A 21st Century Solution for Communities and Police

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March 2016
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Executive Summary

Our mission is to make policing better and communities safer. PACT is a new independent service that uses automated messages to create conversations between community and police. By using text messages, citizens can provide immediate feedback about their interactions with local police as well as opinions on law enforcement policies. PACT addresses the asymmetry between community-police relations and declining community policing budgets. The product is unique in that it is a two-way channel that takes in feedback from community members and sends out responses from police departments. Data-driven decisions coupled with action-oriented responses are the foundation of our theory of change.

This paper is based on nine months of research and prototyping with community members in Palo Alto, East Palo Alto, and the Palo Alto Police Department. The goal of the paper is to provide detailed information on PACT and situate the development of a new community policing initiative in the current policy environment in the United States. The paper will be updated in Summer 2016 to include data and learnings from our Spring 2016 pilot program.
I. Introduction

Policy Window

Media coverage of police-involved shootings, protests, and racial profiling in the United States has increased awareness of tense police-community relations in recent years. The coverage has prompted scrutiny of police departments. Greater attention is now paid to organizational structure, technology, oversight, and training to improve police and community outcomes than before the deaths of Michael Brown and Eric Garner. The Obama Administration commissioned a task force that called for innovative methods to address the lack of data and information about police-community interactions. Discussions on modern policing and civil rights have become prominent in both government policy and public dialogue. In short, new opportunities to improve community policing have emerged at federal and local levels in the United States.

Police departments are community service providers that typically operate without detailed information on officer performance or real-time data on community opinions. Most data on police-community interactions are generated when officers respond to emergencies or issue citations, both of which are generally negative experiences for community members. Based on Palo Alto Police Department estimates, community contact that results in a report or citation only accounts for 20% of interactions. The remaining 80% of interactions are never recorded, analyzed, or otherwise used to understand community concerns, answer questions, or assess officer performance. These remaining interactions are often positive and include officers helping civilians, issuing warnings instead of citations, and engaging in dialogue.

Police departments are aware of this problem. Departments throughout the U.S. have experimented with ways to generate community feedback. Most frequently, community members must visit a police department in person and fill out forms in order to provide positive or negative feedback. Community members who wish to ask questions about policing, raise concerns on specific issues, or provide information are limited to inconvenient options. They must call the station, attend city council meetings, or participate in other public events. Police departments have tried surveys with little success. In Palo Alto, for example, a mail-in survey yielded a 19% response rate.
exclusively from English speakers. These barriers to communication often place an unreasonable burden on community members and prevent ongoing conversations between police and communities. In addition, community members who are most likely to interact with the police (such as low-income residents) are often those who are least able to overcome these barriers to provide feedback about their interactions. The result is an increase in distrust, frustration, and at times hostility.

When budgets are cut, community policing initiatives are often the first to be affected. Discretionary funding is frequently redirected toward tactical equipment and other departmental priorities. Body-worn cameras are being implemented into many police departments, and the procurement and management of those cameras and their data are budget priorities. Despite financial constraints, forward-looking police departments are searching for new ways to perform community policing. There is a strong need for police to better understand local issues, build trust, and analyze off-the-record interactions between officers and civilians. These efforts must be low cost and deliver high returns on investment in order for them to be feasible.

Overall, lack of communication and useful data hinder efforts to improve policing and make communities safer. In part, this helps to explain the tensions between police and communities. Police officers feel under-appreciated, misunderstood, and powerless as stakeholders. Throughout police departments, from chiefs to patrol officers, there is a fear that their city will become “the next Ferguson.” Police chiefs are concerned that poor officer performance and/or community tensions will go unnoticed and lead to larger problems. Without data and communication, there is a concern that “bad apples” will slip through the system’s cracks. Community members feel unsafe and distance themselves from their local police. In many areas, both government and community leaders fear that the situation is poised for more violence, protests, and lawsuits between community members and police.
BOX 1 | Our mission is to make policing better and communities safer.

Method

We use an automated messaging system to create conversations between community and police. Those conversations are grounded in two methodological priorities: i) robust quantitative and qualitative data sourced from the community and ii) action-oriented responses sent from police to the community.

Impact Metrics

We measure our success on our financial sustainability, as well as the four key impact metrics:

- Quantity of messages
- Quantity of messages from high-contact communities
- Opt-in participants
- Amount of donations generated

Theory of Change

PACT creates a engagement loop between police and community. Through PACT, community members submit feedback and police departments provide information to address local concerns. As a result, community feedback is followed by a direct response to that feedback. This loop between community members and police is designed to generate trust and legitimacy.

Greater trust will strengthen the engagement loop and increase the amount information flowing to the police, and provide communities with more agency in the policing of their communities. Community-sourced information will both improve the quality of policing by increasing police awareness of community needs. Most importantly, more informed policing will improve the safety of the community and everyone in it. The cycle is self-reinforcing and provides sustained benefits.
II. Policy Environment

Decentralized Data

U.S. police departments are managed at a municipal level and may or may not be subject to civilian oversight or independent auditing agencies depending on local laws. As a result, inconsistent requirements across municipalities make data analysis more difficult. For instance, some departments collect data on each stop or interactions while others do not. Many departments are reluctant to share the data, and most of the data is not computer readable—all of which make public and academic review challenging. Frequently, there are discrepancies between the data collected by independent monitoring groups, government oversight agencies, and law enforcement. When there is consistency, the primary data that are collected are usually crime statistics, and these do not directly address day-to-day experiences or non-criminal interactions between police and civilians.

Without a national mechanism for community-side data collection, there is no cohesive body of research based on mixed-methods (qualitative and quantitative) analysis. Existing research on criminal justice and reform includes analyses of policing in the United States, and new statistical methods are being used to identify police discrimination. Still, additional quality data is needed to supplement both research and policy making.

Available data highlight racial and ethnic discrepancies related to policing and criminal justice. African-Americans and Latinos who are mistreated by the police are less likely than other racial groups to engage in the complaints processes available to them through their local police department or independent auditor’s office. These broad inferences are made based on data from reports from various police departments, social psychology studies, and ethnographic studies. The majority of research on actual interactions in the field is fragmented between local police departments, academia, and third-party monitors. This currently limits the scope and quality of policy recommendations to legislators and administrators.
Efforts to update municipal policies regarding local police departments, civilian oversight, and community engagement measures in the U.S. are necessary. Recent incidents, including police-community confrontations in major U.S. cities, have created a policy window to enable reform. However, the absence of data and information concerning police interactions can lead to weak and ineffective policies.

**Underfunded Community Policing**

Community policing is an organizational strategy designed to address crime, social disorder, and fear of crime. It is based on the principle that systematic use of partnerships and problem-solving strategies can align police services with the needs of community stakeholders. Though the strategy is not a panacea, it is widely promoted by law enforcement agencies at the municipal, state, and federal levels. Unfortunately, many local police departments say they lack the resources to implement community policing programs. As a result, community policing units are often decommissioned or reassigned to other tasks when financial resources are no longer available.

**Regulation and Oversight**

There are many forms of police oversight models: independent auditors, hearing boards, administrative prosecutorial units, systematic audits of high-risk police programs, and all sorts of hybrid models. Depending on the model, these bodies work in parallel with police internal affairs investigations of civilian complaints, audit police programs, and/or make recommendations based on past misconduct complaints. Over 200 police oversight entities exist in the U.S., but the majority of U.S. police departments have no independent or external police oversight body. Many of these oversight mechanisms are put in place after crises arise, and establishing oversight preemptively remains a contentious issue. Politics are not the only barrier to oversight; the cost of operation and administration can also be prohibitive.
Civic Engagement

Arrest, incarceration, and low-education levels empirically decrease an individual's civic and political participation.\textsuperscript{9,10} We observe a similar relationship between community members’ interactions with the police (e.g. detention) and civic participation in the form of formal complaints. The underlying concerns of community members are trust, privacy, and faith in the impartiality of police departments’ review processes. These concerns are particularly important to people of color, and we expect that they are also related to socio-economic status. Currently, the primary means of providing feedback about interactions with police are formal complaints and commendations. Some municipalities also maintain a dedicated phone number or email address for civilians to provide feedback. Neither option has successfully addressed the community concerns detailed here.
III. Human Centered Design and Research

Design Process

Our solution was conceived in the Hasso Plattner School of Design at Stanford in the course “Design Thinking for Public Policy Innovators” in the spring of 2015. The solution was built on the principles of human-centered design. We started with empathy-building and need-finding in our target population, namely demographic groups that have high contact with local law enforcement and the criminal justice system. This early design work was a qualitative exercise, not a statistically robust observation of behavior. We focused on interviews with young men of color to define the problem from their perspective and to narrow the focus of our solution to improving the relationship between community and police through a better feedback system. We developed a broad range of intervention mechanisms through the ideation process. The possible concepts ranged from redesigning current police complaint processes to smartphone oversight and monitoring applications. We prototyped these different concepts and experiences in order to narrow the list of potential solutions down to a mobile application ready for low-resolution testing. In April 2015, we tested the system through simulated police vehicle stops. To create a high-fidelity environment, one team member played the role of a police officer while the other team member sent real-time text messages to the participants cell phone after the police interaction ended. We varied the level of tension and the type of confrontation in the interaction, and we provided the participant multiple methods of providing or declining to provide feedback. By doing so, we were able to observe the driver’s reactions and how they interacted with our application as a result.

The next step was to perform the same level of qualitative research with our second primary stakeholder—a police department. We chose to develop a partnership with the Palo Alto Police Department (PAPD) in the product development phase. There were many benefits of working with the PAPD, but three criteria were particularly important at this stage: i) a forward-thinking and cooperative police chief, ii) a community with low levels of crime, and iii) a community with high levels of diversity. Palo Alto fit this
last requirement given its daytime demographics, when the population more than
doubles due to commuters and workers who enter Palo Alto from surrounding areas.

In designing PACT, we thought about the police in terms of three primary segments—
leadership, rank and file, and administrators. We further subset those groups into
officers that supported our intervention and those that did not. These categories
helped us to understand the different needs of each group and to develop PACT’s
value proposition. We worked directly with Police Chief Dennis Burns, a Lieutenant,
and their technology officer. We accompanied patrol officers on daytime, night, and
weekend shifts. These ride alongs helped us understand the needs, constraints, and
behaviors of patrol officers in their natural environment, and complemented our other
research. Our priority was to determine if and how our product could be deployed by
the police force without substantive amendments to current procedures and behavior.

Our next iteration of prototyping and interviewing refocused on community members.
We walked through Palo Alto and performed interviews and microsimulations.
Community feedback reinforced our prior finding that independence from the police
and anonymity were key issues, particularly for Latinos. Other groups we interviewed,
particularly under-30 users, were concerned with the speed and ease of using the
system. We met with community organizations in East Palo Alto and spoke with long-
time residents who have been deeply involved with local policing issues, including
community-policing. This feedback was adopted into our product as we continued to
refine the user experience.

Academic Research and Public Reports

We conducted a broad literature review of academic and media articles on criminal
justice reform, relevant legislation, community policing, civic engagement,
methodology, and local community issues. Early research included a focus on criminal
justice issues in the United Kingdom, but we have since narrowed our scope to
exclusively address the United States, with an emphasis on California.
Criminal Justice Reform

We familiarized ourselves with local and national law enforcement issues to better understand the field’s current needs, obstacles, and attitudes toward data-driven reform. In the public sector, the office of Community Oriented Policing Services (COPS) in the U.S. Department of Justice has published valuable resources, including the “Final Report of the President’s Task Force on 21st Century Policing,” and “Implementing a Body-Worn Camera Program: Recommendations and Lessons Learned.” President Obama has used the reports’ results to advocate for reform. The DOJ has also published useful reports through the Bureau of Justice Statistics entitled “National Data Collection on Police Use of Force,” and “Police Behavior during Traffic and Street Stops, 2011.” The FBI’s Uniform Crime Reporting reports supplemented this data. By the Numbers: A Guide for Analyzing Race Data from Vehicle Stops, by Lorie A. Fridell, assisted with interpreting these reports.

In addition, we focused on current events related to law enforcement, such as the FBI’s director’s controversial claim of Ferguson’s “chilling effect” on police officers and a New York Times report on the disproportionate risks black drivers face during vehicle stops. We reviewed the Los Angeles Police Department’s (LAPD) use of force protocol after a recent increase in the number of police shooting deaths of suspects. We researched police use of force, controversies over police brutality, and police shootings in the U.S. to better understand existing data and ongoing public dialogue.

Legislation

Federal law does not require municipal or county police to publish their duty and procedure manuals, so we focused on public regulations and protection of sworn peace officers. Sources like the “Pocket Guide to the Public Safety Officers Procedural Bill of Rights Act” provided simple and valuable legal background surrounding police personnel files, privacy laws, and officer rights. Understanding these protections are particularly important, as they are a priority for police unions. The unions, such as the Palo Alto Police Officer Association, play a critical role in supporting or opposing changes to officers’ duties. This research was specific to California.

In addition, we researched case federal and state case law in order to gain insight into how police regulation and oversight is likely to change. In New York City, a pending
lawsuit alleges that the NYPD practiced institutionalized discrimination against minority officers.\textsuperscript{23,24} Police reform is not without political and organizational delays, so we also explored the challenges of implementation. For instance, police officers and unions have taken a strong stance against all reform and legislation following the death of Freddie Gray in Baltimore in 2015.\textsuperscript{25} Despite resistance at a local level, our research indicates that at the national level, legislators and the public are increasingly focused on criminal justice reform.\textsuperscript{26} Over half of U.S. states have enacted some type of criminal justice reform in recent years.\textsuperscript{27}

**Community Policing**

Community policing is the primary space that PACT operates. The landmark report for companies and organizations in this field is the “Final Report of the President’s Task Force on 21st Century Policing.” The report establishes recommendations, guidelines, and national priorities for policing nationwide, and pays particular interest to community relationships and technology.

We supplemented government reports with private and non-profit research. The “Performance Metrics to Improve Police Community Relations,” released by the RAND corporation, as well as “Stop and Frisk” data from the New York Chapter of the American Civil Liberties Union were particularly useful.\textsuperscript{28,29} We also reviewed research that explored the relationship between budget cuts, police effectiveness, and the need for strong community-police relations to keep cities safe.

Community policing is a broad topic and in the course of our research, we learned about policing as it relates to high-contact populations, mental health, city services, and race. High-contact populations consist of individuals who are more likely to encounter the police, such as ethnic minorities or inner city youth, and often times the least likely to provide feedback about police performance. Mental health issues are closely related to community policing programs and city services. We also explored current practices, procedures, and administrative processes related to community policing and community feedback.\textsuperscript{30}

We researched issues from both police and community perspectives. Specifically, reports from police organizations and leadership forums were useful in providing
insight into how leaders and administrators view the future of community policing. Mainstream news sources emphasized how the different actors within police and communities can interpret the same event and language differently. Qualitative academic research provided another layer of depth. Valuable sources included “Victimization, Types of Citizen-Police Contacts, and Attitudes Toward the Police,” by Paul E. Smith and Richard O. Hawkins in the Law & Society Review, and “Community Policing: The Police as a Community Resource,” by Quint C. Thurman.

Finally, as part of PACT’s downstream effect, we were interested to learn about the relationship between community-police interactions and civic engagement. This research is ongoing, and our findings to date have focused on the link between minor citizen interactions with the police and lower election turnout at a later date.

**Methodology**

Our methodology research focused on surveys, feedback mechanisms, and experiment design. It is well documented that despite adoption of best practices in survey design, participation rates in surveys are low across all media. We focused on the method and outcomes from local Bay Area cities in implementing surveys. In Palo Alto, for example, a mail-in survey yielded about a 20% response rate and only received responses from English speakers. San Mateo County has prioritized efforts to solicit feedback online as part of their public “Shared Vision 2025” strategy, but outcomes are pending.

Other existing mechanisms for community members to provide feedback to police officers around the United States were also unsuccessful. For example, the Chicago Internet Project (CIP) was a web-based survey implemented through a partnership between the Chicago Police Department and researchers at the University of Illinois-Chicago that did not achieve sufficient participation rates. We used the CIP as a case-study to understand feedback mechanisms and current shortcomings in the field to inform our prototyping and design.

In addition, we performed surface-level research on behavioral science and psychology as it relates to survey respondents. Much of this research drew on the Behavioural Insights Team in the United Kingdom, which is a government-supported agency that
applies behavioral science and psychology to inform and improve policies and services, including law enforcement and civic engagement.\textsuperscript{39}

**Palo Alto**

According to the 2015 census, Palo Alto is 65% White, 6% Hispanic/Latino, and 2% African American. Over 80% of its 25 and older population has at least a Bachelor’s Degree, and 98% graduated from high school.\textsuperscript{40} However, Palo Alto’s estimated daytime population doubles. Much of that growth is explained by people that live in neighboring cities but commute to work in Palo Alto. The commuter population is more racially and socio-economically diverse. This has at times caused tension with the PAPD. Concerns of racial discrimination and community protests led to the resignation of Palo Alto Police Chief Lynn Johnson in 2008.\textsuperscript{41} These events still resonate with African-American and Latino communities in neighboring cities, especially East Palo Alto. Thus, much of our community research focused on East Palo Alto residents and San Mateo County’s efforts to promote public feedback and transparency online.\textsuperscript{42,43}

Finally, we used reports from the city manager’s office and local media outlets to stay current on governance and community issues in the area.\textsuperscript{44}

**IV. Our Product: PACT**

PACT is an automated messaging system that creates conversations between community members and police. The questions asked and data collected are designed around the needs of each individual community so that hyperlocal insights can be drawn from the results. This also allows us to ensure that questions are translated into the most frequently used language in a given community. PACT not only provides analysis and policy recommendations, but also serves as a channel for police departments to directly respond to community members based on the community-sourced data and feedback.
Community Member UX

PACT requires an sms-capable cell phone and a cellular network. The entire user flow occurs within the user’s native text-messaging application. Text messaging is the most widely used feature of smartphones, and it is also the most frequently used feature among 18-29 year olds.\textsuperscript{45} The Pew Research Center estimates that 90 percent of Americans have cell phones, making text messages the most widely accessible communication channel available.\textsuperscript{46} Limiting the requirement to text messaging helps ensure that the user returns to engage with the service even when messages from PACT are delayed or the user engages in another activity. Unlike apps, text messages are almost constantly used. The user experience (UX) consists of four primary steps:

**Step 1a**

After any interaction, an officer will hand a card to the community member. The card will have a phone number and a short authentication code, along with other information about privacy and anonymity. The card provides instructions describing how to participate.

**Step 1b**

The PACT platform is open for any community member to participate, even if it is not in direct response to an interaction with an officer. If a community member has not had a recent interaction with an officer, he or she will receive a separate set of questions and are not presented with a card or unique code.

**Step 2**

After texting the PACT number, a brief conversation is started. The questions address topics like officer professionalism, procedure, clarity, local community needs, local law enforcement policy decisions, and demographics. PACT primarily uses multiple choice formatting, but free-form responses can be accepted if requested by the police department and community in advance. Different users are displayed different questions and pathways based on interaction type and other factors.
Step 3
One of our goals is to continue the conversation beyond the first interaction so that PACT can inform the community of the police response to community concerns and provide greater value. If the user chooses to opt-in, we encrypt the phone number and continue the conversation. If the user does not opt-in, we delete the phone number and data is assigned to a randomly generated unique identification number. Feedback remains anonymous to police departments at all stages.

Step 4
Response messages authored by the police department are sent by PACT to opt-in participants. Brief questions may also be sent to opt-in participants in order to gain additional insights on current policies, decisions, and the state of community concerns.

Police UX
PACT involves the police in two-way conversations with communities and minimizes disruption to standard police behaviors. Police departments are an active stakeholder and contributor and are treated as such throughout the entire process.

Step 1
Preliminary meetings with the departmental leadership, representatives from patrol teams, union leadership, and administrators are used to determine which community/policy issues are most pressing and which data should be collected.

Step 2
Police patrol teams are provided information and training on the use of the cards, the anonymization process, and the desired outcomes. PACT answers questions and concerns and seeks to develop buy-in amongst all segments of police users.

Step 3
Police cards are randomly distributed to all participating officers.
Step 4
After any direct interaction with community members, participating officers hand out their cards. The officer then informs the community member of the reason and intent for the card and the PACT service.

Step 5
PACT delivers aggregated, anonymous summary statistics and policy recommendations to the department leadership. Versions of this information are also shared with the public through PACT’s website.

Step 6
Department administration provide PACT with response messages and PACT sends those messages to opt-in participants and publishes them online and through channels such as social media.

Step 7
PACT delivers updated aggregated summary statistics and policy recommendations to the department leadership. Publicly shared information is updated regularly.

Verification
Each PACT card displays a 6-digit alphanumeric string used to verify that an interaction occurred. If the user states that an interaction occurred, the user is asked if a card with a verification code was provided. If it is indicated that a card was provided, the user is prompted to enter the code. After correctly entering the code, the user proceeds. If the user makes three incorrect code entries, the user is allowed to proceed and subsequent responses are marked as unverified. If it is indicated that no card was provided by the officer, the user is allowed to bypass the verification step by providing other information, and subsequent responses are marked as unverified.
Subsetting

Each verification code is associated with an officer, beat, and shift. The codes are randomly assigned to officers by randomly distributing the cards. This allows the data to be filtered by shift, beat, and officer while maintaining complete anonymity.

The data can be filtered by any user response or user-reported covariate. The most useful are age, language, home zip code, self-identified race, and type of interaction (e.g. stop or service call). Throughout our interviews, community members were adamant that we include demographic data, as it provides important information about police interactions and the variation of police-community relations across different populations.

Compliance

The verification process is also used as a compliance metric. We are able to compare the rate of verification code usage within beats or shifts. For example, if we observe a code usage rate from one officer that is significantly lower than other comparable officers, there may be a compliance issue. We can also perform similar analyses over time. Officers remain anonymous, but this helps to identify if a problem exists so that it can be corrected.

The ‘Builder’ Tool

The PACT administrative system is called the Builder. The Builder is a user interface that allows an administrator to rapidly design a comprehensive logic tree to guide the delivery of information to users. The administrator can establish conditions that must be met in order for questions to be displayed or hidden from the user. This allows PACT to customize the experience for different communities and groups of users. The administrator is also able to randomize messages within and across groups.

The ability to create normal conversational patterns is also an important feature of our builders tool. When prototyping, community members complained that the interaction felt too automated and sterile, and that their feedback was not acknowledged. We increased the flexibility of our platform to deliver questions that acknowledge
responses and adjust questions based on responses or combinations of responses. We do not use true artificial intelligence; instead, PACT uses display and skip logic to create an exhaustive logic tree that maps all potential conversation pathways. This allows for more targeted insight and a more natural user experience for community members.

![Figure 2: The Builder Tool](image)

**Data Management and Support Services**

Data management and privacy are important concerns for both community members and police officers. Our practices are based on recommendations from the California Attorney General’s Office.\textsuperscript{47,48} PACT uses a third-party applications management interface (API) to deliver the messages to community members. Data are temporarily stored on PACT servers before being downloaded onto an encrypted disk. All phone numbers are immediately replaced with a key. Opt-in phone numbers are retained with the key and all other phone numbers are automatically deleted from the system. Police and community are not allowed access to the original dataset, and no third-party is allowed access to personal identifiers (i.e. phone numbers).
PACT integrates directly into the departmental procedures and processes with minimal disruption. We provide the following public relations materials and support, customer service, officer information sessions, data management, and data analysis.

V. A Social Enterprise

PACT is designed as a sustainable social enterprise that generates revenues to finance its operations and scale in the future. The business model is explained in detail below.

Customer Segments

PACT serves the needs of police departments and community members, making these two groups our most important customer segments. Police departments are PACT’s revenue-generating customers. The police can be further segmented by the way they interact with PACT and the value it creates for them. The three most relevant police sub-segments as well as community members are described below.

Police Leadership

Police chiefs and management, are the key decision makers. Although budgets must be approved by city governments, the department leadership decides what tools, technology, and services to put in the budget.

Police Administrators

Relevant administrative personnel work on public affairs and outreach for the police department. These employees are responsible for managing use of PACT in their department and interacting regularly with PACT to determine department needs and outputs. Depending on the department, they may or may not be sworn officers.

Patrol Officer

PACT is designed to generate an output that can improve policing. In this sense, the value of PACT for a patrol officer is that it provides a new tool that makes their jobs
Community Members

Community members—people that live or sleep in a city, residents, commuters, and visitors—use PACT for free. Palo Alto, for example, has a “sleeping population” of about 65,000 but that number swells to nearly 140,000 due to workers, students, and visitors who come to the area and commuters who travel through it. Currently, police departments including Palo Alto are only able to solicit feedback from local residents, which ignores large groups of people they serve. PACT bridges this gap by enabling any civilian who interacts with a local police officer to provide valuable feedback regardless of the civilian’s resident status.

Community members who use PACT are given the option to direct a small donation to local community organizations for free with each use. As a result, target customers can more broadly be defined to include partnering organizations that benefit communities, victims of crime, and wounded police officers. Organizations submit financial records, independent audit results, and impact results to be considered for PACT donations.

Value Proposition

PACT offers different value propositions to police departments and community members.

Police Departments

- Includes police in local conversations and helps police derive valuable information from the community.

- Enables police to improve their transparency and accountability while limiting their risk. Public reactions to police at public forums and on social media, for example, are hard to predict and may lead to confrontation or negative reactions.

- Minimize administrative burden while enhancing community policing efforts.
PACT generates revenue from annual service fees that vary according to department size, goals, and needs (e.g. type and frequency of analysis). Service fees include a fixed fee for design, training, and operations, and a variable fee based on the volume of responses and number of survey changes in a given year. Departments are able to cap the number of responses according to budgetary constraints. PACT will require a minimum one year contract with police departments due to the long public sector business cycles. Despite low switching costs, police departments are typically consistent customers and average technology turnover within departments is low. Pricing will vary based on the level of customization desired by police departments and the frequency of reports we provide at the leadership level. We are testing different aspects of this model, including different service bundling, tiered pricing, subscription pricing, and corporate partnership options.

PACT’s costs include its desktop application and website administration, messaging fees based on volume, marketing, community research, and personnel. PACT uses a lean business model and uses existing APIs to leverage cellular networks to minimize communications infrastructure management and maintenance.

Community Members

- A direct channel to police that is convenient and reduces the burden on the individual. The product used exclusively with text messaging and is available multiple languages based on the demographic needs of the local community.
- Community members receive responses about their concerns authored their by police department.
- All responses are confidential and anonymous.
- Public feedback and transparent data. Feedback is summarized, analyzed, and shared with the public online and sent directly to users who opted in, helping users learn about community issues and providing a tool to improve police transparency and accountability.
PACT makes a small donation to a local organization each time the service is used. Users can select from three different community-based organizations that have been vetted by PACT or choose ‘no preference.’ Organizations will evenly represent community services and organizations supported by police officers e.g. victims or fallen officers funds. PACT will fund its community involvement through corporate sponsorships and will initially target high-profile Corporate Social Responsibility (CSR) programs. Because of national interest in police-community relations, we believe PACT will successfully secure development grants from public funds as the company grows.

Measuring our Impact

We measure our impact quantitatively and qualitatively. First, we demonstrate a financial return on investment to police departments. The average salary for a police officer in the Bay area is $53,043. Police departments are under increasing budget pressure and are less likely to be able to maintain traditional community policing teams. In addition, police departments must allocate administrative resources to handle service complaint reports—a lower form of complaint than reports of force and other misconduct. Service complaint reports receive lower priority, are less likely to meet the minimum requirements for disciplinary action, and are less likely to result in a resolution that is satisfactory to community members. In the end, resources are detracted from more serious complaints of misconduct and outcomes do not improve community relations. PACT does not replace existing communication channels, especially the formal complaint process. Instead, community members are able to directly engage the police in a new way. Every interaction is given equal weight, and resolutions and data can be delivered back to the community more quickly. As a result, police departments will be able to focus their investigative teams on high-level complaints and process formal complaints more quickly than they are currently able to.

We will also measure our impact quantitatively by measuring the number of users and interactions on the platform. We pay particular focus to high contact communities, and facilitate relationship building with communities of color under the age of 30. For users that opt-in for their number to be saved by PACT, we will be able to gain additional insight about the impact that the service has on their lives through follow-up questions. Finally, we will be able to track the number of donations generated by PACT users on the platform and measure PACT’s social impact in terms of dollars.
Customer Acquisition and Marketing

PACT’s client acquisition strategy for police departments relies on personal contacts in the Bay Area who have offered to introduce us to police leadership at local departments throughout California. We believe that personal introductions are a promising way to pursue early partnerships with police departments. When we have traction and fully validate and measure PACT’s impact, we will widen our customer acquisition strategy beyond our existing network. At that stage, we will also approach the Community Oriented Policing Services (COPS) office in the Department of Justice to help increase demand for PACT’s services.

Acquiring police department clients is only one part of implementing PACT. Community buy-in and adoption are essential. Currently, we are employing a grassroots strategy to raise awareness about the service and acquire users. We are forming a volunteer team to contact media outlets in the area of use, including radio, television, newspapers, and websites. That team will perform outreach through community networks like parent-teacher associations, school newsletters, sports leagues, and neighborhood associations. We will also participate in civic forums and public hearings to raise awareness among local leaders and officials.

Organizational partners are an important component of the marketing and implementation of PACT. Organizations that will likely collaborate with PACT and receive user-generated donations through the platform will be thoroughly screened. Since we will be implicitly endorsing these organizations, we will examine financial records, impact metrics, and program information to ensure that the user-generated donations will make a direct impact in their local community. These organizations can help PACT better understand local communities, raise awareness for the service, and increase client acquisition. As a result, we are seeking to partner with community organizations with large existing networks that have the willingness and capacity to help us acquire users.

To fund user-generated donations for local organizations, PACT will pitch its program to Corporate Social Responsibility (CSR) departments at large local companies with the interest and capacity to improve community policing in the Bay Area. At this stage, we
will pursue potential partnerships with prominent Silicon Valley corporations with the resources and platform to help us increase our impact.

BOX 2 | The PAPD - A Case Study

**A New Partner**
PACT advisor Judge Cordell introduces team to Chief Dennis Burns, Palo Alto Police Department’s (PAPD) Chief of Police. Chief Burns is particularly enthusiastic about bringing PACT to Palo Alto. We are assigned two main contacts in the PAPD to work with in developing the product: a Lieutenant who had moved up through the rank and file, and the department’s technology lead who is not a sworn officer but has experience in innovation in the public sector.

**Building Relationships**
PACT team members shadow PAPD officers on ride alongs. We observe pre-shift responsibilities, the working environment (vehicle, neighborhoods, break room, etc), patrol duties, interactions with pedestrians, vehicle stops, and security sweeps. We also are given access to these patrol officers to ask more sensitive questions about their work and their interactions with the community.

Nov. 2015
PACT continues meeting with primary contacts to understand how the product can be implemented and to troubleshoot design questions. Through discussions and police interviews, we modify the UX to increase officer compliance and develop a plan to stagger product roll-out (patrol) team by team. We chose to implement the product first with teams that were enthusiastic about PACT. Although this generates biases in community responses, it is intended to build momentum in the department and elicit quality feedback from officers.
**Turbulence**
Over the winter holiday, our PAPD contacts become increasingly difficult to reach. In December, we prioritized community research and product development on the technical side over regular meetings with the PAPD. An officer-involved shooting leads to the death of Palo Alto man over the Christmas holiday. The department also experiences substantive administrative and personnel changes, but delayed disclosing this information. The launch date is postponed multiple times and communication begins to breakdown.

**Gut Check**
During the communication breakdown, a key ally in the PAPD voices concerns about key features of the service that had not previously arisen. Primarily, there is a concern about officers handing out cards and taking a “customer service-oriented.” These features were based on the research and priorities established by the department. We conduct additional interviews of police officers from different department and focused on the cards as a potential friction point. Officers affirm support for the use of cards as a verification measure that does not disrupt natural officer behavior. We proceed with the product as is and contact new departments.

**Takeaways**
The experience forced us to reconsider our assumption and iterate on the early validation process. Also we now better understand the needs and constraints of our police clients. Administrative, personnel, and leadership transitions along with the Christmas Day shooting made the department highly risk-averse and unwilling to pilot the solution. Organizational dynamics were a critical reason why one department was ultimately unwilling to be an early mover with PACT. In contrast, similar transitions in other Bay Area departments have created opportunities and led to new relationships for PACT. Managing relationships and formalizing partnerships early will be a key to PACT’s success. One particular contact in the PAPD was particularly helpful and generous in his feedback, support, and connections. We will have to identify this person as we work with other departments and agencies.
Competitors

Other methods to gather data about police-community interactions have produced limited results. The vast majority of police departments do not currently capture interactions between the police and the public that do not result in citations, detention, or arrest. Warnings, assistance (such as giving directions), or casual interactions generate no paperwork and therefore no data for police leadership. Public surveys are designed to measure general opinions toward the police rather than specific interactions. The Chicago Internet Project, referenced in the literature review, was a survey to measure public attitudes toward police and the mail-in survey in Palo Alto was similarly designed to gauge public opinion.

Third-party solutions are good supplements for oversight and regulation, but they provide few mechanisms to verify that an interaction occurred. They also tend to exclude the police from the conversation. One of the primary competitors is Mobile Justice, the American Civil Liberties Union mobile application to record police misconduct. The app allows users to record and report interactions with law enforcement and automatically shares the footage and reports with local ACLU affiliates.\textsuperscript{51} The Five-O app allows community members to rate, reviews, and store details on users’ interactions with local police officers and is intended to identify and react to police abuse. The system then compiles results to generate “a dynamic grade for courtesy and professionalism.”\textsuperscript{52} Witness is a more generic app that is intended to allow users to livestream in emergency situations and has been used to document human rights abuses, including use of force by the police.\textsuperscript{53}

Social media apps provide informal channels for community members to engage with the police and/or provide positive or negative feedback on interactions. Websites and platforms include Facebook, Twitter, Instagram, and Yelp. Content is user-generated and unrestricted. Police departments commonly use at least some social media sites, such as Facebook and Twitter, to broadcast information such as traffic alerts or emergency information, and sometimes to respond to community concerns. However, we learned that police leadership and administrators are hesitant to engage with users on social media and use the sites sparingly. Social media is unrestricted, and engaging with the public risks increasing departmental exposure during controversies and amplifying negative feedback. Social media also does not filter internet trolls,
increasing the amount of feedback that is not useful and extremely difficult to verify. While social media offer new channels for police-community interactions, police consider them too risky to use extensively.

**Advisors**

PACT has a distinguished team of advisors. The Hon. Ladoris Cordell is a retired judge of the California Superior Court and the former Independent Police Auditor for the City of San Jose. She is an expert on police performance and community engagement. Sharad Goel is an Assistant Professor at Stanford in the MS&E department with a PhD in applied mathematics. Sharad focuses on applying modern computational and statistical techniques to areas including police practices, discrimination, and voting. Kate Eves has a MA in criminology and is on sabbatical from leading the Homicide and Suicide Investigation Team in the Ministry of Justice in the United Kingdom. She is an expert on police training and national-level policy. Mugambi Jouet has an MA in public policy and is currently a Stanford Law School fellow focusing on U.S. criminal law. He is a regular media commentator and has expertise in areas including policing, race, and socio-economic rights.

**VI. Next Steps**

**Pilot Program**

PACT will first be used in a limited-time pilot program in partnership with a police department in the Bay Area. The pilot program will allow us to see how people use the service, better understand how interactions occur on the platform, and develop future iterations to improve on the current version of PACT. In addition, a limited pilot program reduces risk and uncertainty for both PACT as well as a partnering police department. By signing a memorandum of understanding for a specific time period, we believe that police departments will be less risk-averse than an open-ended program. The pilot program will also help us limit costs as the service is implemented for the first time. Finally, the pilot program will help us develop PACT’s impact by allowing us to
compile results and strongly demonstrate “proof-of-concept” to potential police partners, users, and financial supporters.

Police Departments

Moving forward, PACT will require a memorandum of understanding (MOU) for its pilot program to secure a partnership and prevent the type of client turnover that occurred with the Palo Alto Police Department. The pilot program is intended to help us understand how police leadership, administrators, and officers react to PACT’s services once results have been compiled and shared.

PACT will help provide officer training, marketing materials, administrative support for the partnering police department to implement the service. Officer training will be geared toward answering questions, establishing buy-in with the rank-and-file, and teaching officers how to use the service in a way that integrates easily with their existing training materials. Our current plan is to research officer training materials that are currently being used and to then develop and write a training script for PACT.

Partners

During our work with the Palo Alto Police Department and our focus on Palo Alto and surrounding areas, we identified potential community organizations to partner with. The most notable of these was One East Palo Alto, which strives to empower and improve communities in East Palo Alto. We presented an early version of PACT to the director and staff of One East Palo Alto, which led to more introductions and presentations to city officials in East Palo Alto. Community partners helped us better understand local issues, potential questions users would have, and misconceptions about the service based on our materials.

As we secure a partnership for the pilot program, we will conduct additional research on local organizations in the community where we hope PACT will be used. We will likely establish these relationships through introductions, rather than cold calls, and will continue to focus on well-established, prominent local groups as we seek partner organizations.
Outcomes

In addition to demonstrating PACT’s effectiveness, we hope to gain a greater understanding of specific issues during the course of the pilot program. Compliance and participation are key concerns. First, officer compliance is a critical element of PACT’s services. We will gauge officer attitudes toward the service to provide support to assist officer compliance rates. In addition, we will develop incentive structures that inform our contracts with police departments to help ensure officer compliance. For example, built into the fixed cost is a projection of the number of messages to be sent and received on the platform. Departments that project a high number of interactions will be charged based on this projection regardless of whether or not the number reaches that level. As a result, we hope to incentivize departmental leadership to work with officers to ensure high compliance rates.

In addition, public participation is an equally critical component of the program. We hope that PACT’s strong value proposition and organizational partnerships will help create high participation rates. PACT will continue qualitative research and human-centered design to best understand how and why people use the platform. We will continue iterating on the service as we attempt to develop natural language program methods so that we can intake conversational language in addition multiple choice formatted responses. We will also market PACT services intensively in local communities. Our goal is for communities to be aware of PACT’s services independently of whether or not they interact with an officer, or an officer distributes a PACT card. In the case of officer non-compliance, our system is designed to allow people to provide feedback on their interaction. Awareness is the key to this feature.

The pilot program will help us understand how to administer PACT’s services and the work and costs involved with scaling the company. This will include consideration of data management and analysis, providing customer service, public marketing, and the actual costs of operation. In addition, the pilot program will help refine how we monitor and evaluate PACT’s social impact qualitatively and quantitatively. Our goal of the pilot program will be to understand what would be required to scale PACT at a national level.
Works Cited


http://www.jstor.org/stable/3052811?seq=1#page_scan_tab_contents


