

# **E-Filing study** Modernizing the E-filing experience and infrastructure

Prepared by **18F** | February 2, 2017

**18F**

In partnership with the Federal Election Commission

## Presentation structure

**1**

**Goals and  
approach**

**2**

**What we  
found**

**A. filer  
experience**

**B. scalable  
infrastructure**

**3**

**How to move  
forward**

**4**

**Questions**

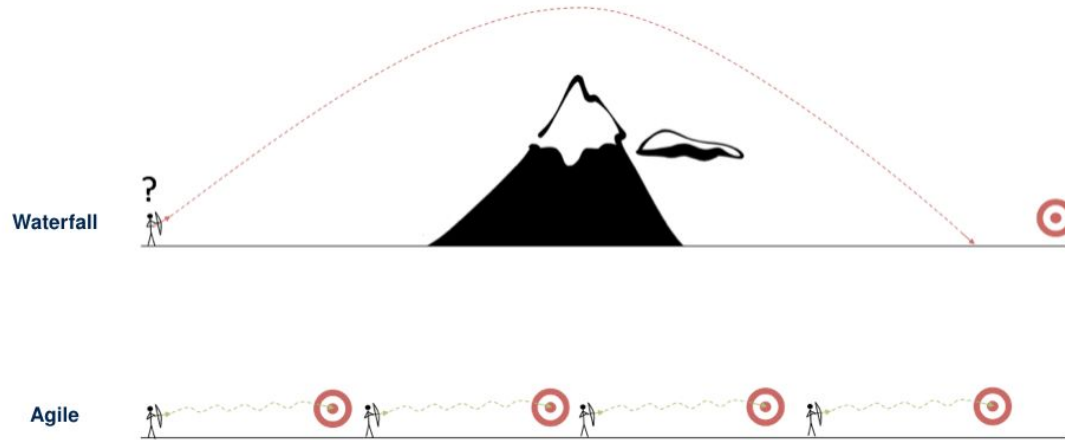
# Background and goals

**How can we modernize the e-filing system to get better quality data, be responsive to user needs, and handle increasing volumes of data?**

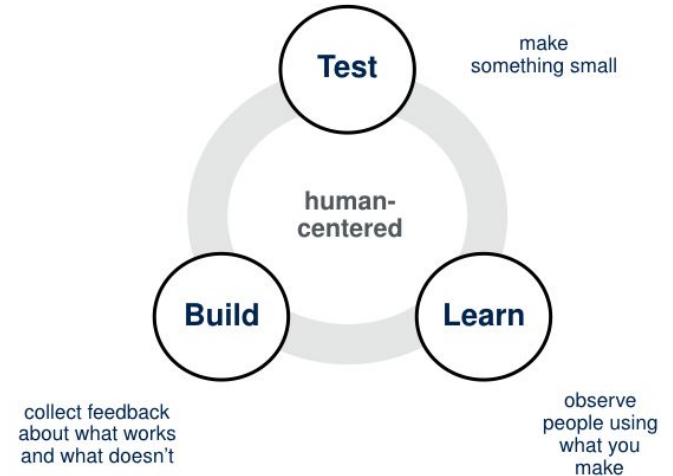
# Our approach

# 18F methods

## 1. We work iteratively



## 2. We design for people



## Research activities

- Goal-setting workshop with FEC
- Contextual interviews and observations
- Prototyping and prototype testing
- Survey distributed to all current E-filers

## We talked to

- **12** Filers of varying experience (+10)
- **12** Experts in various roles within the FEC (+9)
- **5** Commercial campaign finance software vendors
- **3** Data consumers (e.g., journalists, academics)
- **533** Survey respondents (filers)

# **What we found** (at a high level)

## A. Filer experience

**Helping filers complete forms correctly will improve data quality, filers' experience, and the experience for data users both inside and outside the FEC.**

## B. Scalable infrastructure

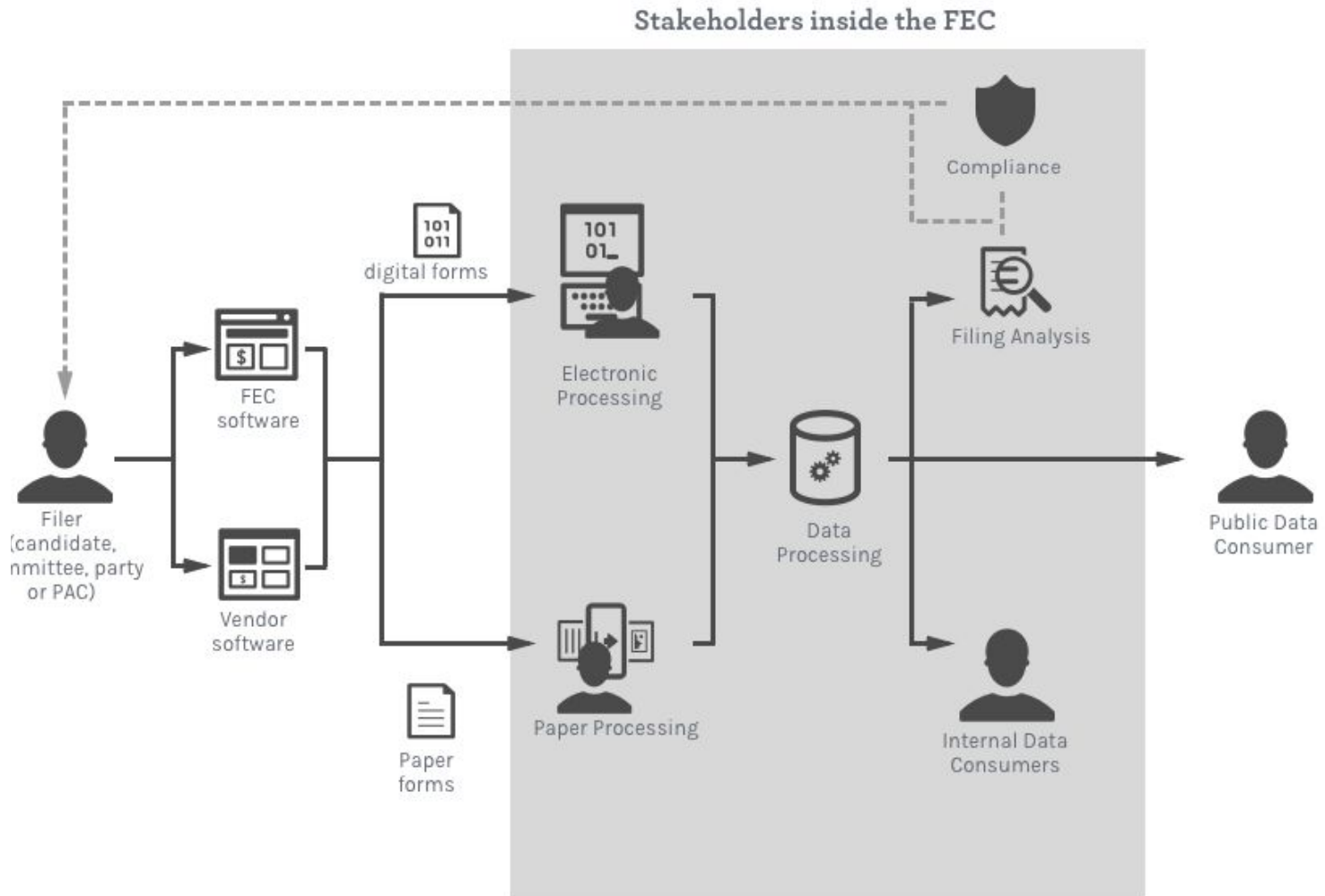
**Existing infrastructure and processes meet the current demand.**

**But this will likely be increasingly difficult in the future...**

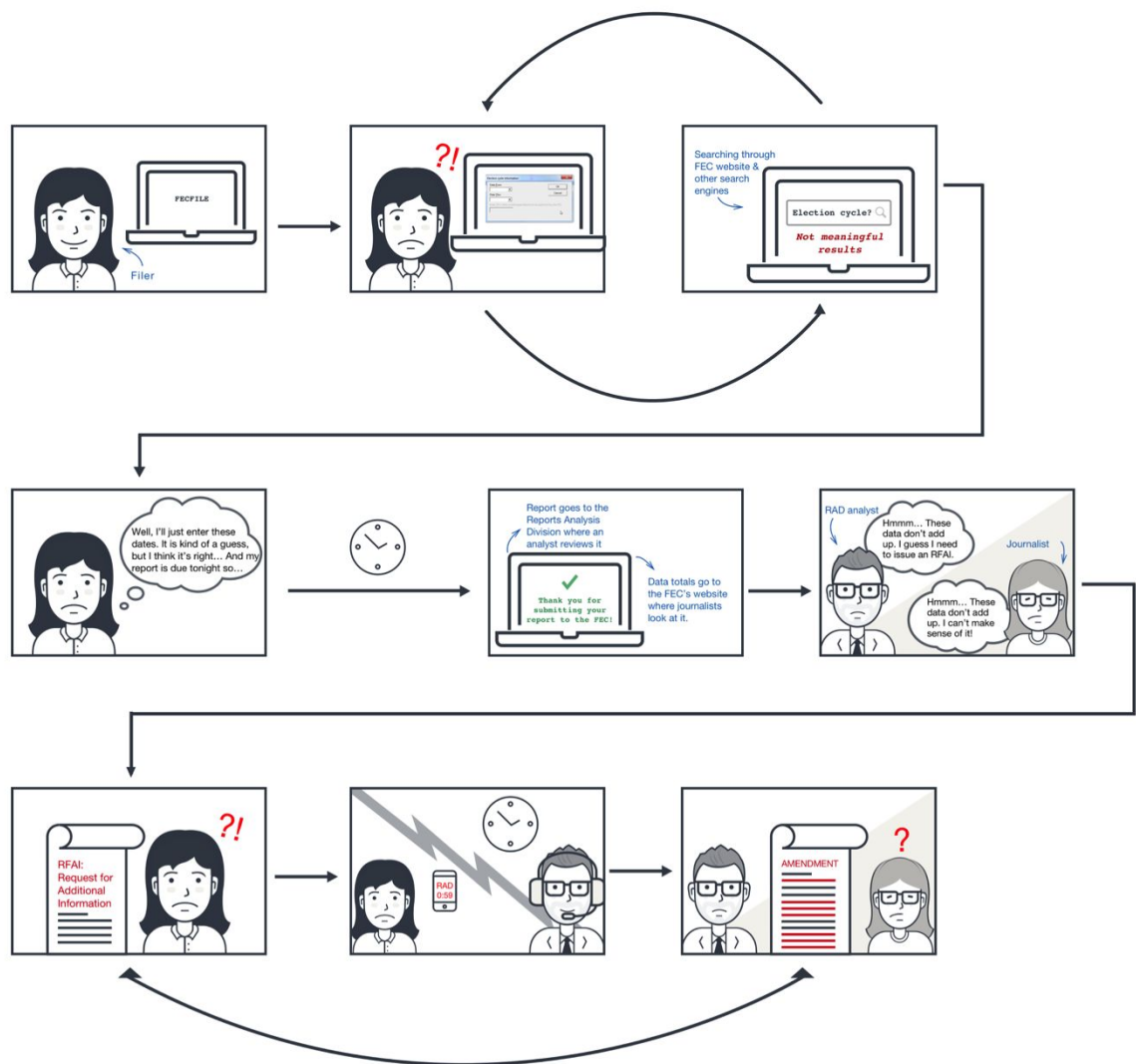
**...without continued evolution.**

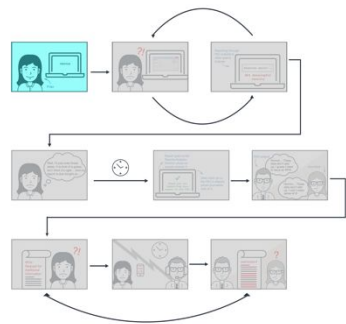
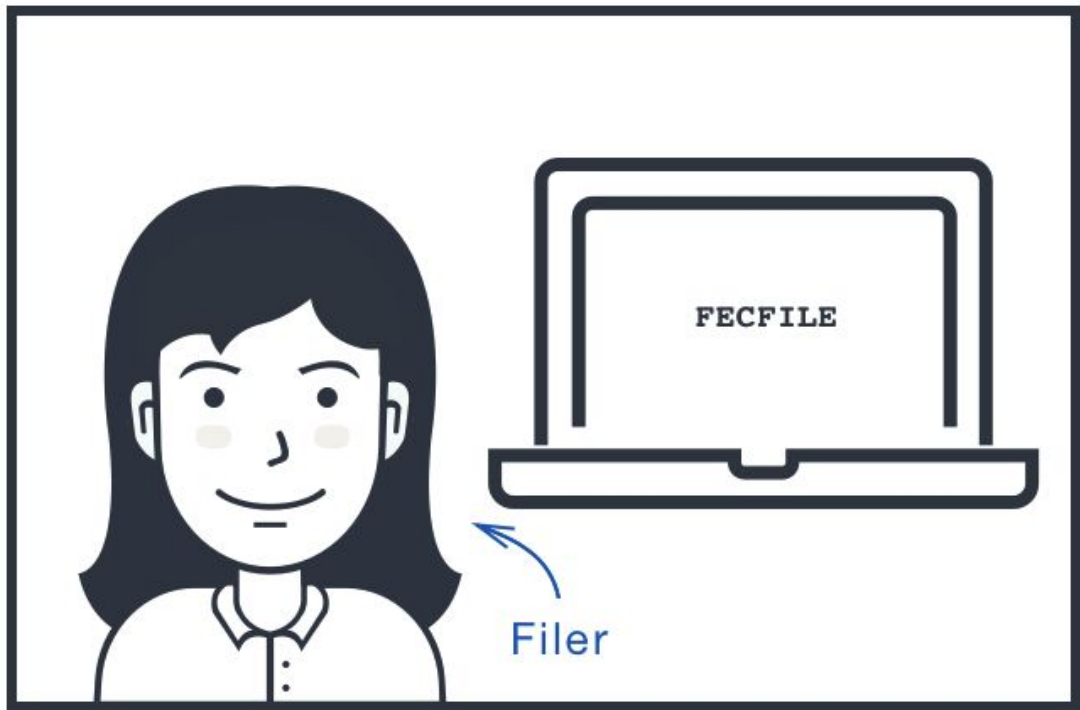
# What we found deep dive: Filer experience

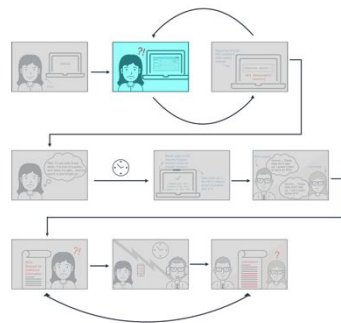
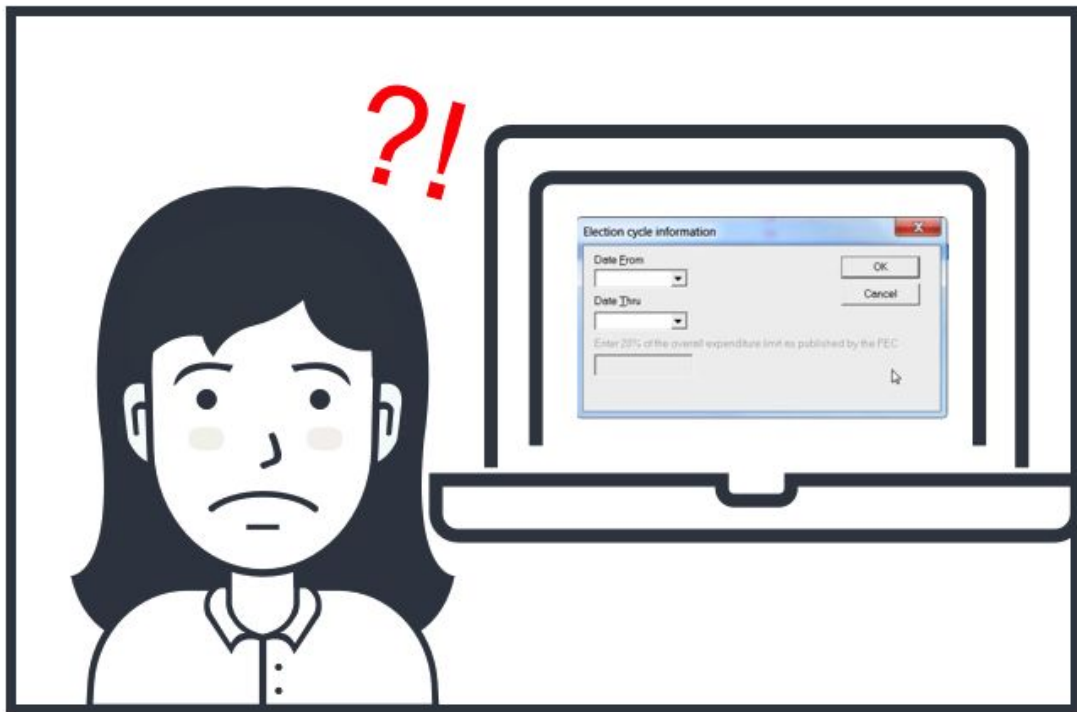
# The flow of campaign finance information throughout the E-filing system.

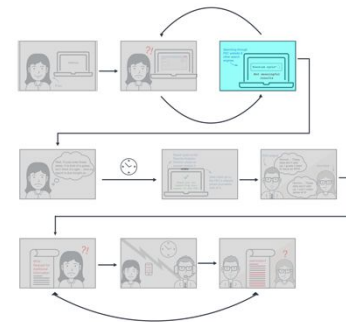
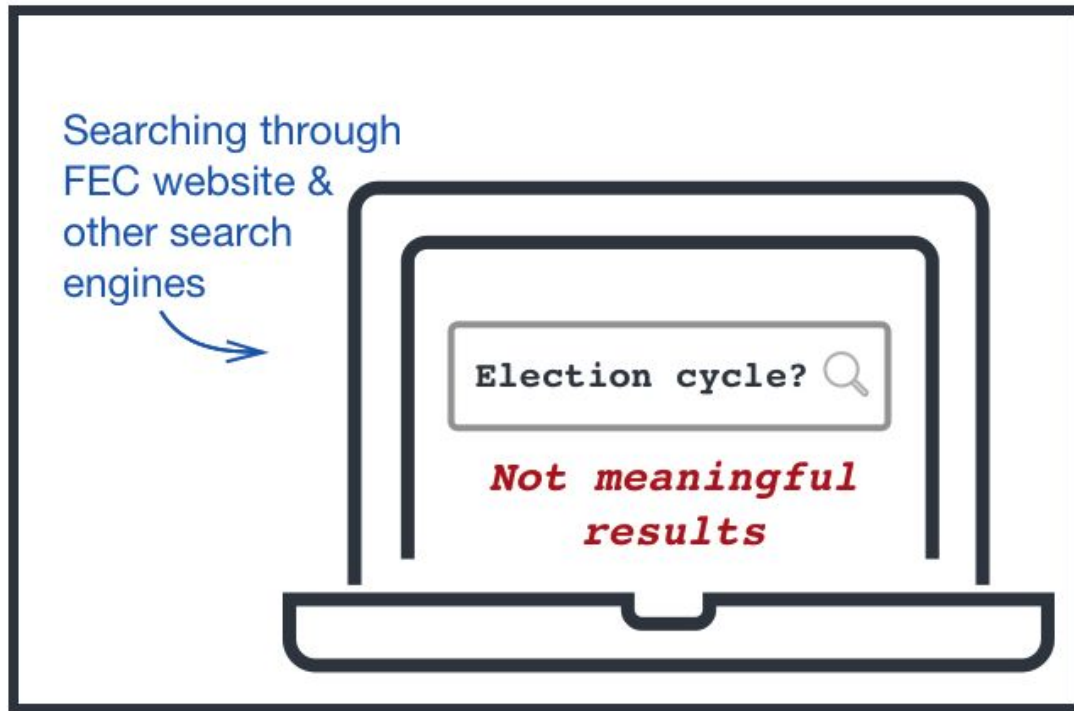


# A short story about the filer experience





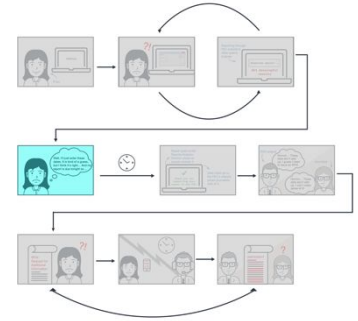
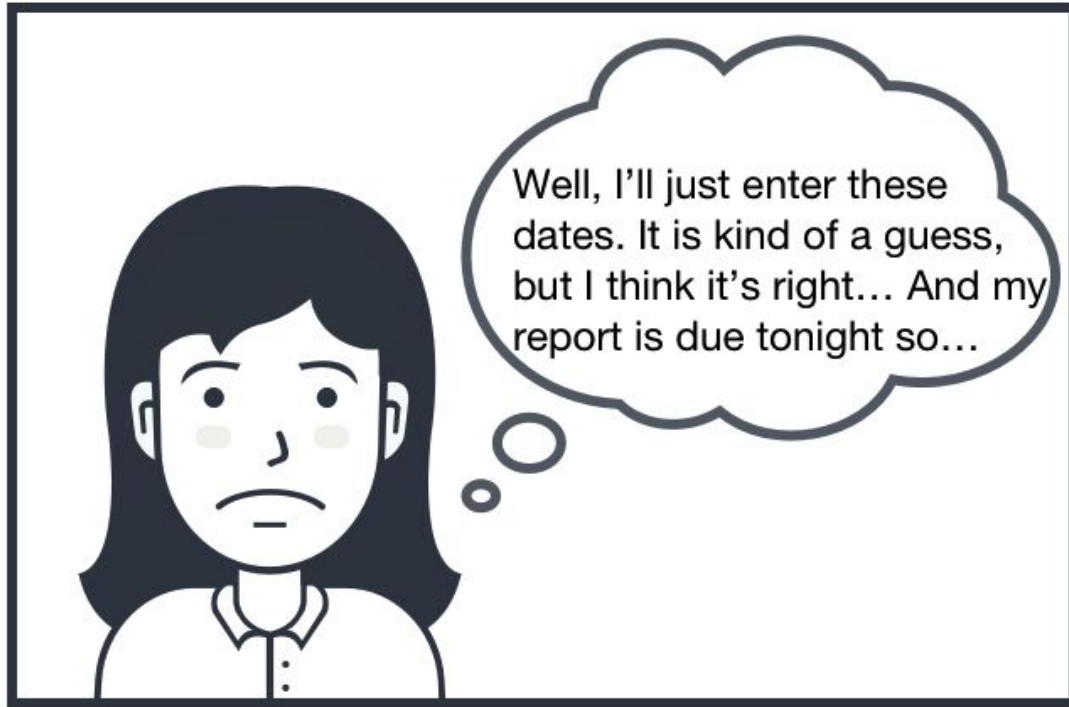


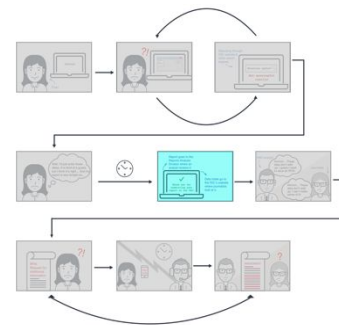
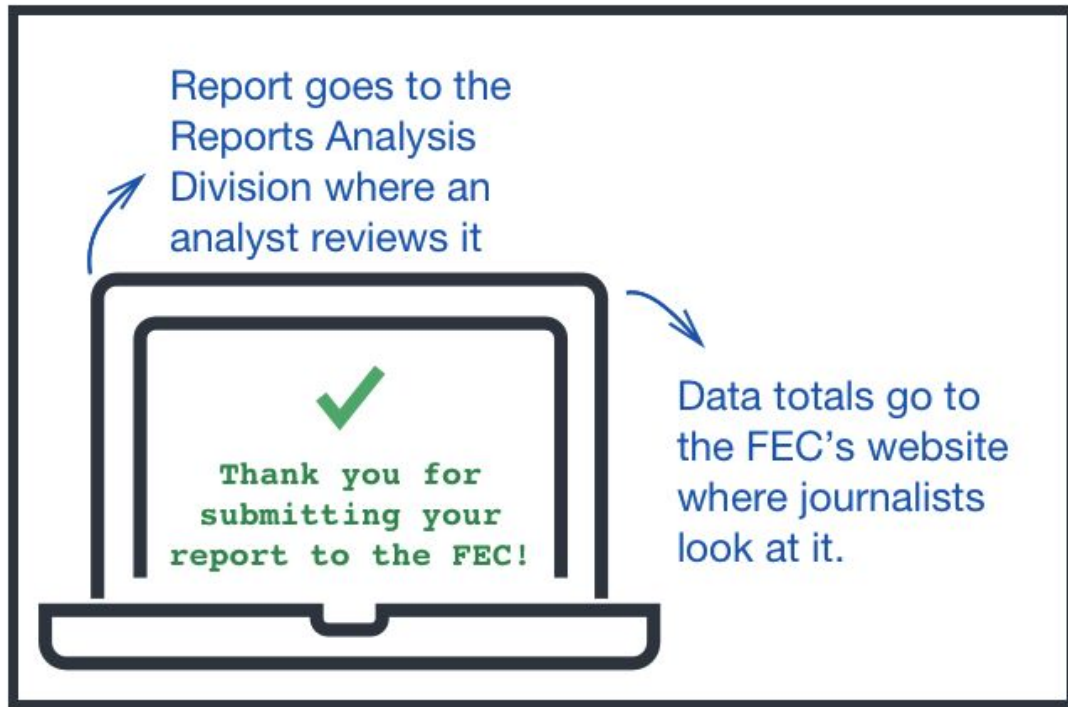


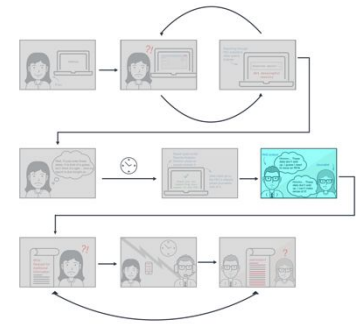
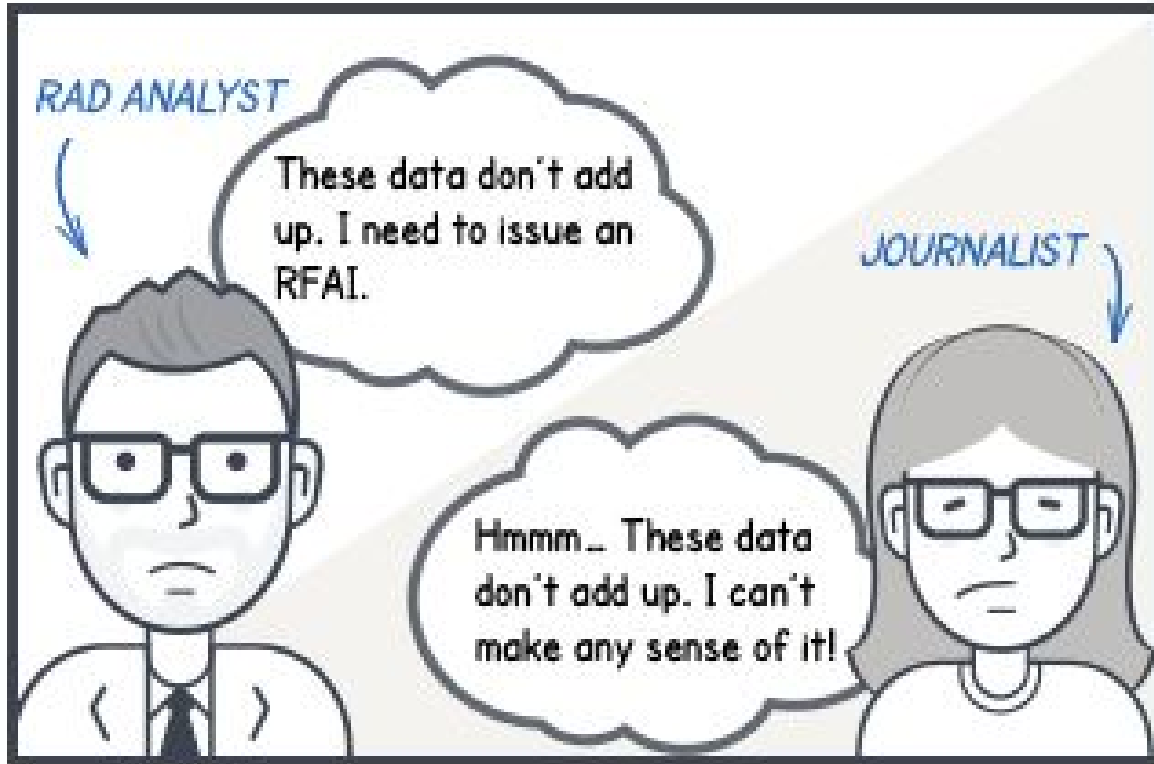
**Filers often have trouble with election cycles.**

**If the election cycle is incorrect, the filer will get a letter because their columns A and B cycle-to-date totals will be wrong.**

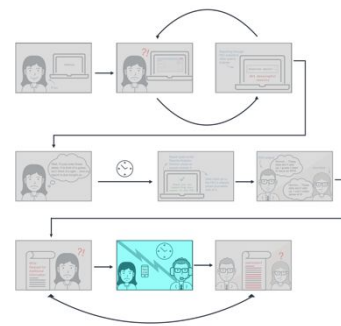
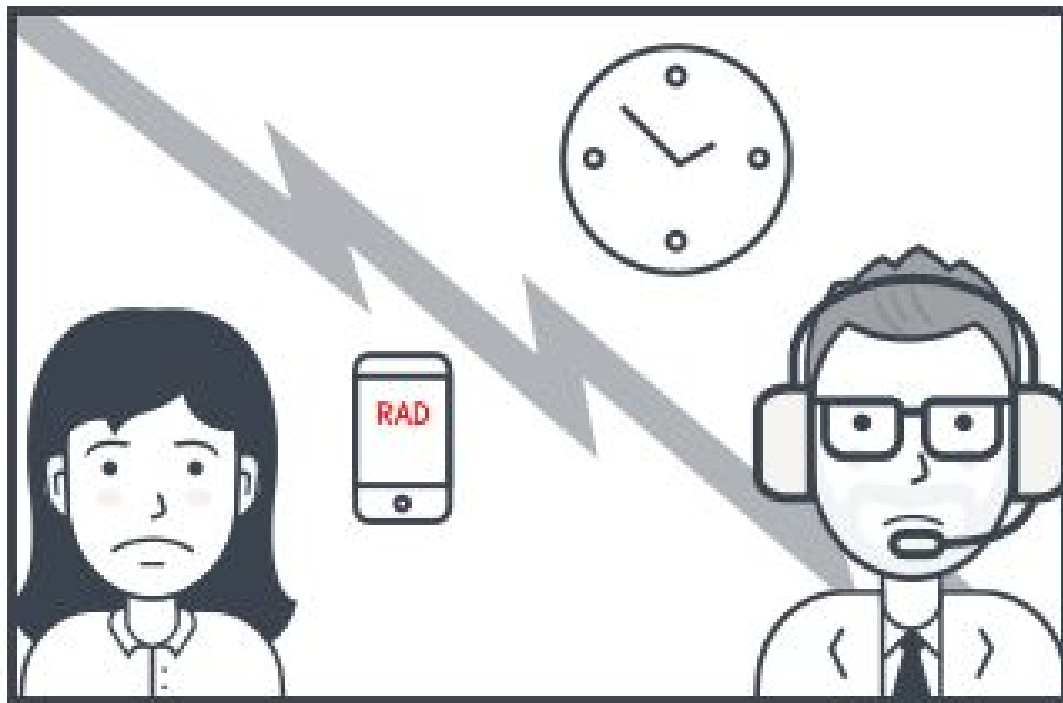
**One analyst estimated that nearly every time column B is wrong on federal candidate committee reports, it is because the election cycle is incorrect.**

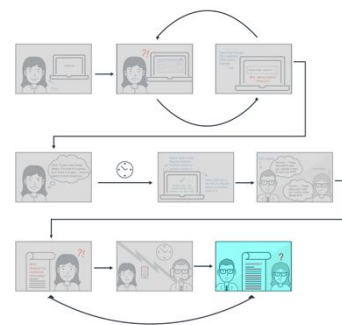
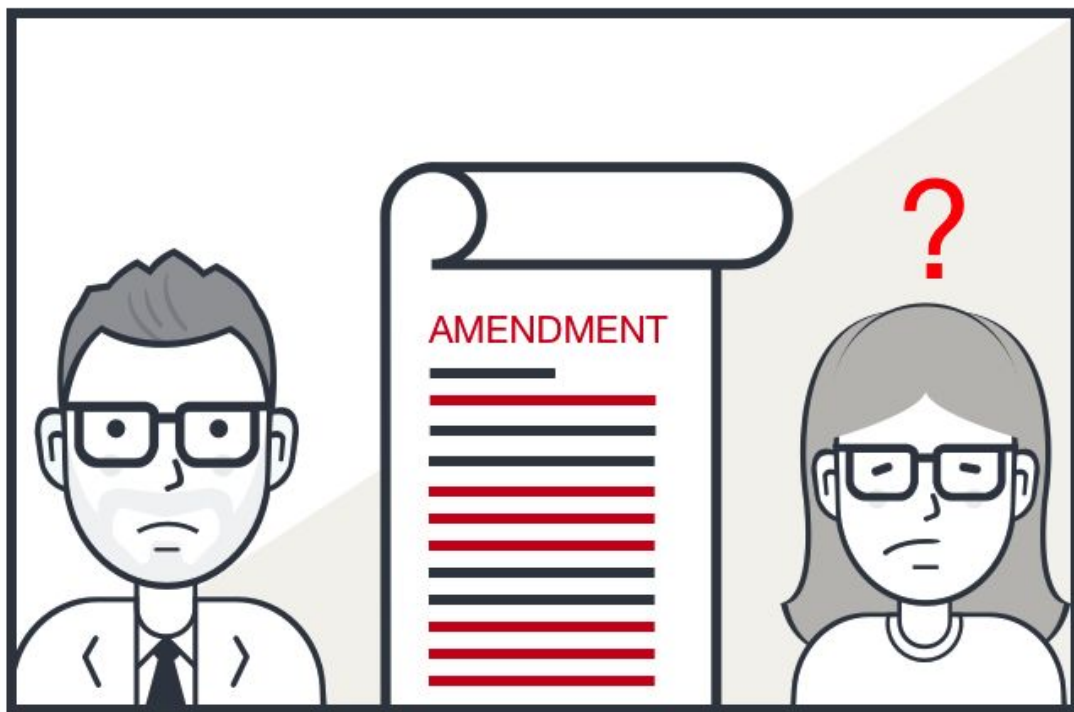












# Filer experience | Recommendations



Re-architect current data validation



Provide an export capability



Improve FECFile's usability



Offer an open source, web-based version of FECFile

# Filer experience | Recommendations



Re-architect current data validation



Provide an export capability



Improve FECFile's usability



Offer an open source, web-based version of FECFile

# File experience | Recommendations



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Provide an export capability



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# File experience | Recommendations



Re-architect current data validation



Provide an export capability



Improve FECFile's usability



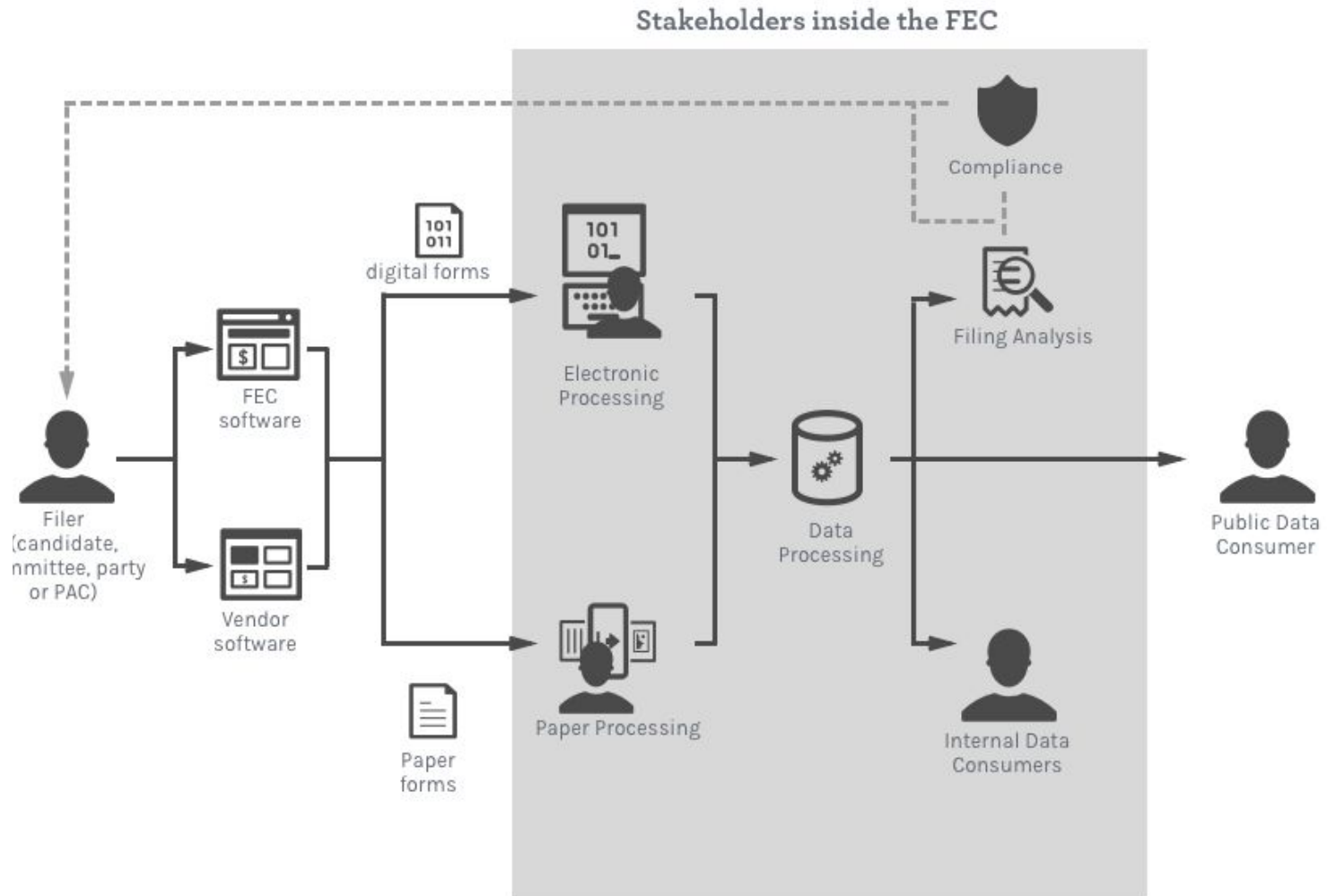
Offer an open source, web-based version of FECFile

**59% of entities filing electronically use FECfile.**

**Only 17% of the 402 FECFile users in our survey identified themselves as compliance professionals.**

**One of the most powerful ways  
to make the filing process  
more intuitive is to make the  
FECFile software more usable.**

# The flow of campaign finance information throughout the efilng system.



# File experience | Recommendations



Re-architect current data validation



Provide an export capability



Improve FECFile's usability



Offer an open source, web-based version of FECFile

**The fact that FECFile is a  
desktop application constrains  
filers' workflow.**

**Filers need open source  
software that is operating  
system independent.**

*“I am a MacBook Air user, so I have to go and find the PC laptop in the office that stores FECfile. If I forget that a report is due and I'm at home, I have to go to the office, find the laptop, and fill out the report.”*

*“I live in constant terror of a computer crashed around filing time, even to the point of being afraid to make updates on my computer in the event that I may lose filing information that I have already entered. A cloud-based storage system would provide so much relief from those concerns.”*

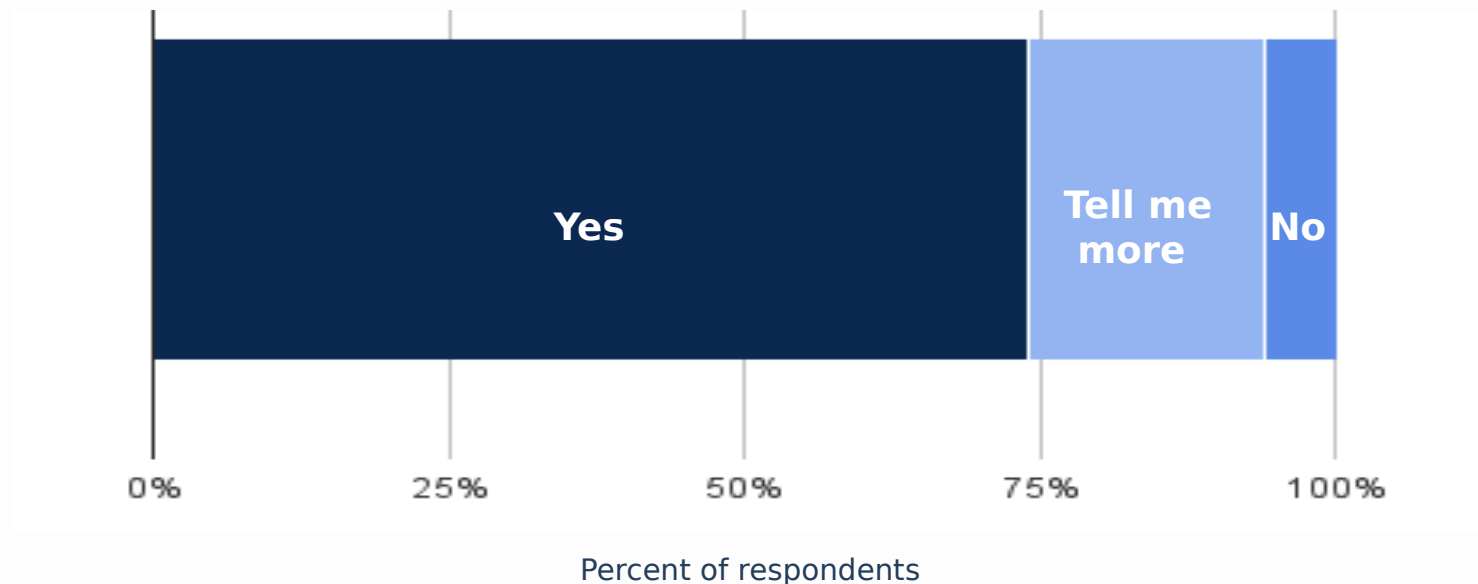
*“I travel extensively and sometimes must complete the report from locations other than my office and computers other than my regular workstation. As a result, I must remember to download the data file to a USB drive and take with me to use. Then I must remember where my most recent data is stored. A web based system would eliminate this problem.”*

*“[a web-based system] would absolutely be helpful! There are two of us that work on the FEC filings and, currently, I have to wait until I can use the other person's laptop (where the FECFile software is stored) in order to enter the data needed for a filing.”*

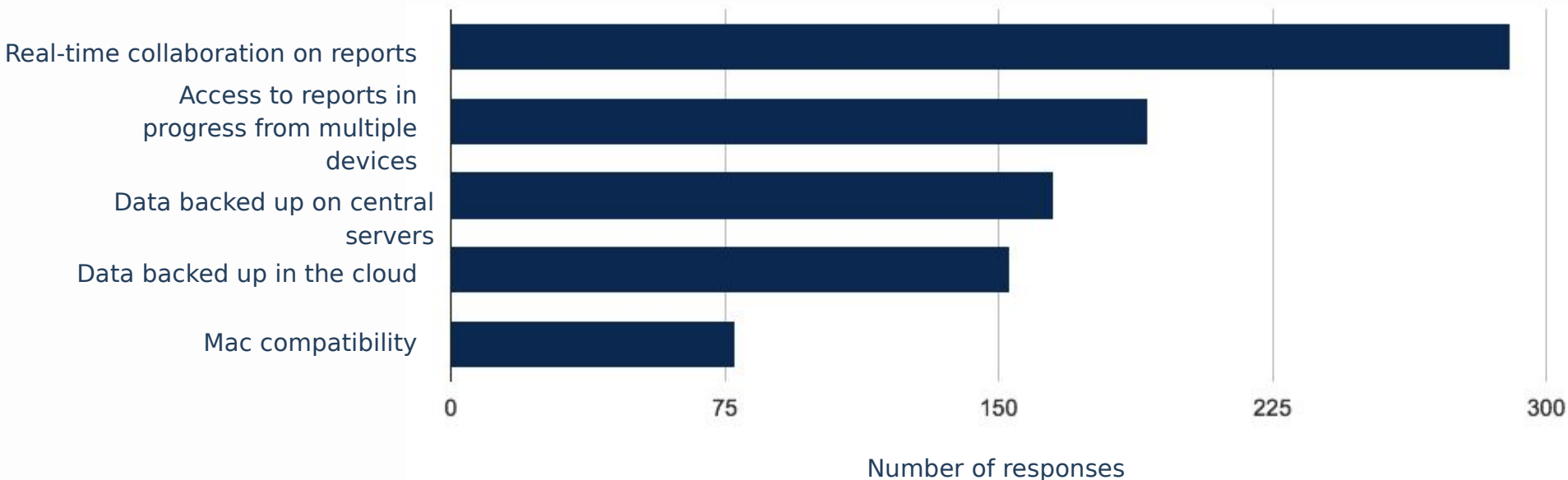
**We wanted to let all current E-filers tell us their thoughts about a web-based FECFile.**

**We sent an anonymous survey to 8,906 unique email addresses. We received 533 responses.**

**“If a web-based version of FECfile were available, would you use it?”**

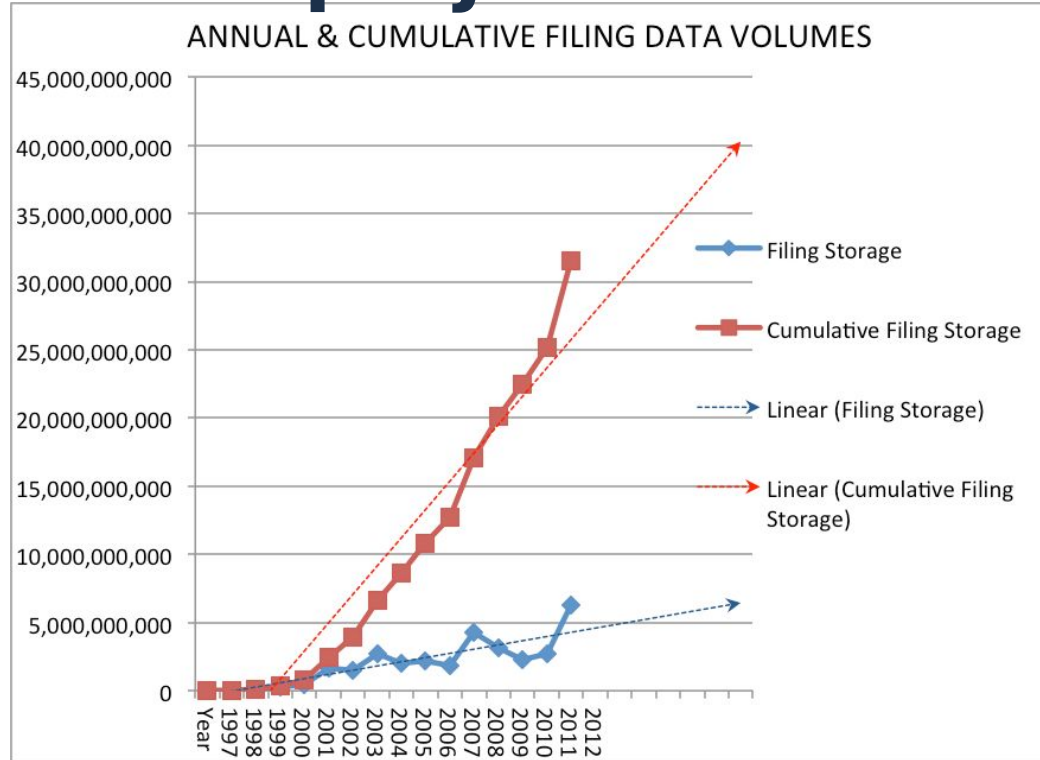


**“Of the following capabilities we hope this change will accomplish, which are you most excited about?”**

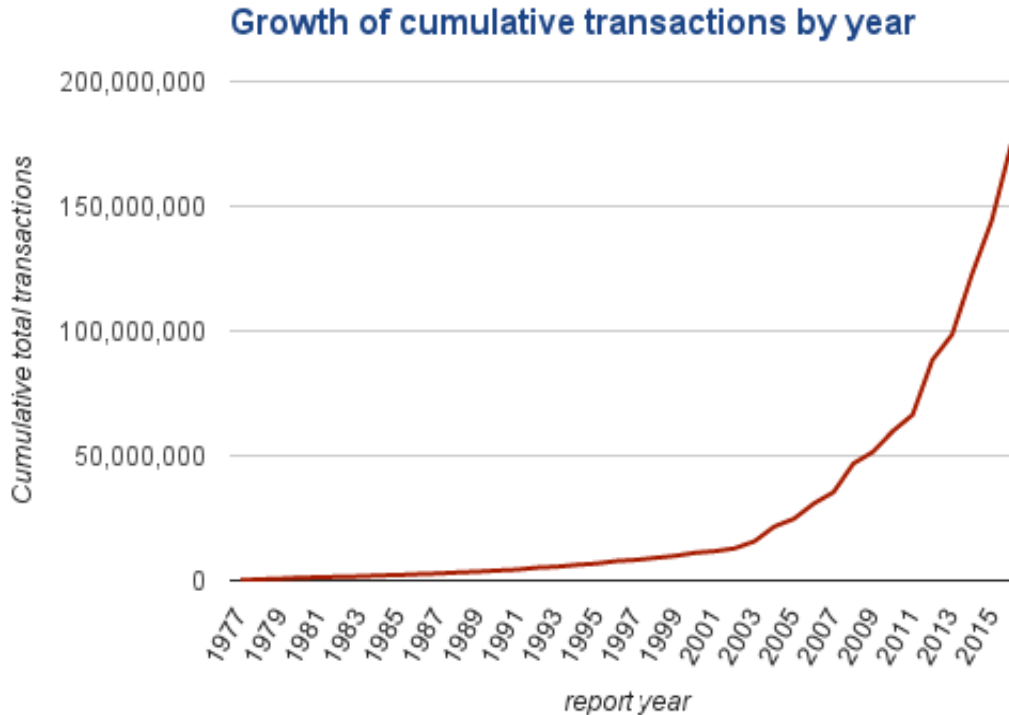


# What we found deep dive: **Scalable Infrastructure**

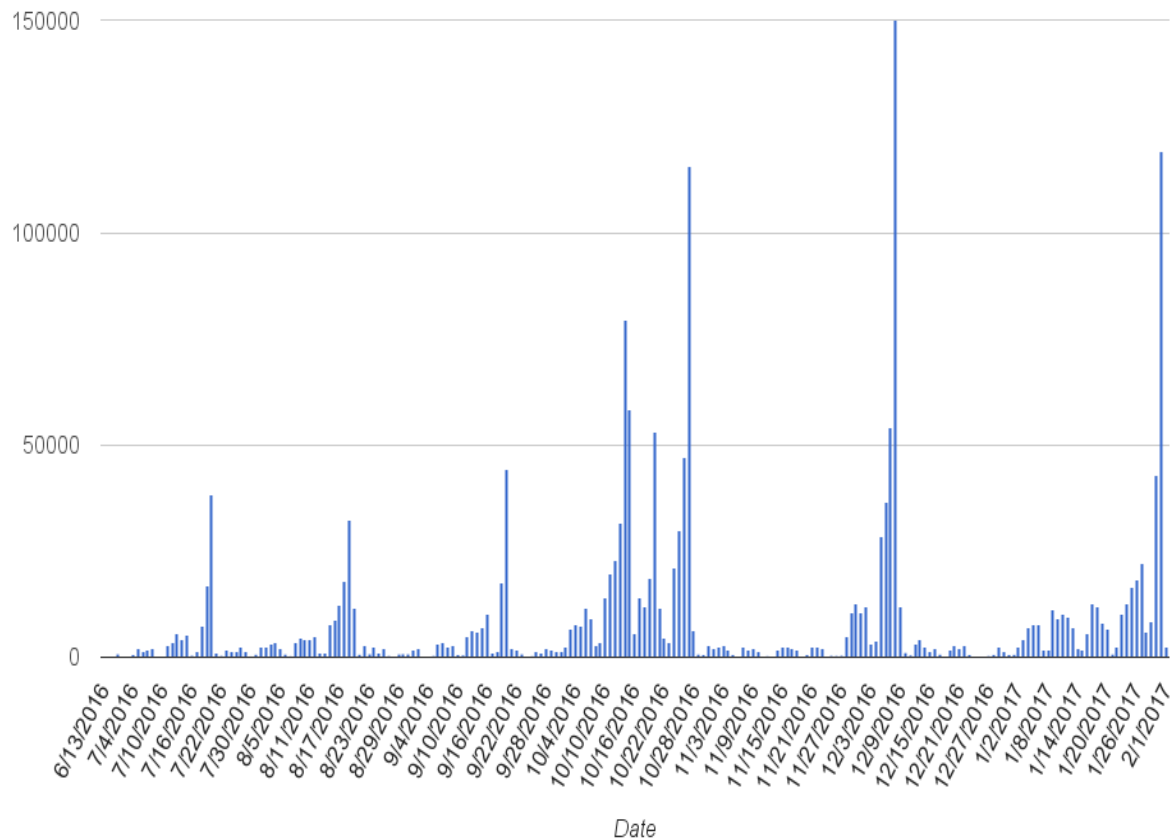
# 2013 Study projection



# 2016 Study (actual data)



# E-filing records per day



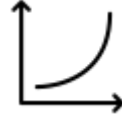
# Impacts



Storage and processing needs will increase at an increasing rate



Analysis more reliant on help from machines



**Storage and processing needs are likely to increase at an increasing rate**



Storage and processing needs are likely to increase at an increasing rate

Traffic has peaks and valleys.

# Keep moving to the cloud.



# By Cloud we mean:

- Scalability
- Don't worry about hardware
- Automated processes



## Benefits:

- Handle more traffic
- Don't worry about hardware
- Automating workflow
- Pro-rated pricing



**Analysis more reliant on help from  
machines**

**Optimize data intake for data analysis**

## Optimize data intake for data analysis

- Optimize data elements for analysis
- Better integrate paper into E-filing process

# Optimize data elements for analysis (1/2)

Image# 201607159020603819

**SCHEDULE B (FEC Form 3)**  
**ITEMIZED DISBURSEMENTS**

Use separate schedule(s) for each category of the Detailed Summary Page

FOR LINE NUMBER: (check only one)

|                                        |                              |                              |                              |
|----------------------------------------|------------------------------|------------------------------|------------------------------|
| <input checked="" type="checkbox"/> 17 | <input type="checkbox"/> 18  | <input type="checkbox"/> 19a | <input type="checkbox"/> 19b |
| <input type="checkbox"/> 20a           | <input type="checkbox"/> 20b | <input type="checkbox"/> 20c | <input type="checkbox"/> 21  |

PAGE 88 OF 96

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NAME OF COMMITTEE (In Full)  
**Randy Perkins for Congress**

Full Name (Last, First, Middle Initial)  
**A. Southwest/OBrien Helicopters Inc.**

Mailing Address 32 Calvin Ave

City Lehigh Acres State FL Zip Code 33936-6702

Purpose of Disbursement  
Travel See in Kind above from Randy Perkins

Candidate Name

Category/Type

Office Sought: ☐ House ☐ Senate ☐ President

Disbursement For: 2016  
☒ Primary ☐ General  
☐ Other (specify)

State: District:

Date of Disbursement  
MM / DD / YYYY  
06 / 21 / 2016

Amount of Each Disbursement this Period  
10795.00

Transaction ID : VQZMXA8VD84

# Optimize data elements for analysis (2/2)

Select data type

DATA TYPE

ProcessedRaw

This data has been categorized and coded by the FEC. The FEC's multi-step process can take days (for electronic filings) or weeks (for paper filings).

Edit filters (4)

Spender information (1)

COMMITTEE NAME OR ID

☒ RANDY PERKINS FOR CONGRESS (C00592261)

Recipient information (1)

RECIPIENT NAME OR ID

☒ "Southwest"

Disbursements data

Share

Export

Viewing about 2 filtered results for:

Data type: processed

01/01/2015 - 12/31/2016

RANDY PERKINS FOR CONGRESS (C00592261)

"Southwest"

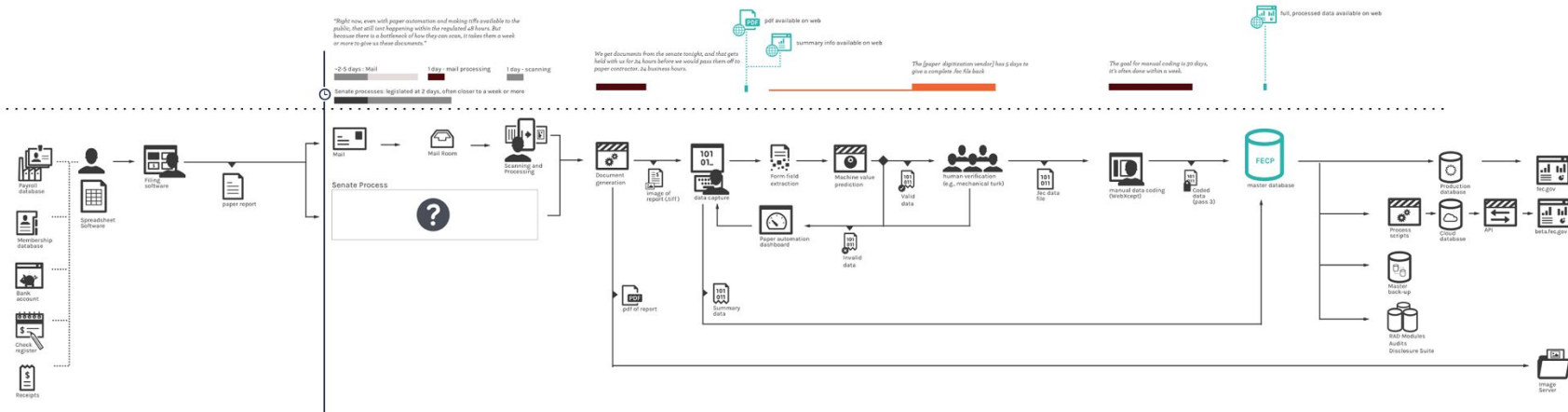
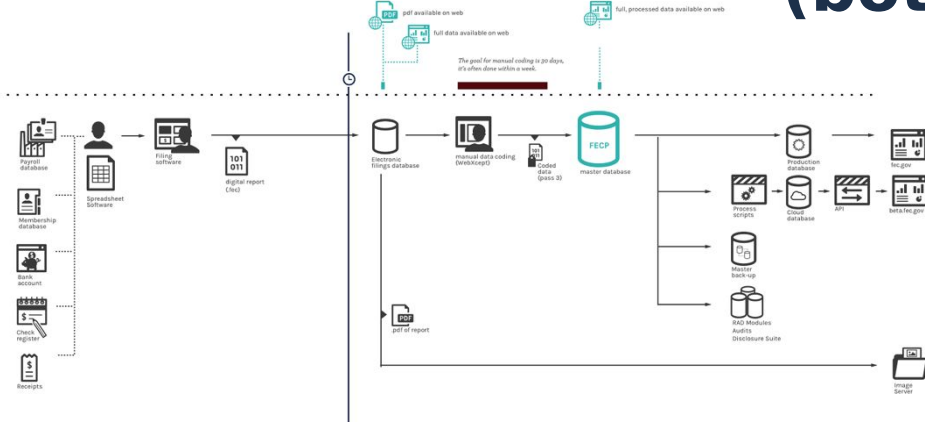
Clear all filters

| Spender                    | Recipient                         | State | Purpose                                     | Disbursement date | Amount      |
|----------------------------|-----------------------------------|-------|---------------------------------------------|-------------------|-------------|
| RANDY PERKINS FOR CONGRESS | SOUTHWEST AIRLINES                | TX    | TRAVEL                                      | 09/01/2016        | \$304.27    |
| RANDY PERKINS FOR CONGRESS | SOUTHWEST/OBRIEN HELICOPTERS INC. | FL    | TRAVEL SEE IN KIND ABOVE FROM RANDY PERKINS | 06/21/2016        | \$10,795.00 |

Results per page: 30

**Better integrate paper into the  
E-filing process**

# E-Filing (top) versus paper process (bottom)



**SCHEDULE A (FEC Form 3)****ITEMIZED RECEIPTS**Use separate schedule(s)  
for each category of the  
Detailed Summary PageFOR LINE NUMBER:  
(check only one)

PAGE 5 OF 20

|                                         |                              |                              |                              |                              |
|-----------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| <input checked="" type="checkbox"/> 11a | <input type="checkbox"/> 11b | <input type="checkbox"/> 11c | <input type="checkbox"/> 11d | <input type="checkbox"/> 11e |
| <input type="checkbox"/> 12             | <input type="checkbox"/> 13a | <input type="checkbox"/> 13b | <input type="checkbox"/> 14  | <input type="checkbox"/> 15  |

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NAME OF COMMITTEE (In Full)  
Shaban for CongressFull Name (Last, First, Middle Initial)  
**A. Springfield Republican Town Committee**  
Mailing Address 60 Evergreen TerraceCity  
SpringfieldState  
CRZip Code  
06610FEC ID number of contributing  
federal political committee.

C

Name of Employer

Occupation

Receipt For: 2016

☐ Primary ☒ General  
☐ Other (specify) ▼

Election Cycle-to-Date ▼

250.00

Date of Receipt

MM / DD / YYYY  
10 / 06 / 2016

Transaction ID : SA11AL5782

Amount of Each Receipt this Period

250.00

☐ Memo ItemFull Name (Last, First, Middle Initial)  
**B. Buckley, Jeff**  
Mailing Address 248 Evergreen TerraceCity  
SpringfieldState  
CRZip Code  
06883FEC ID number of contributing  
federal political committee.

C

Name of Employer

Occupation

Retired

Retired

Receipt For: 2016

☐ Primary ☒ General  
☐ Other (specify) ▼

Election Cycle-to-Date ▼

300.00

Date of Receipt

MM / DD / YYYY  
10 / 16 / 2016

Transaction ID : SA11AL5810

Amount of Each Receipt this Period

100.00

☐ Memo ItemFull Name (Last, First, Middle Initial)  
**C. Johnson, Robert**  
Mailing Address 1 Evergreen TerraceCity  
SpringfieldState  
CRZip Code  
06855FEC ID number of contributing  
federal political committee.

C

Name of Employer

Occupation

Bicycle Records

Blues Musician

Receipt For: 2016

☐ Primary ☒ General  
☐ Other (specify) ▼

Election Cycle-to-Date ▼

300.00

Date of Receipt

MM / DD / YYYY  
10 / 05 / 2016

Transaction ID : SA11AL5761

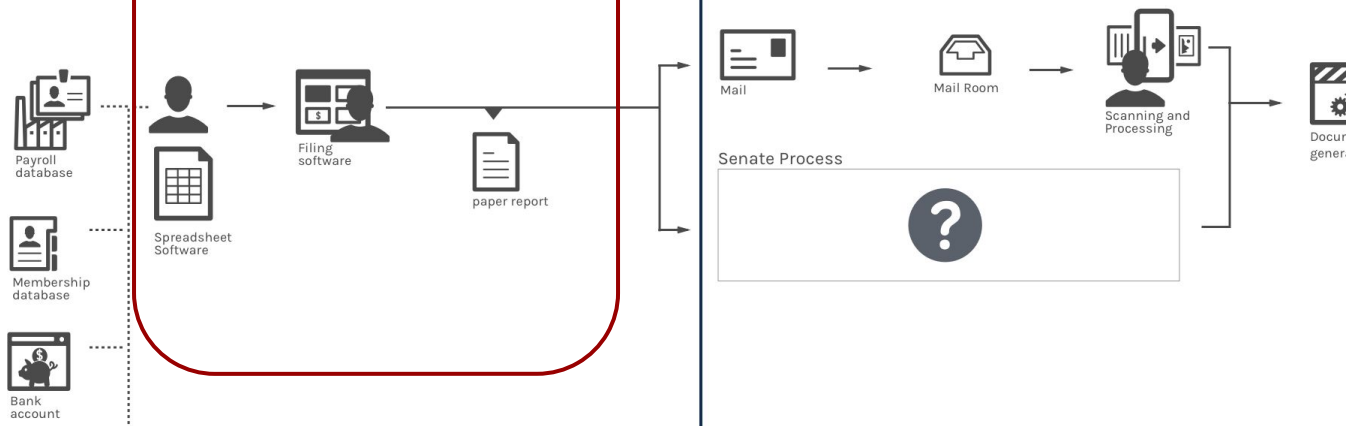
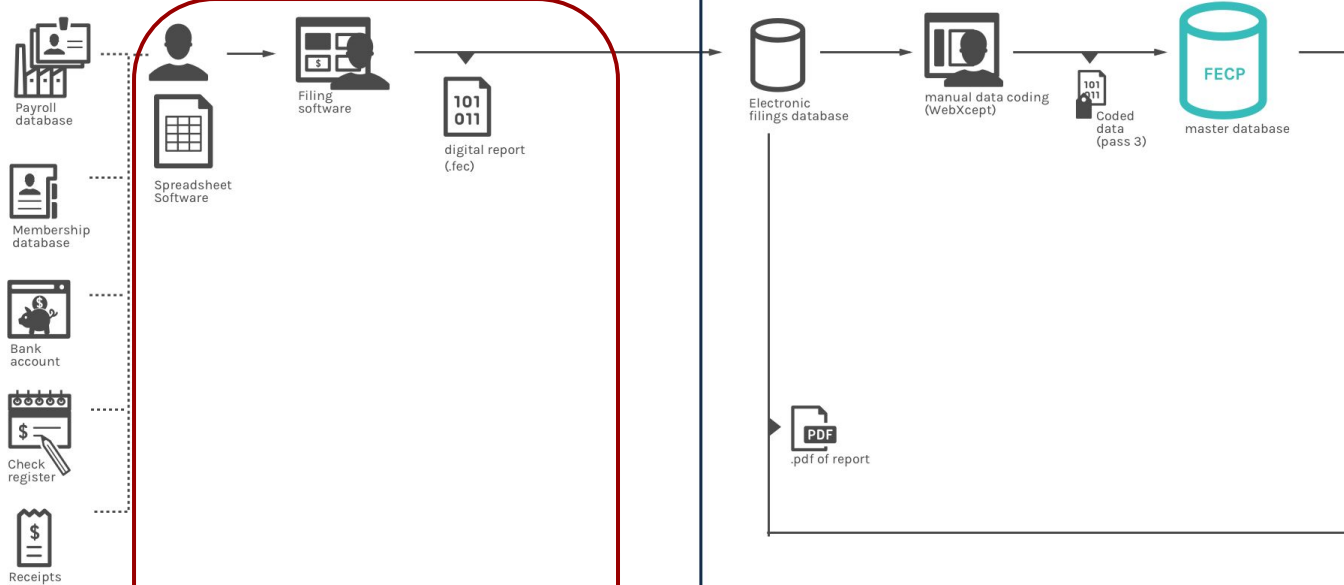
Amount of Each Receipt this Period

200.00

☐ Memo Item**SUBTOTAL** of Receipts This Page (optional).....▶

550.00

**TOTAL** This Period (last page this line number only).....▶



**SCHEDULE A (FEC Form 3) ITEMIZED RECEIPTS**

FOR LINE NUMBER:(Use separate schedule(s) for each category of the Detailed Summary Page)

**check one:** 11a ☒ 11b ☐ 11c ☐ 11d ☐ 12 ☐ 13a ☐ 13b ☐

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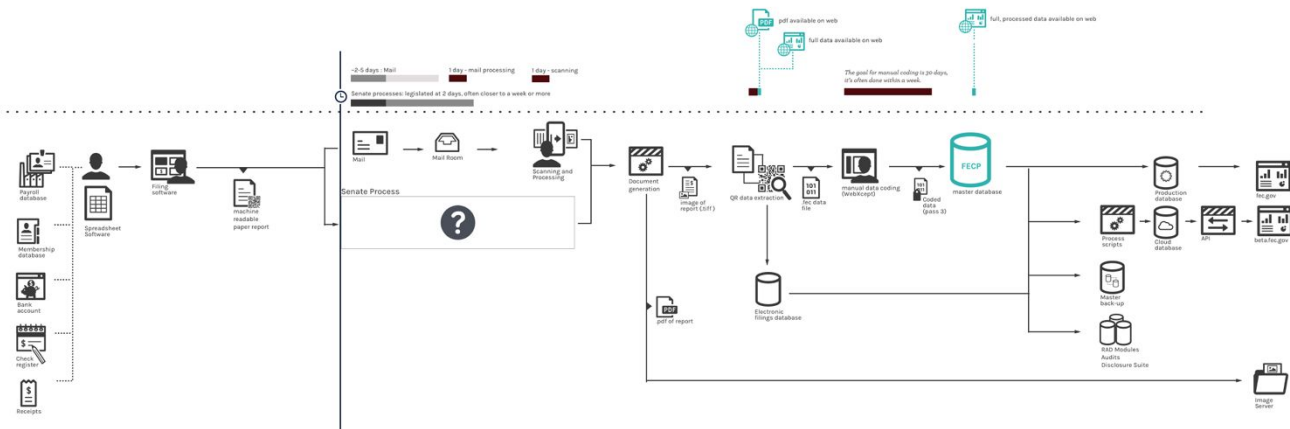
NAME OF COMMITTEE (In Full)

Shaban for Congress



|                                                                                                                                                 |             |                   |                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------|------------------------------------------------------------------------------------|
| <b>A.</b> Full Name (Last, First, Middle Initial)<br><b>Springfield Republican Town Committee</b><br>Mailing Address 60 Evergreen Terrace       |             |                   | Date of Receipt<br>10 / 06 / 2016<br><b>Transaction ID : SA11AL5782</b>            |
| City<br>Springfield                                                                                                                             | State<br>CR | Zip Code<br>06610 | Amount of Each Receipt this Period<br>250.00<br><input type="checkbox"/> Memo Item |
| FEC ID number of contributing federal political committee.<br>C                                                                                 |             |                   |                                                                                    |
| Name of Employer<br>Occupation                                                                                                                  |             |                   |                                                                                    |
| Receipt For: 2016<br><input type="checkbox"/> Primary <input checked="" type="checkbox"/> General<br><input type="checkbox"/> Other (specify) ▼ |             |                   |                                                                                    |
| Election Cycle-to-Date<br>250.00                                                                                                                |             |                   |                                                                                    |
| <b>B.</b> Full Name (Last, First, Middle Initial)<br><b>Buckley, Jeff</b><br>Mailing Address 248 Evergreen Terrace                              |             |                   | Date of Receipt<br>10 / 16 / 2016<br><b>Transaction ID : SA11AL5810</b>            |
| City<br>Springfield                                                                                                                             | State<br>CR | Zip Code<br>06883 | Amount of Each Receipt this Period<br>100.00<br><input type="checkbox"/> Memo Item |
| FEC ID number of contributing federal political committee.<br>C                                                                                 |             |                   |                                                                                    |
| Name of Employer<br>Retired                                                                                                                     |             |                   |                                                                                    |
| Receipt For: 2016<br><input type="checkbox"/> Primary <input checked="" type="checkbox"/> General<br><input type="checkbox"/> Other (specify) ▼ |             |                   |                                                                                    |
| Election Cycle-to-Date<br>300.00                                                                                                                |             |                   |                                                                                    |
| <b>C.</b> Full Name (Last, First, Middle Initial)<br><b>Johnson, Robert</b><br>Mailing Address 1 Evergreen Terrace                              |             |                   | Date of Receipt<br>10 / 05 / 2016<br><b>Transaction ID : SA11AL5761</b>            |
| City<br>Springfield                                                                                                                             | State<br>CR | Zip Code<br>06855 | Amount of Each Receipt this Period<br>200.00<br><input type="checkbox"/> Memo Item |
| FEC ID number of contributing federal political committee.<br>C                                                                                 |             |                   |                                                                                    |
| Name of Employer<br>Bicycle Records                                                                                                             |             |                   |                                                                                    |
| Receipt For: 2016<br><input type="checkbox"/> Primary <input checked="" type="checkbox"/> General<br><input type="checkbox"/> Other (specify) ▼ |             |                   |                                                                                    |
| Election Cycle-to-Date<br>300.00                                                                                                                |             |                   |                                                                                    |
| <b>SUBTOTAL</b> of Receipts This Page (optional) .....                                                                                          |             |                   | 550.00                                                                             |
| <b>TOTAL</b> This Period (last page this line number only) .....                                                                                |             |                   |                                                                                    |

*"Right now, even with paper automation and making trials available to the public, that still isn't happening within the regulated 48 hours. But because there is a bottleneck of how they can scan, it takes them a week or more to give us these documents."*



## **To recap:**

**The data is growing exponentially.**

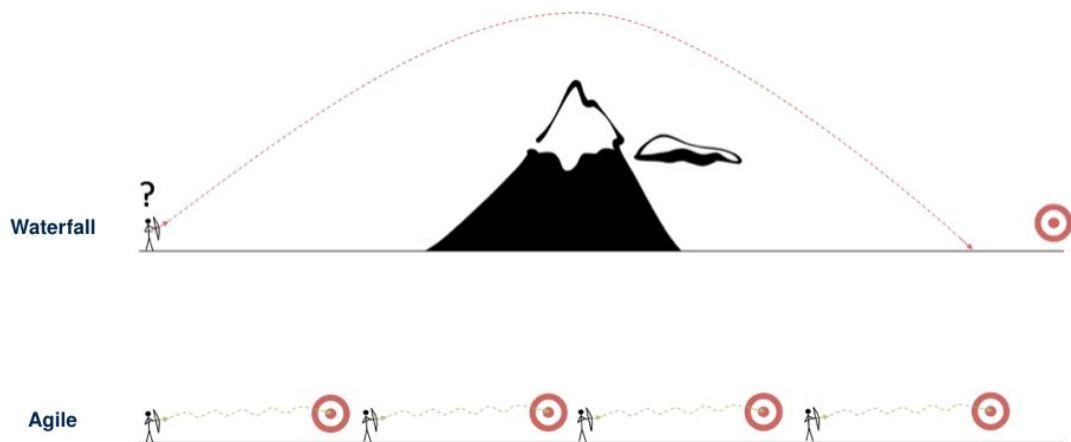
**There are data quality issues that make it harder to analyze.**

**Accelerate the improvements to the filer experience, modernizing intake, and continue moving toward scalable processes**

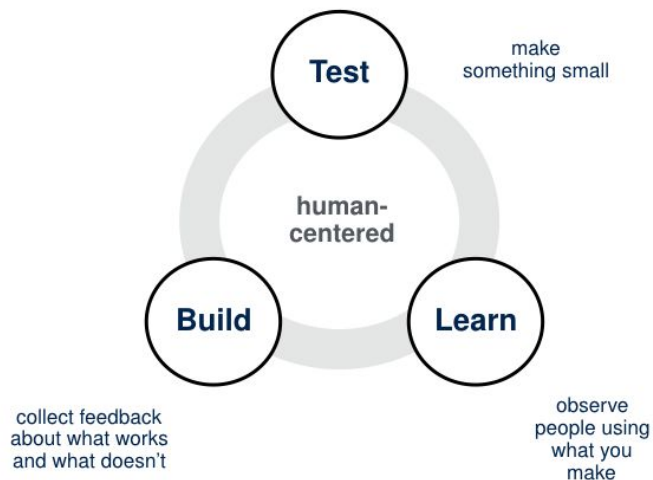
# How to move forward

# 18F methods

## 1. We work iteratively



## 2. We design for people



# Friends of Bo | Welcome Back!

Due in: 3 days

## Report: October Monthly

Tell us how you'd like to get started (1 of 2):

What kind of transactions would you like to enter?



### Receipts >>

Report contributions from individuals and committees



### Disbursements >>

Report expenses made to vendors, individuals, and committees.

Begin Submission Process

**The FEC has made significant progress toward designing human centered applications.**

**The FEC can expand ongoing efforts to make changes in a human centered, open, and agile way to include designing changes to E-filing.**

**Thanks, this has been fun!**

**Questions?**

**Bonus session:**

# Prototype Show and Tell

# Manual entry

## Friends of Bo | Welcome Back!

Due in: 3 days

### Enter Transaction | Contributions

AMOUNT

TRANSACTION DATE

ELECTION

CONTACT TYPE

☒ Individual
 ☐ Committee

LAST NAME

FIRST NAME

SUFFIX

CITY

ZIP

Name

Type

Amount

# Importing data

**One way filers can minimize rekeying errors is by importing their data, yet using the current import feature requires workarounds that are error prone.**

*"I have to call them every time because I can't remember how to do this [import file]. I can't remember. I'll have to call and have them walk me through it again... I have a good consultant, but he must think I'm the dumbest person in the world because he walks me through."*

## IMPORTING PROTOTYPE

**We prototyped one possible look and feel, and tested it with users**

## Friends of Bo | October Monthly Report

Due in:  
3 Days

## Report : October Monthly

Tell us how you'd like to get started (1 of 2):

What kind of transactions would  
you like to enter?

## Receipts »

Report contributions from individuals  
and committees

## Disbursements »

Report expenses paid to vendors,  
individuals, and committees

Begin Submission Process

Other Report Actions:

[Check for duplicates](#)[Run Validator](#)[Preview Report Form](#)[Print Report](#)

## REPORT OVERVIEW

Beginning Cash on Hand \$3,400,238.00

Ending Cash on Hand \$ - - - -



| Description                                      | Itemized | Unitemized | Aggregate |
|--------------------------------------------------|----------|------------|-----------|
| Individual Contributors                          | \$0.00   | \$0.00     | \$0.00    |
| Contributions from political party committees    | \$0.00   |            | \$0.00    |
| Contributions from other political committees    | \$0.00   | \$0.00     | \$0.00    |
| Transfers from affiliated/other party committees |          |            |           |
| All loans received                               | \$0.00   |            | \$0.00    |
| Loan Repayments received                         |          |            |           |
| Offsets to operating expenditures                |          |            |           |
| Refunds of contributions made to others          | \$0.00   |            | \$0.00    |
| Other Federal Receipts (Dividends, Inte          |          |            |           |
| Transfers from Non-federal Account               |          |            |           |
| Transfers from Levin Funds                       |          |            |           |
| Allocable expenditures                           |          |            |           |
| i. Federal share                                 |          |            |           |
| ii. Non-federal share                            | \$0.00   |            | \$0.00    |
| Other federal operating expenditures             | \$0.00   |            | \$0.00    |

*A lot of our current work is formatting the Excel file. If we were able to select from the import file that we have, that would be really great. I would like to be able to select the columns that I need from the spreadsheet.”*

*“That’s nice... I like that very much. So if someone didn't have the spreadsheet in the right order, it would make an attempt to understand what they’ve got. [The current system] takes a phone call to RAD to understand.”*

## Merging duplicate contacts (first attempt)

Keep version  
in contact  
history

☐

**Thomason, Henrik**

☒☐

999 E St NW,  
Washington, DC 20001

☒☐

Banker

☒☐

Self-Employed

☒

**Contributions from this name:**

9/8/2016 - \$43.00

9/12/2016 - \$17.00

**Total combined contributions:**

**\$249.00**

select as  
current

☐

**Thomason, Henrik Larrimore**

☐

999 E St Northwest,  
Washington, DC 20001

☒

Banker

☒

Self-Employed

**Contributions from this name:**

10/8/2016 - \$189.00

Keep version  
in contact  
history

☐☐☐☐

## Merging duplicate contacts (second attempt)

## Friends of Bo | October Monthly Report

Due in:  
3 Days

## Report : October Monthly

Ready to submit?  
Let's check a couple  
things first:

1. Check for Duplicates
2. Run validation
3. Preview, sign and submit

go

## REPORT OVERVIEW

Beginning Cash on Hand \$3,400,238.00

Ending Cash on Hand \$1,975,702.00



| Description                                      | Itemized     | Unitemized  | Aggregate    |
|--------------------------------------------------|--------------|-------------|--------------|
| Individual Contributors                          | \$287,033.00 | \$13,000.00 | \$300,033.00 |
| Contributions from political party committees    | \$40.00      |             | \$40.00      |
| Contributions from other political committees    | \$300.00     | \$300.00    | \$600.00     |
| Transfers from affiliated/other party committees |              |             |              |
| All loans received                               | \$12,090.00  |             | \$12,000.00  |
| Loan Repayments received                         |              |             |              |
| Offsets to operating expenditures                |              |             |              |
| Refunds of contributions made to others          | \$77.00      |             | \$77.00      |
| Other Federal Receipts (Dividends, inte          |              |             |              |
| Transfers from Non-federal Account               |              |             |              |
| Transfers from Levin Funds                       |              |             |              |
| Allocable expenditures                           |              |             |              |
| i. Federal share                                 |              |             |              |
| ii. Non-federal share                            | \$780.00     |             | \$780.00     |
| Other federal operating expenditures             | \$250.00     |             | \$250.00     |

## Merging duplicate contacts (third attempt)

Current block  
comparison

Name: Joe Smith  
Address: 123 House Ln.  
City and State: Washington, District of Columbia  
Zip: 20463  
Employer: The Big Company  
Occupation: Analyst

Name: Joe H. Smith  
Address: 123 House Ln.  
City and State: Wasingten, District of Columbia  
Zip: 20463  
Employer: The Big Company  
Occupation: Analyst

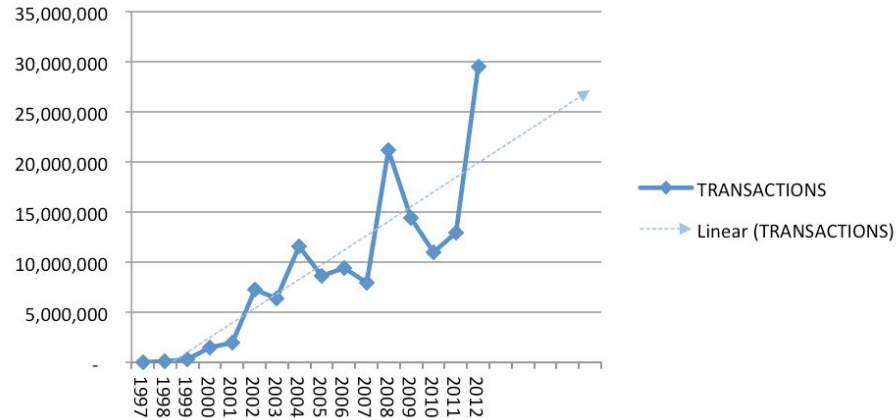
Suggested  
row  
comparison

| Last name | Middle name | First name | Prefix | Suffix | Address       | City | State | Zip | Employer         | Occupation |
|-----------|-------------|------------|--------|--------|---------------|------|-------|-----|------------------|------------|
| Smith     |             | Joe        |        |        | 123 House Ln. | Gary | IN    |     | The Big Company  | Analyst    |
| Smith     | H.          | Joe        |        |        | 123 House Ln. | Gery | IN    |     | The Big Company  | Analyst    |
| Smith     | H.          | Joseph     |        |        | 123 House Ln. | Gary | IN    |     | The Bing Company | Analyst    |

# Thanks!

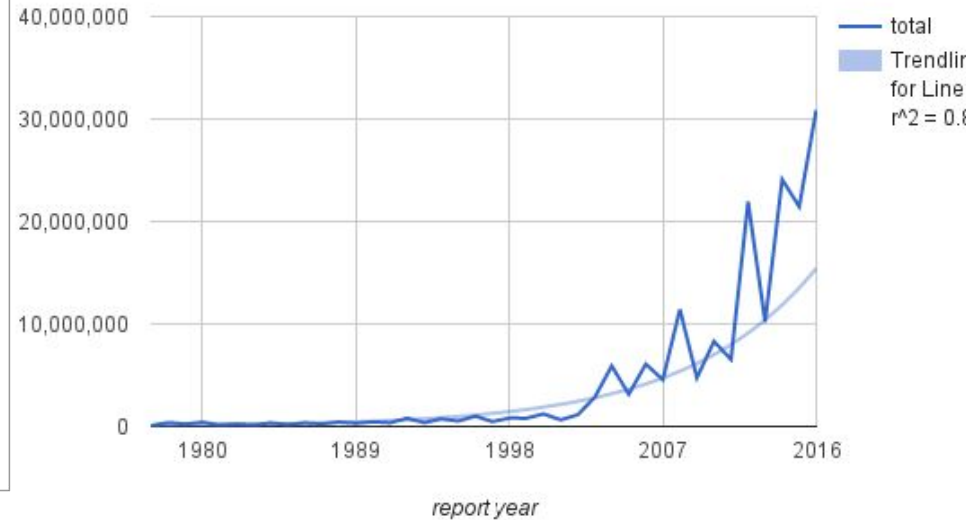
# Back-up slides

## FEC ANNUAL FILING TRANSACTIONS



2013 Study Projections

## total vs. report year



2016 Study Actuals w  
exponential trend