

Phones against corruption: preliminary findings of user experience research

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ABSTRACT:

There is presently much economic activity and growth in Papua New Guinea (PNG). However, these increasing resources face considerable capacity gaps at national and subnational level in terms of implementation and financial management, which undermine effective delivery of decentralised services and open up spaces for corruption. It is important to minimise the risk of corruption, which can be done through various means, including citizen participation. In the communal societies of PNG, it is often difficult to report corrupt practices. This being said, most citizens do not know how to denounce corruption. Corruption reporting mechanisms need to be expanded across the country, in a context of limited reach of most media and communication technologies, with the exception of widespread mobile phone coverage.

The Department of Finance (DoF) has established, with support from the Provincial Capacity Building & Enhancement Program, an option for DoF staff to anonymously report cases of corruption using mobile phone text messaging. All reported cases are referred to the DoF's Internal Audit and Compliance Division for further investigation, in collaboration with relevant state bodies. Depending on the success of this project, the SMS service may be opened up to the public.

This paper presents preliminary findings of user experience research conducted with DoF staff. User experience research has been undertaken in order to: determine the effectiveness of the pilot; recommend any changes to the service; and determine whether or not the service should be opened up to the public. Two methodologies have been employed: a quantitative survey of users during a given time period, using additional questions sent via mobile phone text messaging, and a series of focus groups, generating qualitative data. It is intended that the paper would be useful for government departments and organisations with interest in utilising mobile phone technology for strategic purposes and those who view corruption as a human development challenge in a growing economy.

INTRODUCTION

In recent years, there has been much economic activity and growth in Papua New Guinea (PNG) [1]. At present, there are economic challenges, due to the lower than anticipated prices for gas and oil [2,3] and slow trade growth [4]. There remain considerable capacity gaps at national and subnational level in terms of implementation and financial management, which undermine effective delivery of decentralised services and open up spaces for corruption. It is important to minimise the risk of corruption, which can be done through various means, including citizen participation. In the communal societies of PNG, it is often difficult to report corrupt practices. This being said, most citizens do not know how to denounce corruption. Corruption reporting mechanisms need to be expanded across the country, in a context of limited reach of most media and communication technologies, with the exception of widespread mobile phone coverage [5,6].

PNG is 145th out of 175 countries in Transparency International's Corruption Perceptions Index [7], meaning that the public sector is perceived to be corrupt [8]. PNG is also in the lowest 15% of countries, in terms of its processes for dealing with and controlling corruption, according to the World Bank's Worldwide Governance Indicators [9]. There are various initiatives underway to address corruption, although setbacks have been experienced, notably the disbanding of a prominent anti-corruption taskforce in June 2014 [10,11].

In recent years, the Government of PNG has increased budgetary support to sub-national levels substantially, through the expansion of the Provincial Support Improvement Program (PSIP), District Services Improvement Programs (DSIP) and Local Level Government Services Improvement Programme (LLGSIP) [12,13]. Through DSIP and PSIP, districts receive fifteen million kina per year [13] and concerns about their capacity to spend and account for these funds have been raised [13,14]. The new District Development Authorities (DDAs) manage DSIP and other revenue streams [14,15]. According to one commentator, "there is a serious lack of capacity to effectively utilise available funds and decision-making is often politically driven" [14].

PHONES AGAINST CORRUPTION

The Department of Finance (DoF) has established, with support from the Provincial Capacity Building & Enhancement Program, an option for DoF staff to anonymously report cases of corruption using mobile phone text messaging (or SMS, short message service). Users can choose to receive questions and submit responses in either English or Tok Pisin (a language spoken widely within PNG, and one of the official languages of the country). All reported cases are referred to the DoF's Internal Audit and Compliance Division for further investigation, in collaboration with relevant state bodies. Depending on the success of this project, known as Phones against Corruption (PaC), the SMS service may be opened up to the public.

The PaC service commenced operation in August 2014. By April 2015, two public officials had been arrested for mismanagement of funds worth more than two million US dollars [16]. As at April 2015, more officials were waiting for court decisions and approximately 250 other cases were being investigated [16].

The PaC SMS questions are shown in Table 1 (English only). Each SMS is less than 160 characters long, which is the maximum length of one SMS [17]. The final question is usually followed by a message of appreciation, although during the period of the user experience research outlined below, that particular SMS has been altered, to allow users the option of providing feedback on the PaC service.

Table 1: PaC SMS questions (English version)

Welcome to the "Phones Against Corruption" SMS system to report cases. All information is 100% confidential. Type E for English, P for Pidgin or X to exit.
The case occurred in which Province, District, Public institution? Type answers in this order, separated by commas: Province, District, Public institution.
When did the alleged case of corruption occur?
Select the type of case: Does it involve Financial issues or Non-Financial issues? Type F for Financial issues or NF for non-financial issues.
Thank you. Please describe the case briefly.
Many thanks. We will keep your report confidential and will address it to the concerned authority for their consideration and respective action. Thank you.

The advantages of using SMS include: not requiring specific handset types, as all handsets can send and receive text messages [18]; not requiring specific network types, as all networks can handle SMS traffic (whereas third generation (3G) service or better is required for Internet access and email use); not requiring advanced technical skills [18]; and not requiring users to have credit available in their phones, as services can be established so as to be free to use (as this one has been). Text messaging works well in the PNG context, as long as each message is succinct and clear [17:2].

USER EXPERIENCE RESEARCH DESIGN

This paper presents preliminary findings of user experience research conducted with DoF staff. The research has been funded by the Economic and Public Sector Program. User experience research has been undertaken in order to: determine the effectiveness of the pilot; recommend any changes to the service; and determine whether or not the service should be opened up to the public. The overarching research question is 'What are the experiences of users of the PaC project?'

Research often involves employing more than one research method simultaneously, in order to be able to compare findings generated by different methods. Such a practice helps to alleviate the shortfalls of each research method [19:15,20:243,21:365], meaning that the resulting analysis is more robust than research which relies solely on one method. The process ultimately allows for a greater degree of understanding to be achieved [22:417]. Two research methods have been employed concurrently: a quantitative survey of users during a given time period, using additional questions sent via mobile phone text messaging, and a series of focus groups, generating qualitative data. Combining these two methods was designed to enhance the overall findings, as "interviews and survey responses may provide different lenses on people's perceptions" [22:415].

The survey method is designed to gain responses from a number of people, to a set of questions, in a short period of time [23:35]. Starting from 18 April 2015, PaC users have been given an option to participate in user experience research immediately after reporting an instance of corruption. At the time of writing, the user experience research questions are still in operation ('live'), while the desired number of responses is collected. This paper reports on the responses collected thus far, as at 27 May 2015. As users select the language of their choice (English or Tok Pisin) at the outset of the PaC questions, the additional questions are also in the same language.

An advantage of a survey via SMS is that it can be conducted using mobile phone text messaging with DoF staff members around the country, at minimal cost (compared with travelling to provinces to conduct research). In this instance, it is particularly advantageous as it directly targets those people who have just completed the PaC SMS question series, as the extra questions are following on from the set of corruption reporting SMS questions. Giving users an option to participate in user

experience research immediately after reporting corruption cases would largely eliminate the risk of users distrusting the service's anonymity, which could be jeopardised if a bulk SMS is sent out to previous users soliciting their feedback. Also, users may feel more willing to give negative responses to a SMS survey than they perhaps would in face-to-face interviews. A disadvantage of using this approach, especially if it was used in isolation, would be that if a person finds text messaging challenging, they may find use of the PaC system challenging and they may also find it difficult to report this using the SMS survey.

Focus groups are group interviews, or a group discussion facilitated by one or two researchers. As with one-on-one interviews, the topic of discussion in a focus group is established by the interviewer, who then ideally manages the interaction with flexibility and adaptability [24:3]. In this research project, participants in group interviews have been DoF staff, both users and non-users of the PaC service (in order to preserve the anonymity essential to the service, focus group participants have not been asked whether or not they have used the PaC service). The audio of each discussion was recorded, enabling later transcription and use of direct quotes in research reporting. Using an audio recorder can assist with interpretation and analysis, and it also avoids the distraction of note-taking for all parties involved [25:27]. Discussions were in English, Tok Pisin, or a mixture of both.

Focus groups generate qualitative data (people's thoughts, feelings and perceptions). Focus group members can be inspired by the things other people say, making them more likely to share thoughts, either supporting or rebuking what others have said. During group interviews, as with one-on-one interviews, pre-prepared questions can be re-worded to clarify meaning. Additional questions can be added, if the discussion brings up new, relevant information.

In planning for the series of focus groups, a potential risk was identified, being that due to the face-to-face nature of this method, some staff may doubt that their responses would remain anonymous. This concern was mitigated by conducting a thorough informed consent process, which included providing documentation to each potential participant before each focus group, indicating to participants that their anonymity would be preserved.

This paper reports on findings from four focus groups: one held with staff of the Internal Audit and Compliance Division within DoF, one with officers based at a provincial treasury office and two with staff of district treasuries. Including provincial and district focus groups, rather than conducting focus groups solely in the national capital, addressed a need for balancing responses from Port Moresby-based officers against responses ascertained from officers based in provinces, where there is a different operating context regarding corruption types and communication access.

USER EXPERIENCE RESEARCH PRELIMINARY FINDINGS

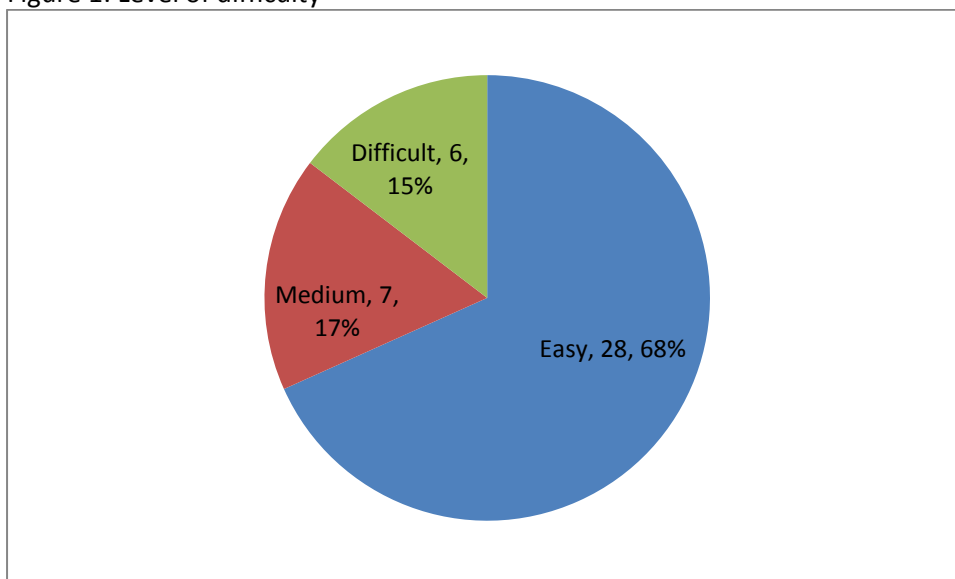
The user experience research SMS questions are shown in Table 2 (English only). Prior to being asked these questions, each user is thanked for their corruption report and asked if they are prepared to answer a few questions about the service. Each SMS is less than 160 characters long [17]. The questions generate primarily quantitative (numerical) data, seeking feedback on the service itself. This data is valuable for reporting on people's experiences of the system, such as whether they found it easy or difficult to use and whether they found it quick or time-consuming. A qualitative question is also asked, to determine whether the user recommends any changes to the PaC service. The final question is followed by a message of appreciation.

Table 2: User experience research SMS questions (English version)

Thinking about the level of difficulty, was responding to the SMS questions easy, medium, or difficult? Text 1 for easy, 2 for medium or 3 for difficult.
Thinking about the time it took, was responding to the SMS questions quick, medium, or time-consuming? Text 1 for quick, 2 for medium or 3 for time-consuming.
Many thanks. Would you be happy to use the SMS corruption reporting system again? Please text 1 for yes, 2 if you're not sure or 3 for no.
Are you confident your report will be actioned by the authorities? Type 1 if you're confident, 2 if you're not sure or 3 if you feel no action will be taken.
Thank you. Would you suggest any changes to the SMS corruption reporting system?

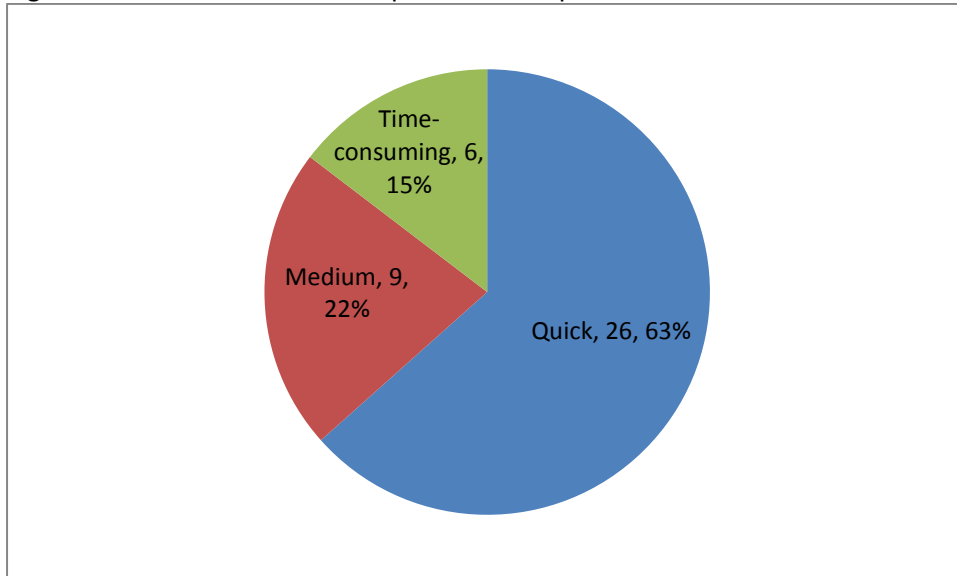
During the period from 18 April 2015 to 27 May 2015, 264 individuals (unique users) sent text messages to the PaC system. Not all users would have reached the end of the PaC question series, which means that not all 264 people would have been presented with the chance to respond to the user experience questions. Of these 264 users, 46 completed the submission process for a corruption report and were asked whether or not they would be willing to answer a few more questions regarding the PaC system. Of these 46 people, 41 people said that they would be willing to answer a few more questions (89.1% of the people given this choice), while 5 chose not to participate. Thus, 41 users responded to the optional series of SMS questions about their experiences of using the PaC service. This represents a sample of 15.5% of the total number of service users during that period, or, more importantly, 89.1% of the people who completed a full corruption report. When asked about the level of difficulty of using the PaC service, over two-thirds of respondents indicated that they found the service easy to use (see Figure 1).

Figure 1: Level of difficulty



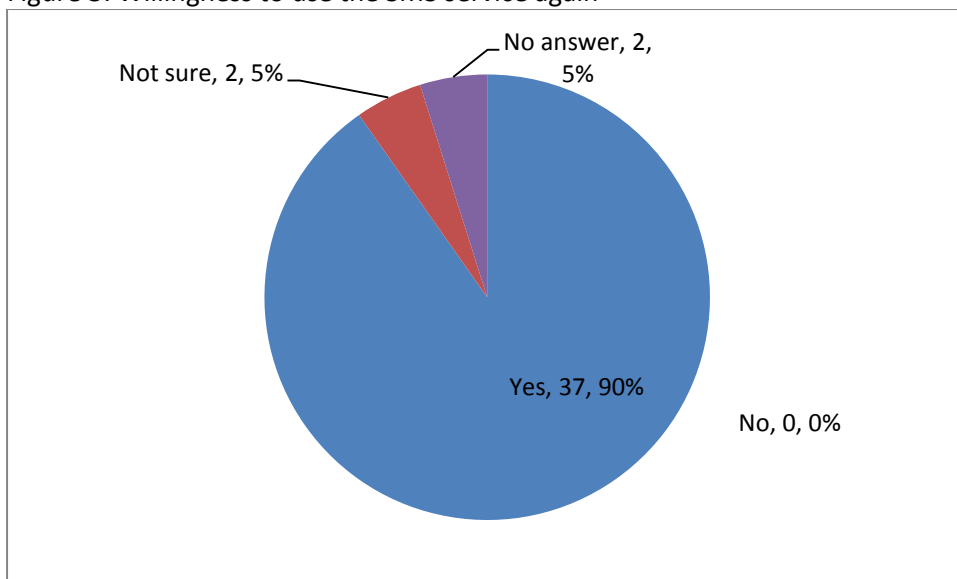
When responding to a question about the length of time it took to respond to the SMS questions, again roughly two-thirds of responses were positive, indicating that users found the PaC system quick to use (see Figure 2).

Figure 2: The time it takes to respond to SMS questions



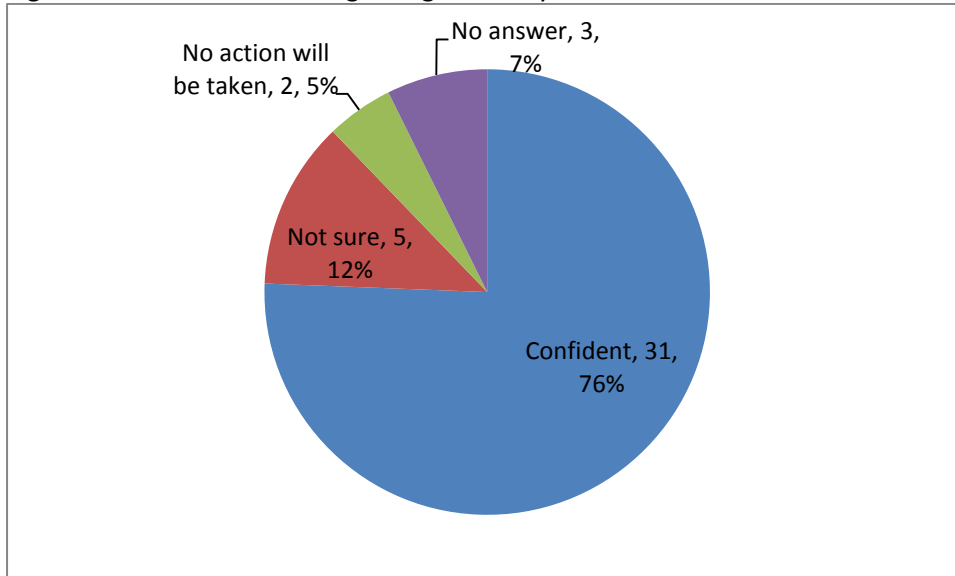
Users were asked about whether or not they would be happy to use the SMS system again. As can be seen in Figure 3, 90% of respondents (37 out of 41) replied suggesting that they would be happy to use the PaC service again.

Figure 3: Willingness to use the SMS service again



With respect to whether or not users were confident that their reports of corruption allegations would be actioned by the authorities, three-quarters of respondents suggested that they felt confident that action would be taken. As can be seen in Figure 4, 12% of respondents (or 5 out of 41) were uncertain as to whether or not any action will be taken, while two people felt that no action would be taken and three people did not respond to the question.

Figure 4: Confidence level regarding action by authorities



Regarding any suggested improvements to the service, most users did not respond to this question. Of those who did, ten indicated that they were happy with the service and/or that they would not like to see any changes made to the service. One respondent suggested that personal responses to users, including follow-up, prompting questions would be better than an automated system. One respondent suggested that it would be valuable to send progress reports regarding investigations to individuals who had submitted particular allegations. Another respondent requested that their allegation be investigated and one more sent a question regarding the status of a particular allegation. One respondent reinforced the need for honest behaviour amongst public officials and two more respondents simply replied with a greeting.

A key focus group was undertaken with staff from the Internal Audit and Compliance Division (IACD) of the DoF. IACD has a crucial role in analysing and assessing corruption reports received in all forms: PaC SMSs, letters, phone calls, and so on. Investigations are undertaken regarding allegations for which there is enough information.

Regarding the PaC SMSs, IACD staff members said that they felt that the system was effective at gathering information, but that there is a need to encourage users to send more specific details. This sentiment was repeated by several focus group attendees and the exact kind of helpful detail that IACD would like to have was explained by one member as follows:

“And specifically, if they can send the name of the particular company, if they make mention of the name of the person or if they specifically name the amount. Or if they could specifically mention the cheque number, the detail, that really helps us.”

Another theme that was returned to throughout the discussion was the need for IACD to have more resources at their disposal to be able to review the SMSs received and subsequently conduct investigations. The need for resources was expressed as follows:

“A couple of serious cases have been taken up already. And it also places some challenge on us on the part of the resources that we need to put into it, as we are faced with an additional task on our part. It will put pressure on the resources that we have in terms of manpower and finance, to really

undertake, immediately undertake some of these serious issues that have been SMS-ed through this program.”

Another theme that was returned to several times during the discussion with IACD staff members was the need for the PaC service to be promoted repeatedly to DoF staff in Port Moresby and at provincial and district treasuries:

“One: It should be effective if we publicise it. [If] we have that regular publicity in the provinces and districts and [it] encourages people to come out. And two: We need to have those resources, like we already been mentioning. The two issues here. Finance and staff: we have to get separate. We can’t engage, like, right here we are struggling to use our resources. Resources, funds, manpower, you look at logistics, all that type of thing.”

IACD staff members were asked about whether they would suggest any changes to the wording of the PaC SMSs. To refresh their memories, papers were handed out showing the wording of the text messages (see Table 1). The staff members all said they did not want any changes to be made to the SMSs. When asked about whether more specific details should be requested in the SMSs, they reviewed the wording of the questions and said that they thought it was satisfactory. They suggested that awareness messaging about the service should encourage people to provide as many relevant details as possible.

With regard to the question of opening up the service to the public, IACD staff members suggested that this should not occur in the near future. After some discussion, the group members concurred that the first step to be undertaken should be repeated awareness campaigns about the service within DoF. Secondly, participants recommended that the service could be extended to other government agencies, but only after arrangements are put in place so that IACD can work collaboratively with relevant sections of other departments to investigate cases. Thirdly, participants suggested that the service should be extended to the public at a later date, only once the system is working well for all government agencies. At this time, IACD does not have the capacity, or the mandate, to deal with reports from members of the public regarding corruption allegations that could relate to various sectors and agencies. A group member expressed concerns with this rhetorical question:

“Looking at the number of SMS coming in, assuming that it’s going to go to public now, you just imagine the, the, the inflow of this SMS that will come in and our capacity to assess, you know what I mean?”

Focus group members from IACD generally liked the idea of opening up the service to other government agencies, but were concerned to ensure that a system is put in place for dealing with the anticipated reports before awareness campaigns are directed to staff of other agencies, as indicated in this way:

“It should include other agencies and also, on the other side, we should look at the constraints faced by our officers here. If we agree that it should include other agencies and then we see the number of our investigators here, how can they handle this huge number of... [complaints]?”

As another officer said, “when we extend, we have to have a program or an agency that, that will deal with these other issues”. This comment led to some discussion about PNG’s planned

Independent Commission against Corruption, but the discussion was limited, as the people in attendance did not seem to know much about the process or the projected timeline for establishment of such a body. In short, IACD members felt that there should not be any expansion of PaC at the present time: “at the moment let’s keep it within finance first and let’s see how effective [it is], and then we can roll it out.”

Overall, IACD staff members were pleased with the PaC service, saw it as a useful way for DoF staff to be able to anonymously report allegations, and found it to be useful for IACD, in order for them to be able to address the issue of corruption. The sentiment of those present was summed up well by one attendee, as follows:

“This is another way of fighting the big giant, from another angle. We are looking at the same giant. People, like police, Ombudsman’s Commission, us auditors within the agencies, Auditors General, we are looking at the same fellow here. How are we going to tackle this fellow? But Phones against Corruption is another way, a small way we try to tackle this issue of corruption in the country.”

Focus groups were also conducted with staff at a provincial treasury office and two district treasury offices. Transcription, detailed analysis and selection of quotations still need to be undertaken regarding these three focus groups. Nonetheless, it was clear from the discussions held that the participants at the provincial level had little knowledge of the PaC service, while district-based officers had no prior knowledge of the PaC service. Given that context, it is unsurprising that district staff suggested that more awareness should be conducted to inform officers like them about the service. There were no changes suggested to the service by officers participating in the three focus groups. District-based officers were particularly grateful about the introduction of the PaC service, saying that it would be very helpful for them, given the pressures faced in their day-to-day work.

CONCLUDING REMARKS

Overall, the findings indicate that the PaC service is working well and providing a useful service. Those PaC users who provided feedback suggested that generally the service is both easy and quick to use. Most respondents suggested that they would be willing to use the SMS service again (90%, n=41). The confidence level regarding follow-up action by authorities was reasonably high, with three-quarters of respondents (76%, n=41) suggesting that they were confident that action would be taken by the relevant authorities, in relation to their corruption report. Most respondents suggested no changes to the service.

Out of the focus group discussions, there were no concrete suggestions regarding changes to the wording of text message questions. Nonetheless, there were suggestions regarding promotion of the service and potential expansion of the service. Overall, the feeling was that the service was useful but that it needed to be promoted more amongst DoF staff at all levels, in particular at district treasuries. Meanwhile, IACD staff members were not keen to see the service expanded widely in the near future. They expressed concerns about the amount of additional resources required to deal with reports coming in through the PaC service and suggested that negotiations would need to take place with other government agencies before the service could be offered to staff of those agencies. They felt that the service should not be extended to the public until a much later date.

The PaC project is one of the first projects in PNG which strategically uses mobile phones to address a felt need. By utilising mobile phone text messaging (SMS), it adheres to published guidelines on the use of mobile phones for development purposes in PNG [17]. The PaC project complements a range

of other initiatives underway in PNG which are aimed at addressing issues relating to corruption. While there are many hurdles to be faced in the battle against corruption in PNG [26], the PaC project makes a positive contribution. It also builds on previous initiatives which have utilised mobile phone text messaging to collect data from across the country [27].

To complete and expand upon the research reported on in this paper, there are several pending processes that need to be completed, including: closing off the SMS survey once a suitable sample has been reached, analysing all of the responses received through the SMS survey, transcribing and analysing three focus group discussions, conducting further focus groups with DoF staff members, and reviewing relevant literature in relation to public financial management and corruption issues in PNG.

Clearly there is a need for further research to be conducted into a number of related areas, including but not limited to: the financial management processes and workplace dynamics in place at district levels, the increasing amounts of funding that are being directed to district levels, and the implications of the new District Development Authorities on the PaC project, financial management processes, corruption issues and other related issues. International literature may provide useful context on areas such as: public financial management, the devolution of service delivery, and corruption issues.

This paper has been presented with the intention that it could be useful for government departments and organisations with interest in utilising mobile phone technology for strategic purposes. It may also be of use for those who view corruption as a human development challenge in a growing economy. Readers who have an interest in the future of the PaC project are welcome to contact the relevant authors.

The authors fully acknowledge that this paper presents only incomplete research results and analysis. Further work is needed and will be undertaken in the coming months. Nonetheless, it was felt that the data gathered thus far is valuable, of interest and worth disseminating. Feedback and suggestions would be most welcome.

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REFERENCE LIST

1. Gouy, J.; Kapa, J.; Moka, A.; Levantis, T., Parting with the Past: Is Papua New Guinea Poised to Begin a New Chapter Towards Development? *Pacific Economic Bulletin* **2010**, *25*, 1-23.
2. Flanagan, P., Papua New Guinea's vanishing LNG export boom. In *DevPolicy Blog*, Australian National University: Canberra, 2014.
3. Flanagan, P., Credit rating a dark cloud for PNG, policy corrections a possible silver lining. In *DevPolicy Blog*, Australian National University: Canberra, 2015.
4. Otor, S., Papua New Guinea: an assessment of trade performance. In *DevPolicy Blog*, Australian National University: Canberra, 2014.
5. Watson, A.H.A., Mobile phones and media use in Madang Province of Papua New Guinea. *Pacific Journalism Review* **2013**, *19*, 156-175.
6. M&C Saatchi World Services; NBC; ABC International Development; Australian Department of Foreign Affairs and Trade *Citizen Access to Information in Papua New Guinea 2014*; 2014.
7. Transparency International Corruption Perceptions Index 2014: Papua New Guinea. <http://www.transparency.org/country#PNG> (25 May 2015),
8. Transparency International Corruption Perceptions Index 2014: Results. <https://www.transparency.org/cpi2014/results> (25 May 2015),
9. World Bank Worldwide Governance Indicators. <http://info.worldbank.org/governance/wgi/index.aspx#countryReports> (25 May 2015),
10. Howes, S., Is Papua New Guinea heading for a crisis? In *DevPolicy Blog*, Australian National University: Canberra, 2015.
11. Walton, G.; Howes, S., Using the c-word: Australian anti-corruption policy in Papua New Guinea. In *DevPolicy Blog*, Australian National University: Canberra, 2014.
12. National Economic and Fiscal Commission *Raising the Bar: The 2013 Provincial Expenditure Review*; National Economic and Fiscal Commission: Port Moresby, May, 2015.
13. Wiltshire, C., Reflections on the PNG Budget Forum: Can devolved funding be effectively utilised. In *DevPolicy Blog*, Australian National University: Canberra, 2013.
14. Wiltshire, C., Without fear or favour? O'Neill's District Authorities to build capacity and consolidate MP powers in PNG. In *DevPolicy Blog*, Australian National University: Canberra, 2014.
15. O'Neill, P., The proposal to establish District Authorities in the provinces of Papua New Guinea. SSGM Discussion Paper Series 2006 Number 2 ed.; Australian National University: 2006.
16. EMTV New Corruption Cases Uncovered with "Phones Against Corruption" Initiative. <http://www.emtv.com.pg/article.aspx?slug=New-Corruption-Cases-Uncovered-with-Phones-Against-Corruption-Initiative&subcategory=Top-Stories> (25 May 2015),
17. Watson, A.H.A., Mobile phones and development in Papua New Guinea: guiding principles. SSGM In Brief 2014/42 ed.; Australian National University: 2014.
18. Watson, A.H.A., Facilitating economic development through the use of mobile phones. In *PNG Update*, University of Papua New Guinea School of Business and the Development Policy Centre, Australian National University: Port Moresby, Papua New Guinea, 2014.
19. Creswell, J.W., *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 2nd ed.; Sage Publications: Thousand Oaks, 2003.
20. Lapan, S.D., Evaluation Studies. In *Foundations for Research: Methods of Inquiry in Education and the Social Sciences*, DeMarrais, K.; Lapan, S.D., Eds. Lawrence Erlbaum Associates: Mahwah, New Jersey, 2004; pp 235-248.
21. Plano Clark, V.L.; Creswell, J.W.; O'Neil Green, D.; Shope, R.J., Mixing Quantitative and Qualitative Approaches: An Introduction to Emergent Mixed Methods Research. In *Handbook of Emergent Methods*, Hesse-Biber, S.N.; Leavy, P., Eds. The Guilford Press: New York, 2008; pp 363-387.

22. Irwin, S., Data Analysis and Interpretation: Emergent Issues in Linking Qualitative and Quantitative Evidence. In *Handbook of Emergent Methods*, Hesse-Biber, S.N.; Leavy, P., Eds. The Guilford Press: New York, 2008; pp 415-435.
23. Neuman, W.L., *Social Research Methods*. 5th ed.; Allyn & Bacon: Boston, 2003.
24. Gillham, B., *The Research Interview*. Continuum: London, 2000.
25. Mangan, S., Qualitative Research Methods in Cross-National Settings. In *Cross-National Research Methodology & Practice*, Hantrais, L.; Mangan, S., Eds. Routledge: London, 2007; pp 19-34.
26. Koim, S., The challenges of fighting corruption in Papua New Guinea. In *DevPolicy Blog*, Australian National University: Canberra, 2014.
27. Watson, A.H.A.; Morgan, E., M-government for courts systems: A data collection trial in Papua New Guinea. In *Commonwealth Governance Handbook 2014/15*, Robertson, A., Ed. Nexus/Commonwealth Secretariat: Cambridge, 2015; pp 34-36.