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VOIP Telephone System / Call Center / Online Intake Project

Grantee Name:	Southwest Virginia Legal Aid Society, Inc.	TIG Grant:	#11037
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I. PROJECT GOALS & OBJECTIVES

The goal of this grant was to install a VOIP Telephone System and Call Center using internet technologies that improve the effectiveness and efficiency of the SVLAS Intake System and that increases applicant access to legal services and information. Our objectives were:

OBJECTIVE 1: Replace the three separate landline phone systems with a program-wide VOIP system thereby reducing future phone costs by \$8,000 per year and providing the basis for intake system improvements.

OBJECTIVE 2: Using the new VOIP system and internet technology, improve the efficiency and effectiveness of the intake system while increasing client access to services.

OBJECTIVE 3: Using the new VOIP system, install recorded, problem-specific, legal information messages that enable callers to determine their eligibility for services so that at least 80 callers per month access legal information specific to their particular problem.

We achieved each of these objectives with no significant changes. We are very happy to report that this project has been overwhelmingly successful and we are proud of the access we make available to applicants, the improvement in staff morale because applicants do not complain that "they can't get through", the reduction in how many applications are "incomplete" and the tools that management now has to evaluate job performance and intake trends; all while reducing monthly costs by about \$900 per month.

II. EVALUATION DATA & METHODOLOGIES

The methods and data collection defined in the Evaluation Plan were executed as planned and included the following:

A. Comparison of budget data before and after installation to compare costs

B. Using our KEMPS case management system to:

- compare the number of completed applications pre and post VOIP installation
- compare the number of rejected applications (due to "incomplete application") pre and post VOIP
- compare the number of rejected applications (due to program ineligibility or non-priority) pre and post VOIP

C. Using our new VOIP Telephone and Call Center System reporting to:

- compare the number of dropped calls pre and post VOIP installation
- determine a monthly count of the callers who listen to the recorded legal information

D. Combining data from both our KEMPS case management system and new Call Center reporting:

- to compare each intake worker's calls/intakes per time period, pre and post VOIP installation

E. Using GoogleAnalytics, track the number of times a mobile phone user uses the GoogleTalk link on our public website to call directly to our Intake Unit.

F. Developed Surveys to:

- survey the Call Center Intake Workers, pre- and post-install, asking them to describe the problems with the intake process as well as their overall job satisfaction
- survey of applicants to the Call Center, pre- and post-install, asking applicants how many calls they had to make to reach an intake worker and whether they had listened to the legal information messages. This was a telephone survey done by the Call Center Intake Workers as they interviewed applicants.
- survey Hotline Callers to the Call Center using a written survey to assess their satisfaction with access into the phone system and legal information. 262 surveys were mailed with only 12 returned, which did not provide the information we sought.

III. SUMMARY OF MAJOR ACCOMPLISHMENTS AND RECOMMENDATIONS

Accomplishments:

A. This project has increased applicant access into, and satisfaction with, our intake system by:

1. allowing applicants who call a field office to transfer themselves to the Call Center,
2. eliminating applicant complaints that they could not "get through" to the Call Center,
3. installing a Googletalk link on our website so that mobile phone users can connect to the Call Center,
4. connecting our Kemps Online Application to our phone system,
5. expanding our intake hours from 27 hours per week to 35 hours per week, and
6. allowing applicants to leave their phone number for an automatic callback, effectively holding their place in the queue without their having to hold on the line.

B. This project has increased the effectiveness of our intake process because:

1. we replaced our old callback process with automatic callback technology,
2. we are completing more applications. Pre-install we were completing (on average) 275 applications per month with 33% of them being “incomplete” because we could not reach the applicant. Post-install we complete (on average) 300 applications per month with only 8% of them being “incomplete”,
3. we developed legal information recordings that are designed to both inform the caller about Virginia law and also to allow callers to self-identify when they should not apply. Our Intake Workers report the legal information is helpful during the intake process because applicants who listened to that information have a better understanding of the law and our case acceptance process.

C. This project increased efficiency because:

1. staff communication is improved between offices,
2. we have reduced our monthly telecommunication costs by roughly \$10,000 per year,
3. the EPIC Call Center system allows for real-time supervision, remote intake and management, and reporting which has been helpful for spotting trends, for planning and for making staffing decisions,
4. applicants calling our field offices now have the ability to transfer themselves to the Call Center which frees field office staff to do substantive work.

Recommendations:

We recommend:

- eliminating callbacks unless they are done with an automatic callback system,
- using your phone messages to help callers self-identify whether to complete an application, and
- installing a VOIP phone system both to increase intake effectiveness and to reduce long-term telecommunication costs.

Future Steps:

We will change our legal information messages as our case acceptance policies change and may add more topics. We will continue to analyze our Call Center data and structure our intake system accordingly.

IV. IN-DEPTH ANALYSIS OF ACCOMPLISHMENTS

We eliminated all landlines and replaced them with VOIP lines. We installed an EPIC Call Center along with an Allworx VOIP Telephone System. Those systems have been programmed to work seamlessly together and are also integrated with our KEMPS Client Database. The result is that applicants now have multiple points of access into our intake system. [See Appendix 1 – Points of Access.](#)

Accomplishment A: This project has increased applicant access into, and satisfaction with, our intake system.

1. **Applicants are treated better because they do not feel they “get the run around” by having to call multiple times to reach an intake worker:**

Before this project was implemented, many applicants called our field offices either because they did not know about our centralized intake unit or because they had called our intake unit multiple times and then called our field office out of frustration. Now applicants who call field offices to apply for services can be transferred within the phone system to the intake unit without having to hang up and call another number. This happens two ways: (1) the field office auto attendant systems allow callers to transfer themselves to

the intake unit without ever having to speak to a field office receptionist. The message explains the process for applying (calling the intake unit OR completing an online application) and gives callers the option to push a button to transfer directly to the intake unit OR (2) if the applicant reaches the receptionist, she can transfer the call directly to the intake unit with the press of a button.

We surveyed our field office receptionists pre-install and post-install – asking them to keep track of every call to their office, for a one-week period, where the caller was seeking to apply for services. The survey question was: “Did you call our Intake Unit before calling here?” Pre-install, 25% of those callers had called the Intake Unit before calling the field office because they could not get through to the intake unit. Post-install, only 5% of callers said they had tried calling the Intake Unit first.

In addition, post-install there was an 80% decrease in the number of calls to the field offices where the caller was seeking to apply. We interpret the decrease to mean that the vast majority of the people who call our field offices seeking to apply for help are listening to the auto attendant message and transferring themselves to the Call Center and because they are getting through to the intake unit and thus not calling the field offices out of frustration.

2. Applicants are not complaining that they cannot “get through” to the Call Center:

Our dissatisfaction with our intake system, and the constant complaints from applicants that they could not get through to our central intake unit was the reason that we applied for this TIG grant. Pre-install field office receptionists and the dedicated intake workers received daily complaints from applicants who complained they could not reach an intake worker.

These complaints were exacerbated by the callback policy we had prior to the Summer of 2011. For years we had allowed callers to the intake unit to leave a voice-mail message for a callback when all the intake workers were busy. We kept track of the number of unsuccessful callbacks made, marking those applications as “incomplete”. When we applied for this TIG grant, incomplete applications were running at 33% of all intake being done and was draining our intake resources.

We took what seemed to us to be a drastic move in the Summer of 2011 while we were waiting to learn if this TIG grant would be approved. We simply stopped callbacks. We did not have a “zero” or “receptionist” option on our central intake phone. An amazing thing happened. We began to talk to more eligible applicants and the number of “incomplete” applications dropped dramatically. We heard fewer applicant complaints. When we freed up our intake workers from doing callbacks, they were freed up to take live calls. [See Appendix 2 – Intake Comparison Pre and Post Install.](#)

This chart compares applications during four eleven day periods of time. The first period of June 6-16, 2011, was during the time we still allowed applicants to leave their information for a callback. We completed 275 applications, of which 33% were incompletes and 53% were eligible applicants. Compare that to the period of September 6-16, 2011 after we implemented our no callback system. We had completed 301 applications, only 9% of which were incomplete and 63% were eligible. This shows that simply stopping callbacks increased the number of eligible applications by 10% and reduced incomplete applications by 24%.

Finally, compare the eleven day period of April 8–18, 2013 after this project was complete. At this point our project was completed finished, we had two fewer intake staff, we had expanded our intake hours, and we had the benefit of automatic callback capability. Our intake workers completed the same number of applications as the period described above, but only 8% were incomplete and the number of applications for eligible applicants has risen to 67% of all applications!

At this point we are keeping track of applicant complaints on an ad hoc basis; all field office receptionists and intake workers are asked to notify me of any applicant complaint about any intake points of access. We are receiving no complaints from applicants saying they cannot reach an intake worker.

3. **Mobile Phone users with a data plan, who visit our website, can call our Call Center directly from our website without having to hang up and dial a phone number:**

Using Google Analytics, we see that we average 10 website visitors per month connecting to our Call Center from our public website. This is just one more point of access into our intake system.

4. **Integration of our Call Center with our Kemps Online Application:**

During the programming process, we struggled with the mechanics of giving online applicants preference within the call center system since callers do not “hold” in the traditional sense. We had originally planned to give online applicants a special code to use to “move to the front of the line” in an intake phone queue; however, since most callers get through to an intake worker the first time; and the ones that don’t can choose to “hold” their place by leaving their phone number; we did not want to setup a queue that would involve applicants holding on a line.

We programmed a separate “auto callback” module within the EPIC Call Center software for online applicants and our public website encourages online applicants to apply during intake hours. If they do, our Kemps online application “pushes” their phone number into that special auto callback module and our intake workers prioritize those calls.

One unanticipated outcome from this project is that we are seeing a decline in the number of online applications submitted. Pre-install, online applications represented 20% of all intake. Post-install they have dropped to 15% of all intake.

Given that we push applicants toward the online system with our auto attend messages and website; this decline doesn’t make sense unless it is simply that applicants are able to reach our intake workers by telephone and, so, are not forced into doing an online application.

We are proud that we were the first legal aid program in Virginia to implement an online application (in August 2008) and although we have worked hard to improve our online application and bridging it to this new phone system; the data we indicates talking to applicants by telephone remains the most effective way to do intake for our program because online applicants who do not apply during intake hours turn into “callbacks” and we do not reach 28% of them to complete an application.

5. **Expanded Intake Hours by 30%:**

In August of 2012, about three months after the EPIC system was stable, Anita Robinson, the Managing Attorney of the Intake Unit and Mary Parsons worked together to evaluate how the intake workers were coping with the new system, looking at the number of intakes completed and their level of satisfaction. The end result is that, in mid-August 2012, we increased our intake hours by 30%. We now keep the intake unit open every work day and stagger lunch breaks. Our intake hours are 9 a.m. to 4 p.m. Monday through Friday which means that we have 35 hours of intake access versus 27. And we are doing this with two fewer intake staff.

6. **Automatic Callback allows applicants to hold their place without holding on the line:**

When applicants call the Call Center, the phone system automatically rings to the first available intake worker. If all the intake workers are busy, the caller is given the option to leave their telephone number for

a “call back” if they plan to be at that number for 60 minutes. Callers are told to call back at a later time if they do not get a call within 60 minutes or if they cannot wait 60 minutes for a return call.

Post-install surveys show that 82% of the callers who left their number for an automatic callback did receive a callback.

Accomplishment #B. Our Intake Process is More Effective:

1. Automatic Callback is also effective:

While it is important that applicants have improved access into our intake system, another important feature is that intake workers simply spend no time on callbacks. The phone system does it for them!

Our intake workers log into the EPIC Call Center software at the start of each intake day. Their EPIC screen shows calls waiting in automatic callback (both telephone callbacks and online callbacks). The intake worker simply clicks a button to indicate she is ready and the telephone system initiates the callback. If the call is answered, the telephone system rings the intake worker and she completes the application. If the call isn't answered, the intake worker has spent no time other than clicking that number on her EPIC screen.

Pre-install, our intake workers surveyed 256 applicants to determine how many times that applicant had tried to reach an intake worker. Pre-install, 30% of applicants had called the intake unit at least twice. Post-install, the same survey done with 125 applicants show that only 15% had called more than one time. And, as reported above, 82% of the callers who left their number for an automatic callback did receive a callback.

We also surveyed our Call Center intake workers pre- and post-install. Pre-install our intake workers were frustrated with our callback system. They felt they were inefficient because they so often could not connect to applicants who had left a callback number. They were frustrated because they were working hard yet applicants complained constantly that they could not get through or that “nobody had called them back” even when they had been called.

Post-install the intake workers believe that client access is vastly improved and the frustration to both applicants and staff is gone. They credit the automatic callback and direct transfer of intake callers from the field offices as the two best features of the new system.

Post-install the only problem the intake workers report is about call quality. We knew going into the project that VOIP call quality is not as clear as landline calls. While call quality is occasionally a problem, that complaint is offset by the improved intake system and cost savings that have resulted from this project.

2. We are completing more applications for eligible applicants:

[Appendix 2](#) shows that, pre-install, during the period of June 6–16, 2011, our Call Center completed 275 applications of which 53% were for eligible applicants. Compare that to the post-install applications completed April 8–18, 2013. You will see that our intake unit completed 300 applications for that period, of which 67% were for eligible applicants. This was a 10% increase the number of applications completed for eligible applicants at a period when we had two fewer intake staff. [See Appendix 2-Intake Comparison.](#)

3. We developed legal information recordings to help applicants self-identify when or when not to apply:

We created scripts for divorce, custody and bankruptcy; the three areas of law most frequently requested. Our scripts combine information about Virginia law with our case acceptance policies. We want to provide

information that will help applicants to self-identify whether or not to apply; our goal being to minimize the amount of time that our intake workers spend doing ineligible applications. [See Appendix 5 – Legal Information.](#)

We also redesigned our public website to reflect the same legal information as that recorded in our telephone system so that online applicants have access to the same information as telephone callers.

Callers are listening. Data generated from the EPIC Call Center software shows that we average 1211 calls per month to the EPIC Call Center and that 31% of callers choose to listen to the legal information. Of those who chose to listen, 66% listened to divorce, 22% to custody and 12% to bankruptcy.

Is it working? Call Center data shows that of the average 1200 callers to the Call Center each month, 28% dial directly to the intake worker rotation, 31% listen to legal information, and 41% simply hang up. While we have no way to know why callers hang up, a large percentage have to be callers who cannot leave a call back number and thus hang up to call back at a later time; but many of them may be people who have self-identified that they do not qualify for SVLAS services. And remember, we are hearing no complaints from applicants saying they are unable to apply.

Post-install the intake workers report that callers who have listened to the legal information messages better understand what they are told and have a better understanding for our case acceptance policies. This was an unexpected but very welcome outcome of the legal information piece of this project.

Finally, one of the items we had planned to measure post-install was the number of applications that were rejected due to program ineligibility or non-priority; as a way to determine if our legal information messages are achieving their purpose. Unfortunately, our data has been skewed by the fact that our case acceptance policies were significantly changed in the Fall of 2012 as a result of the funding cuts that led to the layoff/reduction in hours of the equivalent of 3 attorneys and 3 non-attorneys. The number of applicants rejected for “non-priority” has increased significantly (by 47%) due to the changes in our service delivery plan.

Accomplishment #C: This project has increased efficiency:

1. Staff Communication is Improved:

All staff can see the extensions of every other employee and thus know their call availability. Intercom calls can be made to staff in outlying offices by dialing their extension or by connecting via the Allworx telephone software. Before this installation, staff placed long distance phone calls to staff in other field offices since we had three independent analog phone systems.

2. We have significant cost savings:

We are saving approximately \$900 per month as compared to our telecommunication costs pre-install. These cost savings are from dropping landlines and replacing them with a VOIP lines which are much cheaper, because these VOIP lines include enough long distance minutes to almost eliminate outgoing long distance costs, and because our incoming toll-free per minute cost is slightly cheaper.

3. The EPIC Call Center system includes several features that improve efficiency:

a. Call Center Intake can be done remotely:

The EPIC Call Center allows for intake to be done from any location with internet access. An example is that we were able to retain a very experienced attorney (she formerly was the intake unit managing attorney)

when we moved to Richmond. She logs into the EPIC Call Center from her home to do intake and supervise non-attorney intake staff. It is helpful that our central intake unit began to operate “paperlessly” in CY2008 so our KEMPS software was already modified for paperless supervision before this project began.

b. Call Center Supervision:

The Managing Attorney for the Call Center sees an EPIC Real Time Monitor screen which allows her to see what each intake worker is doing at any given time without leaving her office. She can see when they are on the phone, when they are “idle” and when they have taken a “break”. In fact, breaks have been coded so that she can tell when each intake worker is at lunch versus taking other breaks [which is important to know because of time limits without ever leaving her office. A screenshot of the EPIC Real Time Monitor screen is attached. [See Appendix 3 – Call Center Supervisory Screen.](#)

c. Reallocating field office staff to the Call Center:

Funding losses during this project have prevented us from pulling field office staff into the intake rotation in times of crisis; which was one of the initial goals. However, we did add one field office person temporarily into the intake rotation during a three month period when one of our dedicated intake workers was on extended leave. It was a successful test to show that we have the capability; we just don't have the staff to do it in any on-going way at this time.

d. Call Center Reporting can be compared to KEMPS database reporting:

In addition to the Call Center Managing Attorney's real-time supervision of the work done by the intake workers, she also has data from the EPIC system that can be exported into Excel and, thus, compared with data from our Kemps database. An example of such a comparison is attached.

This report is for the period of September 4– 14, 2012 and the data is separated by intake worker. The **gray** section shows incoming calls **by intake worker**. The **blue** section shows automatic callback (outbound) calls, the **pink** section shows the number of applications completed and the **peach** colored section shows the number of hours worked, by intake worker, from our KEMPS database timekeeping system. So in one report management can see the number of calls each intake worker answered, the number they returned, and how many eligibility slips they completed; and compare that information to the number of hours each intake worker worked each day. It can be a very helpful comparison when you are making decisions about staffing.

Having such data gave us the option to consider, in September of 2012, which non-attorney staff to lay off as the result of funding losses. We even gave serious consideration to closing our call center and reallocating field office support staff to do that same function since we they have the capability to login to the EPIC system and do intake from their offices. In the end, it was decided that closing the intake unit was not in the best interests of the program; but the layoffs did result in two fewer staff in the intake unit with the remaining intake staff completing roughly the same number of application as before that layoff.

[See Appendix 4 – Phone Data and Intake Data by Intake Worker.](#)

4. Allowing field office applicants to transfer to the Call Center within the phone system frees up field office staff to do substantive work.

As reported under A1, post-install there has been an 80% decrease in the number of calls to the field offices where the caller was seeking to apply. We interpret the decrease to mean that the vast majority of the people who call our field offices seeking to apply for help are listening to the auto attendant message and transferring themselves to the Call Center. We have reported that outcome as an example of increased

applicant access; but is an increase in efficiency for our field office staff who are now freed up to do more substantive work..

IVa. INFORMATION FOR MULTIYEAR OR MULTIPLE PROJECTS.

N/A

V. FACTORS AFFECTING PROJECT ACCOMPLISHMENTS

Loss in Funding: The project affected by our funding losses was our plan to pull field office staff into the Call Center to do intake if the Call Center experienced crisis or disaster. Although we did pull one field office employee into the Call Center in a limited way for a short period of time, and have thus proven that it can be done, we have not implemented this piece of the project in a meaningful way. We simply do not have enough support staff in each field office to make this happen.

Telephone Vendor's Project Manager fired mid-project: we are a program that serves a large rural area and were limited to only two telephone vendors willing to both install and maintain a VOIP phone system for our three field offices. Even though the vendor we chose was experienced and has met our expectations in every other way; their key person heading our project was fired early on and this caused the most complex pieces of our project to languish while we waited for the rest of their technicians to be trained. This caused us to be late on one milestone and was stressful.

Multiple technology vendors: bridging the Kemps Online Application to our EPIC Call Center was the most difficult piece of the entire project because we had four entities involved in making this happen. The four are: Kemps Caseworks who modified our online application; Venture Technologies who had to grant permission for our Kemps database, which is hosted on their servers, to communicate with our new Call Center; Hungate Business Services the installers and programmers of both the Allworx phone system and EPIC Call Center; and Computer Telephony Distributing who was a subcontractor for HBS as expert programmers for the EPIC Call Center software. This collaboration actually started on November 14, 2012 but wasn't complete until February 19, 2013.

VI. STRATEGIES TO ADDRESS MAJOR CHALLENGES

Our major challenge was coordinating the multiple technology vendors – keeping them working cooperatively to achieve our goals. Our strategy was dogged persistence.

VII. MAJOR LESSONS AND RECOMMENDATIONS

Automatic Callback Technology: while automatic callback technology is an LSC technology baseline requirement, and it was simply a feature that came standard in our EPIC Call Center; we believe it is the most important piece of this project. For years we allowed applicants who couldn't get through our intake system to leave messages and we worked hard to return their calls; and in doing so wasted a ridiculous amount of intake resources with little result.

We recommend that any legal aid doing callbacks without automatic callback technology should at least experiment with stopping callbacks altogether and analyze the results. Read page 5 of this report to learn how successful this was for us even before we had automatic callback technology.

VOIP lines can be hacked: Both of our VOIP internet providers have been hacked once since installation, resulting in several hundred dollars of international calls that were subsequently forgiven by the vendors. While our telephone vendor worked to tighten security to prevent this from happening again, it is

not certain that it won't. If you are considering moving to VOIP, be aware of this, try to protect against it, and know in advance whether your VOIP/long distance provider will credit your account should a hack occur.

Insufficient Infrastructure: Although both vendors who responded to our RFP did on-site inspection prior to quoting the job; when HBS began the install they discovered some of our computer cabling was insufficient and we also had to replace a network switch. While our costs ended up being nominal, we recommend that you set aside some extra money to improve your infrastructure as issues will arise that you do not anticipate.