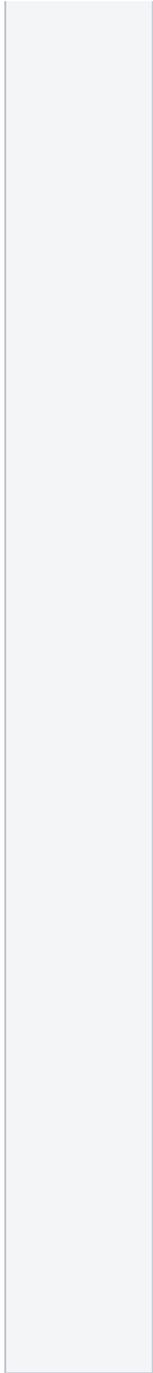


P4All - DoW Review

This page aims to summarize the main points of the P4All Definition of Work (DoW) document and create a road map for the P4All July 2015 deliverable.

P4All Workpackage	Description	Objectives	Users & Stakeholders	Personae & Usecases	Interview Candidates
<p>Developer Space</p>	<p>A network of contributors from across a variety of open source projects and communities, addressing the fragmentation of knowledge that is a typical problem within the accessibility field.</p>	<p>Technical Objectives:</p> <ul style="list-style-type: none"> • Providing mainstream developers a common open repository of AT interface modules to enable creation of mainstream products and services with increased accessibility. • Providing AT interface module developers the capabilities to excel by access to novel technologies, such as: <ol style="list-style-type: none"> 1. Components from Fluid Infusion, FLOE, IBM Accessibility Works, enabling them to be used in production alongside other components and technologies. 2. Components will be upgraded to support user preferences and auto personalization out of the box, requiring less effort on the part of the developer to make their application compatible with Prosperity4All, Cloud4all, and the GPII 3. The Infusion framework will be extended to support modelbased authoring /development, opening up the future possibility for endusers to participate directly in the software creation process. • Providing improved debugging and accessibility tools to simplify the work involved in creating and testing adaptable user interfaces. • Providing a means for searching, browsing, and contributing (i.e. a set of "libraries" or "shelves") relevant third-party development tools, frameworks, components, and open source applications categorized by type of development need. • Creation of a tool to help localize user interfaces into different languages, which can be connected to automated translation tools to allow for crowd-sourced correction. • A blueprint for any developer out there, to see how gamification can be applied and which traps should be avoided. • A collection of exemplary, production-ready accessible web user interface components that can be used by both mainstream web application developers as well as developers of web-based assistive technologies to more rapidly and effectively create flexible and personalizable user interfaces. <p>Social Objectives: Developers-Developers</p> <ul style="list-style-type: none"> • Help developers finding people with similar skill level (paring a new developer with a very experienced one can actually slow down both significantly), similar interests, and with similar problems and questions • Identify developers with good knowledge and the ability and will to teach others and reward and motivate them to collaborate • Share code and work on projects collaboratively, by motivating developers to do so: <ul style="list-style-type: none"> • Interface with popular Developer sites e.g. github, stack overflow • Mechanism to give rewards for collaborative work • Mechanism for providing feedback on existing products • Mechanisms for describing tricks and strategies to make what exists work <p>Social Objectives: Developers-End Users</p> <ul style="list-style-type: none"> • Creation of collaborative forums/tools that will help close the gap between developers and end-users, providing a means for users to influence and participate within the design, development and testing process more actively <ul style="list-style-type: none"> • Feature/capability suggestions with voting – to allow users to suggest new features and other users to comment or vote on them for both existing products (e.g. those in the Unified Listing and/or Open Marketplace), and for generic products (e.g. for requirements clustering to help guide development of generic areas of accessibility) • Standard user review (5 stars and comments – with manufacture response possible) • Bug reporting – to allow users to directly report problems/ issues to manufacturers • Tips and Tricks – to allow users to discuss workarounds or unusual ways to use products to meet needs. <p>Evaluation and Technical Validation:</p>	<ul style="list-style-type: none"> • Main stream product developers • Main stream product manufacturers • AT developers • Non-developers who want to build AT (clinical personnel, caretakers, students) • Product testers 	<p>(Fluid) Andy Wright, Independent Programmer</p> <p>(GPII-DSpace) Daniel, AT developer: wants to build an accessible screen reader for chess.</p> <p>(GPII-DSpace) Grace, mainstream developer: wants to make her company's website accessible.</p> <p>(GPII-DSpace) Arlie, a non-developer artist: wants to build AT application</p> <p>(Fluid-Sakai) Brad Dieger, faculty training support, trouble shooting and site archiving.</p> <p>(New) Independent AT developer:</p> <ul style="list-style-type: none"> • looking for a reliable head-tracker. • needs an open source and reliable continuous integration system that includes accessibility. • finds other developers working on a head-tracker, they collaborate review each others work and merge work to improve the existing head-tracker • they find and contact other AT experts through the network to ask questions 	<ul style="list-style-type: none"> • Open Source developer (Mozilla) • Corporate developer (EDready) • AT developer (GPII community) • AT entrepreneur with no development background (Tetra North America)



- Allowing implementers to deploy test cases – either a study, a survey, or both – to tool users on an opt-in basis using privacy preserving mechanisms.
- Automated analysis of social media type feedback mechanisms and discussion forums to identify and quantify new, critical or missing features across the infrastructure.

(New) A main stream product developer at Edready:

- needs to integrate UIO in their OER setting.
- needs to localize their program for several different languages.

(New) A non-developer engineer volunteering at Tetra North America:

- Has got an idea for a Sip-and-puff controlled game and don't know how to build it.
- wants to include gamification and need to know how

(New) A person who uses head-tracker

- This person leaves comments about the problems with current head-trackers, discusses the workarounds and provide feedback.

<p>Unified Listing</p>	<p>Unified Listing database covers not only assistive technologies but also the access features in mainstream products. The only database where this currently exists is the GARI database for mobile phones that was generated in response to government mandate.</p>	<p>Technical Objectives:</p> <ul style="list-style-type: none"> Extend the database beyond just assistive technologies into the similar functioning but structurally different entries needed for access features in mainstream products. The database uses a layered rather than flat structure so that it has a record of all of the databases with which it federates. By aligning them and giving them a common product identifier is possible to provide only one copy of the product in search results even if it appears in many databases. Once it is found, an individual can flip through the different descriptions of the product from different databases if they wish. Or look for a description in a language they are most familiar with. Federated database records that originated from another database are clearly marked as to their origin (track the number of times that data from another database was accessed in the Unified Listing.) Store multiple languages for a record where they exist and couple with automatic translation engines from Google to make it easier to serve information in multiple language. Provide a manufacturer-facing interface that makes sense to manufacturers, and allows them to easily enter and maintain their data, and a quite different consumer-facing interface. 	<ul style="list-style-type: none"> AT developers AT Users Teachers, caregivers, clinicians AT manufacturers Mainstream product developers Mainstream product manufacturers Companies seeking to comply Product marketers International consumers speaking different language 	<p>(New) Filipino screen reader user: Looking for Tagalog supported Web API</p> <p>(New) Entrepreneur wants to do a quick market search for his product</p> <p>(New) Teacher who wants to make her course material more accessible</p>	<ul style="list-style-type: none"> AT users Caregivers of AT users Nursing homes /institutes / schools that need to purchase AT for their residence / employee s/ students, etc. Open Source AT developers (In GPII international community)
<p>Open Marketplace</p>	<p>The Open Marketplace becomes an extension of, or complement to, all of the other markets that are out there. However, it is a market where users can upload and sell apps or program or services that cannot be listed elsewhere. Coupled with international translation tools for products being developed separately.</p> <p>The purpose of the Open Marketplace is not to compete with the other marketplaces, or to carry a full range or as many products as possible. Instead the purpose of the Open Marketplace is to provide those individuals or companies who cannot market internationally themselves with an easy mechanism for selling their product internationally.</p>	<p>Technical Objectives:</p> <ul style="list-style-type: none"> Automatically handle the financial transactions needed to purchase products in currencies other than the manufacturer's base currency. Development of a micropayment subsystem to make AT more affordable. Try different approaches to address the challenge in that Open Market needs to be designed to work for people who need assistive technologies in order to use the website, but who do not yet have their assistive technologies. <p>Social Objectives:</p> <ul style="list-style-type: none"> A user bid subsystem where anonymous users or a third party outline a desired service and bids for its creation are aggregated. Service suppliers will be notified and will be prompted to declare whether they intend to create the service. To push development back toward users, they will have the chance to identify a desired service and issue donations (through the Prosperity4All micropayment system). Once donations and bids reach critical thresholds, the creation of the service will be possible, even allowing from contest based decisions on the entity to build the service. 	<ul style="list-style-type: none"> Back-end support for logistics, finance, security, tracking bids and user requests, etc. AT or Non AT users Service providers Product developers Product manufacturers (small and corporate) Entrepreneurs 	<p>(Fluid) Anita Stalmach, instructional designer: wants to take advantage of technology to improve teaching and learning.</p> <p>(Fluid) Christy Gonzola: Undergrad student with low vision how has some ideas for AT</p> <p>(New) Small consumer electronics manufacturer: wants to showcase product and its accessibility features</p> <p>(New) Filipino screen reader user:</p> <ul style="list-style-type: none"> needs web API to support Tagalog start a bidding process to provide funding for the project <p>(New) Indie game development team from Kenya:</p> <ul style="list-style-type: none"> develop game in Swahili wants to sell the game in African countries that don't support a credit system 	<ul style="list-style-type: none"> AT developers (GPII community) AT entrepreneurs (IDRC community) International small development teams with different language

<p>Media and Material Automated/ Crowdsourced Transformation Infrastructures</p>	<p>This activity will include specification and implementation of a stand-alone version of the document transformation engine as well as a specification and implementation of a set of interface components to allow third parties to integrate existing systems with the document conversion service.</p>	<p>Technical Objectives:</p> <ul style="list-style-type: none"> • Increase the media types and platforms that the AMARA infrastructure can work with. • Develop new technologies that are not yet supported in any online or open system to enable flexible video translation. • Modularization and Replicability of Transformation Engine, this work will be based on the current proprietary RoboBraille agent software. • Modular interfaces for Tabular data and and Text-to-sign language. • Couple RoboBraille to the autoperpersonalization from preferences" (APfP) capability to have materials sent to an individual be automatically transformed before delivery. • Collaborate with external researchers and to see if a means for better processing of math and science materials can be identified and coupled with the system using its new (to be implemented) modular approach. • Couple the language translation capability with the accessible format transformation engines. 	<ul style="list-style-type: none"> • Robobraille and AMARA team and volunteers • Organizations that need to comply • Independent service providers • Consumer who needs to access content • Consumer who needs to transform content for others to use 	<p>(GPII) Paulinas Reyes, born blind Spanish speaking who wants write a job application</p> <p>(Fluid-Sakai) Sarah Windsor, university professor who wants to create accessible online content for her course</p> <p>(Fluid-Lightbox) Eillean Otrovsky, Art professor who needs to build a collection of images and manage them for different courses and presentations</p> <p>(New) Volunteer who wants to help out with video close captioning</p>	<ul style="list-style-type: none"> • Robobraille or AMARA volunteer community • PGA Community
<p>Assistance on Demand</p>	<p>Assistance on Demand Services Infrastructure enables the rapid deployment of new machine/human/crowd-based assistance services on demand by allowing individuals to seek assistance in an organized fashion from a set of predefined sources based on type of need, quality of service desired, and other personal preference at the moment. This service will support different application domains (among others health, education, transportation, work) and intends to satisfy strongly heterogeneous user groups, accessing the Prosperity4All infrastructure through a variety of different devices and interfaces.</p>	<p>Technical Objectives:</p> <ul style="list-style-type: none"> • A framework for creating "dashboards" of assistance services, customizable (per person or community/group) and supporting a wide set of service selection criteria (e.g. service type, price, developer, presentation, quality and security level) while offering zero/default configuration options for efficiently support non professional disabled users. <ul style="list-style-type: none"> • A lightweight AOD service interface for new users, which can then be refined/ elaborated according to user's personal preferences/needs and configuration skills either by himself or by a third person. • A professional user will be offered a great variety of options which will have preset default values to be used by non-experts consumers. This interface will allow for dynamic configuration of his Assistance on Demand network, although predefined (highly scored by other users of similar profiles) configurations will be proposed /offered. • A mechanism to offer the most appropriate service matching user's request and based on his preferences. • Support accessible user interfaces enabling multimodal interaction and exploiting HMI explosion • Support flexible interface configuration with minimal technical knowledge requirements and c) consider technical support as a service that must be offered in flexible, possibly collaborative, yet efficient and reliable way. • Allow Assistance on Demand services including microAssistance on Demand (for as little as 30 seconds) <p>Social Objectives:</p> <ul style="list-style-type: none"> • In an elementary version, when the service consumer is not satisfied by the experienced quality of service, the infrastructure offers him the option to upgrade the quality (the "try harder" button appears) notifying the user about the involved costs and leaving him to decide on the evolution of the service and on passing from local automated service to networked advanced service and/or human assisted services. • Explore an all human cascade since most types of assistance, especially cognitive assistance, are usually beyond the capabilities of today's automation (e.g. exploring a cascade that starts with family members and then cascades out to friends, communities that a person may belong to, then volunteers and then commercial assistance.) • Mechanism for user rating/feedback mechanism <p>Collaboration with Other Systems:</p> <ul style="list-style-type: none"> • For the discovery of services, the AOD service infrastructure will interface the developers' infrastructure. • FLOE may be connected with Prosperity4All's Assistance on Demand infrastructure, helping to fill resource gaps encountered when delivering Open Education Resources. 	<ul style="list-style-type: none"> • Independent service providers • Developers of automated services • Volunteers • Consumer with an unmet need 	<p>(Fluid-Sakai) Carol Hudson, part time support and student looking for extra sources of income</p> <p>(New) Lightweight AOD user, using this service occasionally</p> <p>(New) Professional AOD user, using the service on daily basis</p> <p>(New) AT developer wants to get an idea what AOD services are used most often and get an idea for his next app.</p>	<ul style="list-style-type: none"> • Be My Eye community • Fiverr community

<p>Education eLearning, Business and Employment</p>	<p>An infrastructure that addresses the need to transform very different kinds of material to different format. Once the conversion components are in place, it will capitalize on the vast amount of educational content it is has gathered and will transform it to an accessible e-Learning content.</p>	<ul style="list-style-type: none"> • Provide tools and infrastructure to make it easier to develop new applications within the existing business intelligence of SpagoBI by building an application from scratch enriched with accessibility features • The development of accessible content and interfaces for the geo-referenced business intelligence applications of SpagoBI. • Integration with Lifetool • Integration with Floe 	<ul style="list-style-type: none"> • Amateurs seeking training • Volunteers offering help • Freelance workers • Teachers & educators 	<p>(Fluid) Sergio Rossi, Graduate Teaching Assistant needs to learn about open source software</p> <p>(Fluid-Sakai) Sarah Windsor, university professor who wants to create accessible online content for her course</p> <p>(P4A) Andrea, teenager who wants to learn new skills to find a job after high school</p> <p>(P4A) Kevin, Mid age who wants to shift career to work from home and have flex schedule</p>	<ul style="list-style-type: none"> • P4A Interview notes • IDRC community
<p>Gamification Across Platform</p>	<p>Incorporating gaming principles within the overall design of the P4All and its individual components to encourage participation and collaboration that match the interests and skill levels of different types of participants.</p>	<p>Technical Objectives:</p> <ul style="list-style-type: none"> • Provide a gamification framework to express highscores and how to track events for achievements. • Support skinning systems to restyle applications on demand e.g. display information in a gamelike way using real world metaphors, like the physical postbox instead of an abstract inbox list. • Support alternative display metaphors to implement further, more gamified representations of user interfaces, like the small post car collecting mail, requires the interface to have abstract definitions of the allowed user actions. <p>Social Objectives:</p> <ul style="list-style-type: none"> • Allow selfmaintaining community building. Users can score points in various ways, for example by giving answers on user questions that were marked as useful by other users, or by participating in events. Increasing "reputation" points will highlight the answers of a user or even grant additional privileges, up to moderation and administration privileges on the upper end. • Supporting collaborative work or discussions about certain technical problems. This requires respective server implementations and the statistical analysis to allow people with similar questions, interests or knowledge to find each other. 	<ul style="list-style-type: none"> • Consumer with unmet needs • Individuals seeking training 	<p>(New) Filipino screen reader user: Looking for Tagalog supported Web API</p>	
<p>Payment Across Platform</p>	<p>The following objectives should be met any where on the platform that a financial transaction occurs, such as in Open Marketplace or in Assistance on Demand.</p>	<ul style="list-style-type: none"> • Mechanisms to facilitate the establishment of contract relationships, taxation, control of the tasks addressed for users legally certified, etc. • Smooth and reliable support of finegrained payments, leveraging on emerging micropayments technologies, which will be fair and flexible enough to support the charging of products as well as the usage of services. • Support of the interactivity and the collaborative capabilities among the service providers and the consumers, in an enhanced form of crowd financing especially in the area of accessibility features. • Reliable and flexible infrastructure that will cater for the charging and payment functionality in order to alleviate the service provider from these burdens and to support the consumer in a seamless and friendly way. • Detailed logging and accounting information describing the charging and the usage of the services upon request. • Updated information, upon request, on the progress of the crowdfunding activity and appropriate handling (e.g. return, if necessary) of the funds. 	<ul style="list-style-type: none"> • Back-end support for logistics, finance, security, tracking bids and user requests, etc. 		