

OPEN DATA'S IMPACT

INDONESIA'S KAWAL PEMILU

Elections: Free, Fair and Open Data



By Auralice Graft, Stefaan Verhulst and Andrew Young*

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INDONESIA'S KAWAL PEMILU

Elections: Free, Fair and Open Data

Dimension of Impact

- ✓ Improving Government
- ✓ Tackling Corruption and Transparency

Kawal Pemilu (“guard the election,” in Indonesian) was launched in the immediate aftermath of the 2014 presidential elections, as the country was riven by political polarization and the two leading contenders for the presidency traded allegations of vote rigging. Faced with this delicate moment in Indonesia’s ongoing process of democratization, a globally dispersed group of technologists, activists and volunteers came together to create a website that would allow citizens to compare official vote tallies with the original tabulations from polling stations. These tabulations were already made public as part of the Elections General Commission’s (KPU) commitment

to openness and transparency. However, Kawal Pemilu’s organizers played a critical role in assembling a team of over 700 volunteers to digitize the often handwritten forms and make the data more legible and accessible. The site was assembled in a mere two days, with a total budget of just \$54. Its overall impact was to enable citizen participation in monitoring the election results, increase public trust in official tallies, and more generally, help ease an important democratic transition.

Key Takeaways

- Successful open data projects rely and often build on a pre-existing government commitment to openness and transparency. But open data enthusiasts and activists can play a critical role in taking already-released information and making it more accessible.
- When given the opportunity, citizens are willing and able to play a role in digitizing and analyzing data in order to ensure that government is working properly. Kawal Pemilu demonstrates the importance of crowdsourcing, in its various forms.

- Successful open data projects do not require huge budgets or a centralized team. They can be built on a shoestring budget, by dispersed and nonhierarchical teams that may largely consist of volunteers.
- Open data projects that threaten the status quo must guard against hacking and other security attacks. This is an especially important consideration given the rapid and ad hoc nature of many of these projects, which naturally increases their vulnerability.

I. CONTEXT AND BACKGROUND

Corruption in Indonesia

Public demand for transparency, accountability and better government in Indonesia has been growing rapidly since the “Reformasi,” a movement for political reformation that began in the 90s.¹ In spite of this, corruption remains a problem in the country. According to Transparency International’s Corruption Perceptions Index, Indonesia ranked 107 out of 175 countries in 2014. Its Bribe Payers Index ranked Indonesia 25 out of 28 countries in 2011.² According to the World Democracy Audit, Indonesia ranked 88 out of 150 countries in terms of corruption in 2014.³

Corruption has also been evident in the electoral process, and both the 2004 and 2009 elections were characterized by alleged irregularities. Perludem (www.perludem.org), a nongovernmental association for election and democracy in Indonesia, reported instances of money politics, manipulation of vote counts, intimidation and officials taking advantage of government positions to add candidates or campaigns. As Diah Setiawaty, Perludem program manager for election application programming interface, puts it: “Candidates used to routinely bribe voters. They bribed them with money, with rice and with other food products.”⁴ Observers also note that Indonesia’s electoral process is particularly prone to vote manipulation, due in large part to its size and complexity.⁵ “Our election system is one of the most complex in the world,” says Setiawaty. “It has to accommodate over 100,000,000 registered voters and a complicated geography that includes over 17,000 different islands. It is huge and it all happens in one day.”⁶

1 <http://www.opengovpartnership.org/country/indonesia>

2 <https://www.transparency.org/country/#IDN>

3 <http://www.worldaudit.org/corruption.htm>

4 GovLab interview with Diah Setiawaty, Program Manager for Election Application Programming Interface, Perludem, September 10, 2015.

5 Brajawidagda, Uuf and Akemi Takeoka Chatfield. “Roles of Social Media in Open Data Environments: A Case Study of the 2014 Indonesian Presidential Election Voting Results.” 25th Australasian Conference on Information Systems. December 8-10, 2014. http://aut.researchgateway.ac.nz/bitstream/handle/10292/8170/acis20140_submission_176.pdf?sequence=1&isAllowed=y

6 GovLab interview with Diah Setiawaty, Program Manager for Election Application Programming Interface, Perludem, September 10, 2015.

Open Data and Indonesian Elections

In 2011, Indonesia joined the Open Government Partnership (OGP), emphasizing a national commitment to budget transparency and more efficient public service delivery. In 2014, Mardianto Jatna, Assistant to the Head of the Presidential Delivery Unit for Development Monitoring and Oversight (UKP4), declared a “Year of Open Data.”⁷ Several initiatives were undertaken as part of this Year of Open Data. One was the launch of the Indonesia Data Portal, which publishes approximately 700 sets of data from 23 government institutions.

Another particularly significant open data effort was the Elections General Commission (KPU)’s move to begin sharing all election-related data on the Internet. The KPU is a quasi-governmental body whose mandate is to ensure transparent and fair elections. In April 2014, amid urgent calls from citizens and political parties on all sides to improve transparency and safeguard the presidential elections due later that year, it announced its decision to share election data on its official website (www.kpu.go.id/).⁸

The political mood during that year was particularly polarized. It was the first time in Indonesia’s history that just two candidates were running (typically, three or more run). In addition, the candidates’ backgrounds and profiles were dramatically different: Prabowo Subianto had a military background and was associated with the former Suharto regime, while Joko Widodo (Jokowi) belonged to a more recent generation and came from a more civilian background. According to Perludem’s Diah Setiawaty, the polarization of voters was magnified by their increasing presence on social media. Indonesia had the fourth-largest number of Facebook users in the world in 2014,⁹ and Jakarta was the most active city in the world in terms of Twitter participation in 2012.¹⁰

It was against this background that the KPU made its decision to publish the voter tabulation forms from various levels of the Indonesian voting process. Voting in Indonesia is manual; citizens vote at one of more than about 470,000 polling stations. The results are then tabulated at six different levels: the polling station, the subdistrict, the district, the city regency, the province and the national. Each level uses a different form, and the time between actual voting and national tabulation can be very long. The potential for fraud – for example, by manipulating results along the way – is huge. Initially, in April 2014, the KPU announced that it would open up and make accessible the results tabulation forms for levels 2-6. However, this left out the all-important polling place tabulation form (the so-called C1 form) from the first level (i.e., the actual

7 “2014, Indonesia’s commitment to Open Data.” Open Government Indonesia. March 2, 2014. <http://opengovindonesia.org/uncategorized-en/2014-indonesia-commitment-open-data/>

8 Lukman, Enricko. “Indonesian voters are crowdsourcing ballot counts to protect against election fraud.” Tech in Asia. July 14, 2014. <https://www.techinasia.com/kawal-suara-indonesia-voters-crowdsourcing-ballot-counts-protect-election-fraud/>

9 “Top 10 Countries with most Facebook users 2014.” Addictive Lists. April 22, 2014. <http://addictivelists.com/top-10-countries-with-most-facebook-users-2014/>

10 Lipman, Victor. “The World’s Most Active Twitter City? You Won’t Guess It.” Forbes. December 30, 2012. <http://www.forbes.com/sites/victorlipman/2012/12/30/the-worlds-most-active-twitter-city-you-wont-guess-it/>

location of voting). After further pressure from civil society groups and some political leaders,¹¹ the KPU announced in July 2014 that it would also make the C1 forms available. These forms were then scanned and published on the KPU's website, offering citizens and the media an unprecedented level of scrutiny over election results.

The KPU's initiatives have been widely praised. Ainun Najib, one of the founders of Kawal Pemilu, says: "I really have to commend the KPU for this move. It was a huge step toward improving transparency in Indonesia's election system."¹² Nonetheless, the KPU's initial efforts were in some respects incomplete, and have since been supplemented by citizen efforts. For example, the scanned C1 forms were filled out by hand and published in a non-machine-readable format (usually JPEG or PDF); often, these forms were hard to decipher, and sometimes published upside down.

To address these (and other) problems, a number of independent, citizen-launched applications and websites emerged around and since the 2014 presidential elections. The first such application appeared almost immediately after the July 11 election, when a Twitter user with 7,000 followers began posting the scanned C1 forms.¹³ Other applications followed, each monitoring different portions of KPU-opened data: Some filled the gap in machine-readability by digitizing the scanned C1 forms and making them more accessible; other applications dealt with district, city/regency and province-level scanned forms, monitoring results at those voting levels; and yet another category of citizen-led applications examined scanned C1 forms for problems or anomalies. Kawal Pemilu, the application under study here, was among the most successful initiatives in this surge of citizen-led voting applications.

II. PROJECT DESCRIPTION AND INCEPTION

During the summer of 2014, Ainun Najib, who would later go on to co-found Kawal Pemilu, was living and working in Singapore. It was the middle of Ramadan, and he was down with the flu. Still, he was following the elections closely in his native Indonesia, and watched with growing concern as the extreme polarization that had characterized the campaign spilled over into the post-election period, and as the results were contested by both the Jokowi and Prabowo camps.

Amid allegations of fraud and vote rigging, Najib began looking at ways he could add more transparency to the electoral process. "We [had to do something] to prevent the nation [from]

11 GovLab interview with Diah Setiawaty, Program Manager for Election Application Programming Interface, Perludem, September 10, 2015. And Lukman, Enricko. "Indonesian voters are crowdsourcing ballot counts to protect against election fraud." Tech in Asia. July 14, 2014. <https://www.techinasia.com/kawal-suara-indonesia-voters-crowdsourcing-ballot-counts-protect-election-fraud/>

12 GovLab interview with Ainun Najib, Co-Founder Kawal Pemilu, August 5, 2015.

13 Rakhmani, Inaya. "Technology for Transparency." New Mandala. July 21, 2014. <http://asiapacific.anu.edu.au/newmandala/2014/07/21/technology-for-transparency/>

being ripped apart because of two claims to victory that nobody can verify,” he told *The Financial Times*.¹⁴ Around this time, he messaged a friend, Andrian Kurniady, a Google employee based in Sydney; Najib had met Kurniady in 2007 at a Mathematics Olympiad Champions competition, and though they were not close friends, they were connected on Facebook. The two quickly decided to work together to help safeguard Indonesia’s vote count. Later, they were joined by three other friends, who worked with them to get the application off the ground.

In its early days, Kawal Pemilu tried to fill machine readability gaps in KPU data by digitizing scanned C1 forms and using handwriting recognition to extract the polling data. They quickly ran into obstacles with this approach, however, and soon decided to turn to a form of crowdsourcing. Specifically, they decided to recruit volunteers to manually digitize the almost 500,000 scanned C1 forms on the KPU site. This was the genesis of Kawal Pemilu (“guard the election,” in Indonesian), which was launched on July 12, 2014, with the intent of providing a platform for public participation in guarding the 2014 general election results. As Andrian Kurniady, Najib’s co-founder, put it at the time: “We hope this system can reduce the uncertainty, fear of election fraud, and restore public confidence in one of the most important points in Indonesian democracy [while it] is still young.”¹⁵

The Kawal Pemilu application consists of two main components. At the back-end, it includes a private, walled-off website, where volunteers and site administrators can enter polling data based on scanned forms (Figure 1). In addition, there is a public-facing site that allows citizens to view the data, broken down by polling station and candidate (Figure 2). Visitors can choose to view results for different levels of the tabulation process. For example, a visitor can choose to examine just C1 results. Results can also be viewed by region.

The underlying data for the site was generated from KPU data through a network of volunteers spread across the globe. Volunteers were recruited through a closed, secret Facebook group, which ensured that only trusted people were included. To start the process of recruiting volunteers, each founder chose 10 trustworthy friends, each of whom was asked to recruit 10 more, and each of those was also asked to recruit another 10 friends – and so on. Over 700 volunteers were recruited in this way in just three days. Volunteer names and identities were initially kept hidden, to prevent any efforts at bribing or intimidation.

Each recruit received a secret link to the nonpublic component of the website, where scanned C1 forms were presented with an accompanying form for the volunteer to fill in with extracted data.¹⁶ The form also allowed for the reporting of errors. The results of this work were posted every 10 minutes to the public-facing website, which was read-only. In addition to allowing citizens to monitor election results in near real-time, this data also allowed them to compare vote tallies listed on the site to official numbers released by polling stations.

14 Bland, Ben. “Indonesian techies crowdsource election results.” *Financial Times*. July 18, 2014. <http://www.ft.com/intl/cms/s/0/6c62a8b6-0e33-11e4-85ab-00144feabdc0.html#axzz3x2yIm11u>.

15 Yusuf, Oik. “Siapakah “Pandawa” di Balik Kawal Pemilu?” *Kompas.com*. August 13, 2014. http://tekno.kompas.com/read/2014/08/13/09050057/Siapakah.Pandawa.di.Balik.Kawal.Pemilu.?utm_source=WP&utm_medium=box&utm_campaign=Khlwp. Translated into English by Google.

16 GovLab interview with Ainun Najib, Co-Founder Kawal Pemilu, August 5, 2015.

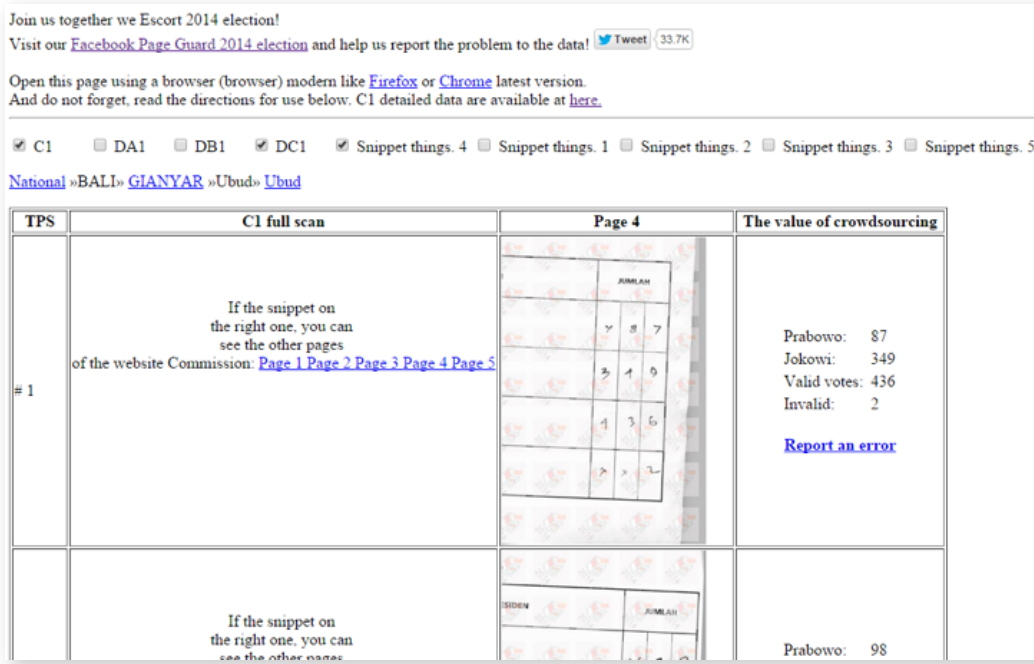


Figure 1: Screen used by volunteers to digitize scanned C1 forms (translated into English by Google)

Bergabung bersama kami bersama-sama kita Kawal Pemilu 2014!
 Kunjungi [Facebook Page Kawal Pemilu 2014](#) dan bantu kami melaporkan masalah pada data! [Tweet](#) 33.7K

Bukalah halaman ini menggunakan peramban (browser) modern seperti [Firefox](#) atau [Chrome](#) versi terkini.
 Dan jangan lupa, baca petunjuk pakai di bawah. Data C1 terperinci tersedia di [sini](#).

C1 DA1 DB1 DC1 Snippet hal. 4 Snippet hal. 1 Snippet hal. 2 Snippet hal. 3 Snippet hal. 5

[Nasional](#)

No	Tempat	Prabowo-Hatta (C1)	Prabowo-Hatta (DC1)	Jokowi-JK (C1)	Jokowi-JK (DC1)	Suara sah	Tidak sah	TPS Error	TPS				
	TOTAL	61.627.150	46,99%	62.576.585	46,85%	69.535.322	53,01%	70.997.607	53,15%	131.162.864 (+392)	1.364.151	1,19%	99,76%
1	ACEH	1.026.671	55,21%	1.089.290 (+62.619)	54,39% (-0,81%)	833.002	44,79%	913.309 (+80.307)	45,61% (+0,81%)	1.859.667 (-6)	55.962	1,92%	100,00%
2	SUMATERA UTARA	2.814.953	44,73%	2.831.514 (+16.561)	44,76% (+0,03%)	3.478.032	55,27%	3.494.835 (+16.803)	55,24% (-0,03%)	6.292.884 (-101)	31.041	0,61%	100,00%
3	SUMATERA BARAT	1.791.495	76,97%	1.797.505 (+6.010)	76,92% (-0,05%)	535.979	23,03%	539.308 (+3.329)	23,08% (+0,05%)	2.327.474	17.669	0,54%	100,00%
4	RIAU	1.341.459	50,15%	1.349.338 (+7.879)	50,12% (-0,03%)	1.333.426	49,85%	1.342.817 (+9.391)	49,88% (+0,03%)	2.674.894 (+9)	18.545	0,75%	100,00%
5	JAMBI	869.264	49,27%	871.316 (+2.052)	49,25% (-0,02%)	895.056	50,73%	897.787 (+2.731)	50,75% (+0,02%)	1.764.320	13.891	0,73%	100,00%
6	SUMATERA SELATAN	2.125.022	51,27%	2.132.163 (+7.141)	51,26% (-0,01%)	2.019.376	48,73%	2.027.049 (+7.673)	48,74% (+0,01%)	4.144.398	31.770	0,53%	100,00%
7	BENGKULU	433.063	45,27%	433.173 (+110)	45,27% (0,00%)	523.611	54,73%	523.669 (+58)	54,73% (0,00%)	956.678 (+4)	7.811	0,12%	100,00%
8	LAMPUNG	2.026.396	46,93%	2.033.924 (+7.528)	46,93% (0,00%)	2.291.229	53,07%	2.299.889 (+8.660)	53,07% (0,00%)	4.317.637 (+12)	29.967	0,73%	100,00%
9	KEPULAUAN BANGKA BELITUNG	200.315	32,73%	200.706 (+391)	32,74% (+0,01%)	411.752	67,27%	412.359 (+607)	67,26% (-0,00%)	612.143 (+76)	6.110	0,22%	100,00%
10	KEPULAUAN RIAU	330.653	40,36%	332.908 (+2.255)	40,37% (0,00%)	488.572	59,64%	491.819 (+3.247)	59,63% (-0,00%)	819.225	5.614	0,64%	100,00%
11	DKI JAKARTA	2.521.412	46,92%	2.528.064 (+6.652)	46,92% (0,00%)	2.852.843	53,08%	2.859.894 (+7.051)	53,08% (0,00%)	5.373.828 (+27)	53.634	0,65%	100,00%
12	JAWA BARAT	14.072.239	59,77%	14.167.381 (+95.142)	59,78% (+0,01%)	9.471.518	40,23%	9.530.315 (+58.797)	40,22% (-0,01%)	23.543.812 (+55)	298.185	1,02%	99,42%

Figure 2: Screenshot of the public-facing Kawal Pemilu website (translated into English by Google)

The entire process of building the site and gathering all the data was performed with remarkable efficiency. Because the co-founders were spread around the world (California, Sydney, Singapore, Indonesia, Netherlands, Germany), they were able to work round-the-clock, taking maximum advantage of different time zones. This enabled them to create the website

and counting system in just two days. In addition, all the recruited volunteers and founders worked without pay. The total capital investment for the setup was, as a result, just \$54; these funds were used to purchase the website's domain and space on a hosting server.¹⁷ Overall, Kawal Pemilu is an impressive example of a “public-service startup”: Despite never benefiting from seed capital or a Silicon Valley-style business ecosystem, it was put together with all the agility and speed that are the hallmarks of far more lavishly funded business ventures.

III. IMPACT

Kawal Pemilu was one of many crowdsourced vote count initiatives launched around the time of the 2014 elections, and built on KPU data. Others included Kawal Suara (“guard the votes”),¹⁸ Real Count and a Tumblr site called C1 Yang Aneh. However, Kawal Pemilu stands out as one of the most efficiently built and managed, and one of the most effective initiatives. In an article on “Indonesia's election tech fighters,” one Indonesian reporter described the site as “the most professionally run” among various efforts.¹⁹ Kawal Pemilu has also been described as a “leading spearhead in monitoring and legitimizing the [2014 electoral] vote count outside the state apparatus.”²⁰

The impact of Kawal Pemilu can be measured in several ways:

Settling the 2014 Election Results

By the fifth day after the 2014 elections (four days after the site's launch), Kawal Pemilu volunteers had digitized 470,000 or 97 percent of all scanned C1 forms.²¹ In fact, volunteers had competed against each other to scan the highest number of forms, spurring the rapid and efficient process described above.²² Based on these numbers, Kawal Pemilu (and citizens accessing the site) was able to establish that the vote count was in fact very similar to the official KPU result (53.15 percent for Joko Widodo and 46.85 percent for Prabowo Subianto), which was at the time being contested by the Prabowo camp.

17 “The Five Pandawa Behind Kawal Pemilu.” Global Indonesian Voices. August 13, 2014. <http://www.globalindonesianvoices.com/14988/the-five-pandawa-behind-kawal-pemilu/>

18 Lukman, Enricko. “Indonesian voters are crowdsourcing ballot counts to protect against election fraud.” Tech in Asia. July 14, 2014. <https://www.techinasia.com/kawal-suara-indonesia-voters-crowdsourcing-ballot-counts-protect-election-fraud/>

19 Lukman, Enricko. “5 things you need to know about Indonesia's election tech fighters.” Tech in Asia. July 18, 2014. <https://www.techinasia.com/kawal-pemilu-indonesia-presidential-election-fighters/>

20 <http://theconversation.com/indonesias-democratic-masses-brought-victory-to-jokowi-29569>

21 Lukman, Enricko. “5 things you need to know about Indonesia's election tech fighters.” Tech in Asia. July 18, 2014. <https://www.techinasia.com/kawal-pemilu-indonesia-presidential-election-fighters/>

22 After 460,000 forms, recruitment was stopped because Kawal Pemilu founders believed they had achieved their goals. In addition, the site had received considerable media coverage by this time, and the founders decided to stop recruiting because they feared that recruits might not be trustworthy anymore. GovLab interview with Diah Setiawaty, Program Manager for Election Application Programming Interface, Perludem, September 10, 2015.

A month after the elections, the vote tallies were still being contested, and the results were taken to court. Kawal Pemilu played an important role in the court hearings, and its testimony – along with that provided by KPU officials and other expert witnesses – helped influence the court's decision to award the elections to Jokowi. In this way, the crowdsourced election results helped settle the elections, legitimize the winner and, more generally, ensure a peaceful transfer of power in Indonesia.

Increased Trust and Greater Public Participation

Beyond its direct impact on the 2014 elections, Kawal Pemilu has also had an overall effect on Indonesia's electoral process and political climate, helping to increase transparency and public trust. As Uuf Brajawidagda, a lecturer of Indonesian politics at the University of Wollongong in Australia, who studied Kawal Pemilu and similar Indonesian open data initiatives, puts it: "Projects like Kawal Pemilu catalyzed the level of trust among citizens. The KPU move [to open election related data] increased trust, but Kawal Pemilu and others like it transformed the trust into something bigger. Their actions amplified the level of trust."²³

The greater public trust has, in many ways, translated into a new sense of citizen involvement and stakeholderhood in Indonesia's political process. The sense of involvement is most evident in the more than 700 volunteers who helped crowdsource the KPU data. But observers also note a more general sense of empowerment and new expectations of transparency. As Perludem program manager for election application programming interface at Perludem Diah Setiawaty, put it: "Kawal Pemilu created a movement – a movement toward increasing open data and transparency in Indonesia. It set the bar really high."²⁴ As evidence, Setiawaty cited the numerous open data initiatives that have followed Kawal Pemilu (see below for details), and the energy she experiences around these initiatives. "Indonesians are definitely more eager and willing to participate in crowdsourced applications now," Setiawaty says. "They want to participate in the political process."

Reduced Polarization

Kawal Pemilu emerged at a time of intense polarization in Indonesia. One of its most important (and perhaps long-term) effects may be to reduce the climate of partisanship and political division. Observers note that, because it presented an independent, verifiable and nonpartisan snapshot of the election results, it helped heal some of the mistrust and mutual suspicion among rival political camps. "I think it closed the gap between the two groups," said Brajawidagda. "It made people feel better about official results, even if those results

²³ GovLab interview with Uuf Brajawidagda, Lecturer of Indonesian Politics, University of Wollongong, Australia, September 3, 2015.

²⁴ GovLab interview with Uuf Brajawidagda, Lecturer of Indonesian Politics, University of Wollongong, Australia, September 3, 2015.

contradicted their personal outcome preferences.”²⁵ As evidence, Brajawidagda cites some of the comments he saw posted on social media – comments that point to people’s faith in the final results, regardless of their political leanings. One example he cites is the following comment: “Unbelievable, kawalpemilu (final count) deviates only 0.01 percent. Great. ... This is the real count.” Overall, Brajawidagda feels that, in helping validate the election results, Kawal Pemilu played an important role in fostering a more civil political climate in Indonesia.

Perludem’s Setiawaty agrees. “Politics were still very polarized after Kawal Pemilu,” she says. “But the mood was less negative. People could see things from a more objective perspective.”²⁶

IV. CHALLENGES

What happens next for Kawal Pemilu and, more generally, for Indonesia’s political climate? Despite the early successes of initiatives like Kawal Pemilu, corruption remains a serious problem in Indonesia, and ample scope exists for improvement in the electoral process. In order to truly change conditions, Kawal Pemilu (and other similar projects) will not only need to scale significantly but also prove that they can grow and last beyond a single election. If that is to happen, a few challenges will need to be overcome.

Legal Changes

In fact, the KPU’s move to open up election data in 2014 was just a temporary measure, without any lasting legal foundations. Following the success of Kawal Pemilu and similar applications, there has been a general clamor calling for legislation to require opening of election data for all future elections. The organization Perludem has played a key role in pushing for new legislation and in drafting versions of the proposed law. Setiawaty of Perludem says: “Kawal Pemilu was a definite success, and in addition it has increased the probability of new election laws in Indonesia that emphasize transparency.” So the prospects for new, more-encompassing legislation are bright – but until it is passed, the cause of greater transparency in Indonesian politics, and more specifically applications like Kawal Pemilu, will continue to face challenges.

²⁵ GovLab interview with Uuf Brajawidagda, Lecturer of Indonesian Politics, University of Wollongong, Australia, September 3, 2015.

²⁶ GovLab interview with Diah Setiawaty, Program Manager for Election Application Programming Interface, Perludem, September 10, 2015.

Security

As with any anticorruption project, Kawal Pemilu has come up against some powerful vested interests. Soon after it was launched, some of those vested interests appeared to strike back. Four days into its existence, the site was attacked by what administrators called “hundreds of hackers.”²⁷ As a consequence, the site was brought down for a few hours, until the project’s administrators returned a “logic bomb” to their attackers. In addition, administrators ran a mirrored version of the public site, to limit the potential damage from hacking.

The identity of the hackers remains unknown, but they were mostly believed to be located within Indonesia, and they were widely considered to be responding to the website’s growing legitimacy and popularity. In this sense, the hacking attempts were just a particular instance of a more general effort to hijack the project or weaken its credibility.²⁸ For example, in the early days of the Kawal Pemilu, the project’s founders went to great lengths to hide their identities (and those of their volunteers), in an effort to thwart attempts at bribery or intimidation. Such threats are only likely to grow as Kawal Pemilu and other popular initiatives seek to take on the establishment and increase transparency in Indonesia.

Reliability of Information

In its early days, Kawal Pemilu experienced some skepticism about the reliability of its data. This skepticism was heightened by the anonymity of its volunteers – ironically, because the anonymity was in fact designed to decrease their susceptibility to untoward influence and was thus a way of ensuring reliability. Ainun Najib says organizers regularly fielded questions from the public about accountability and verification of inputs. He and the rest of the team always took the time to explain their methodology, and to point out that all the data was verifiable within the site itself. Indeed, visitors to the site can click on any piece of information and find the underlying, original scanned form, all the way down to the C1 form from the initial polling station, as proof. In that sense, Kawal Pemilu contains an internal process of legitimization – which helps overcome (if not entirely do away with) public skepticism or doubts.²⁹

Lasting Political Impact

Any issue- or event-focused project faces questions about its survivability and sustainability over time. For Kawal Pemilu, the question is not only whether the project can survive, but what form it can take in the long term. The same factors that permit such initiatives to emerge quickly and rapidly – their decentralized, ad hoc nature – often make it difficult to grow into larger organizations. The

27 Lukman, Enricko. “As Indonesia’s democracy is on the verge of crisis, hackers and fakers attack crowdsourced vote counts.” Tech in Asia. July 18, 2014. <https://www.techinasia.com/indonesia-democracy-crisis-hackers-fakers-attack/>

28 Rakhmani, Inaya. “Technology for Transparency.” New Mandala. July 21, 2014. <http://asiapacific.anu.edu.au/newmandala/2014/07/21/technology-for-transparency/>

29 GovLab interview with Ainun Najib, Co-Founder Kawal Pemilu, August 5, 2015.

founders of Kawal Pemilu are well aware of these challenges. They say they don't have answers yet, but are exploring strategies to ensure the long-term sustainability of Kawal Pemilu.³⁰

V. LOOKING FORWARD

The example offered by Kawal Pemilu has inspired several other open data initiatives that aim to increase transparency and reduce corruption in Indonesia. In some ways, we are witnessing the emergence of a new, citizen-driven open data ecosystem in the country, one whose aims can broadly be defined as improving governance and enhancing democracy.

This ecosystem is likely to grow more vibrant in coming years, and several new applications and websites are already starting to make their presence felt. Here, we highlight three of the most promising.

Kawal APBD

Following his involvement with open data and elections, Kawal Pemilu co-founder Ainun Najib has launched a new site that aims to improve budget transparency and open it up to citizen involvement. His new project, Kawal APBD (www.kawalapbd.org) places different versions of government budgets side by side and allows citizens to find and comment on discrepancies. For example, in one case, the site helped find a discrepancy between the South Jakarta department of education and the education section of the city budget.³¹ In addition to commenting on discrepancies, citizens can also “like” or “dislike” budget allocations, and visualize data, thus helping them better understand the budget process.

The goal of Kawal APBD “is to make more government data accessible and presentable for people,” said Mr. Najib. “We already knew through Kawal Pemilu that people would participate. We hope more and more government data is going to be exposed to the public.”³²

Mata Massa (“Eye of the Masses”)

Mata Massa was in fact launched before Kawal Pemilu, in the run-up to the 2014 elections. It allows citizens to report campaign-related and other violations through their smartphones to the General Elections Monitoring Body (Bawaslu). For example, citizens have reported instances of vote buying, as well as other administrative violations. Overall, some 1,500 violations have been

30 Rakhmani, Inaya. “Technology for Transparency.” New Mandala. July 21, 2014. <http://asiapacific.anu.edu.au/newmandala/2014/07/21/technology-for-transparency/>

31 “Lihat sendiri perbedaan APBD versi Pemprov dan DPRD di KawalAPBD.org.” Rappler. March 10, 2015. <http://www.rappler.com/world/regions/asia-pacific/indonesia/86371-lihat-perbedaan-apbd-versi-pemprov-dan-dprd&prev=search>. Translated by Google.

32 <http://blogs.wsj.com/indonesiarealtime/2015/03/11/ouch-jakartans-compare-dueling-spending-plans/>

reported (though reports indicate that little follow-up action has in fact been taken).³³ Originally launched to monitor the trustworthiness of journalists, the app was created and is run by the Alliance of Independent Journalists in Indonesia.³⁴

Kawal Pilkada

Kawal Pilkada sought to replicate Kawal Pemilu's effort to crowdsource digitizing of KPU C1 forms for regional elections in December 2015.³⁵ The project is built around the same concept as Kawal Pemilu, but under different leadership. There are several challenges here. One is in terms of recruitment. While citizens are eager to participate, crowdsourcing is more challenging than it was in the Kawal Pemilu experience. Diah Setiawaty, whose team provides technical assistance to the Kawal Pilkada team, says there is less intrigue overall in these regional elections, and voters know and care less about leaders in other regions. Kawal Pilkada also faces a time constraint. The KPU only recently announced it would publish related tabulations online, so the Kawal Pilkada team has little time to prepare. Another constraint going forward is the frequency of regional elections, which occur every two years. "For each election, there is a lot to monitor at the same time. The political situation in every region is different. We face different challenges in every place," says Setiawaty.³⁶

Taken together, these and many other existing and emerging applications make up a new landscape for open data, transparency and accountability in Indonesia. They demonstrate that data can be used by ordinary citizens to hold government accountable, and, although many of them remain modest, more proof of concept than full-blown national platforms, they suggest that a citizenry empowered with information can indeed effect genuine political transformation.

33 Rakhmani, Inaya. "Technology for Transparency." New Mandala. July 21, 2014. <http://asiapacific.anu.edu.au/newmandala/2014/07/21/technology-for-transparency/>

34 Naing, Saw Yan. "Smartphone-Wielding Indonesians Tasked With Ensuring Fair Elections." The Irrawaddy. April 7, 2014. <http://www.irrawaddy.org/asia/smartphone-wielding-indonesians-tasked-ensuring-fair-elections.html>

35 Ruslan, Heri. "Kawal Pilkada Publikasikan Real Count Pilkada Serentak." Republika.co.id. December 20, 2015. <http://nasional.republika.co.id/berita/nasional/pilkada/15/12/20/nzn40m372-kawal-pilkada-publikasikan-real-count-pilkada-serentak>. Translated by Google.

36 GovLab interview with Diah Setiawaty, Program Manager for Election Application Programming Interface, Perludem, September 10, 2015.