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Overview of problem

When we think about emerging crowdsourcing tools and their applications, one can see the domination of digital tools. From different social media platforms to online crowdsourcing websites, these tools help us to harness inputs and creativity of crowds in different ways. However, conventional methods like interviews, focus groups, workshops or assemblies still protect their popularity in different cultural and demographic conditions and still considered reliable sources for qualitative idea collection. Through this semester, we wanted to work on how we can bridge physical and digital idea collection methods and we came up with Live Assembly which is a real time data collection and analysis tool that allows its users to map, categorize and link ideas with other digital tools.

Our Client

Our client for the project was Participatory Budgeting which is a nation-wide organization that organizes community members to come together and directly decide how to spend part of a public budget. Through this process the initiative invites community members to share ideas on projects to improve in this case Cambridge. Currently, the organization engages with the community using both digital and physical methods. On the digital side, they use a web platform that allows citizens to share, locate and discuss their ideas with each other. In terms of face-to-face interaction, the organization mostly depends on assemblies and some pop-up events from time to time. The organization is challenged by the very same problem of disconnection between physical and digital methods and gave us the green light to focus our energy on this issue.

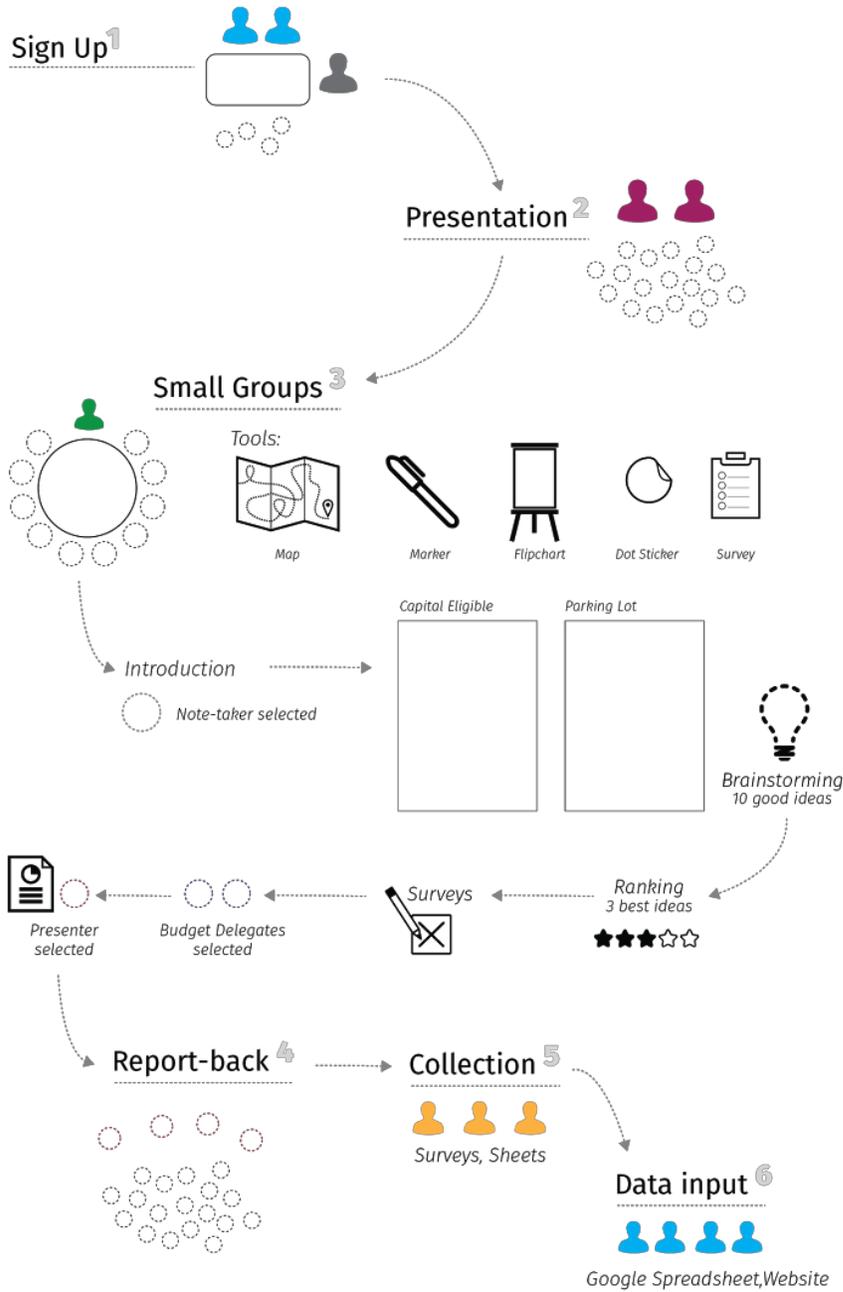
Analyzing the existing system

Through several meetings with our client, we have analyzed the current assembly organization and parts that we can intervene. From the beginning, we have adopted a pragmatic approach that accepted existing website of PB as a given. Although we think that it can be improved, we believe its discussion and comments interface, favorite function and visual appeal are strong enough to move forward. When we started looking into the existing assembly structure, we found out that it is complex process with several actors taking role in different parts.

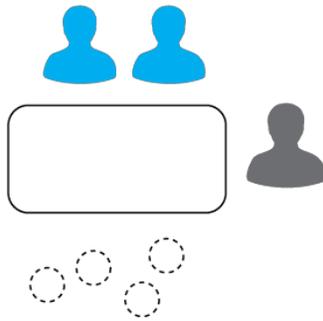
People:



Process:

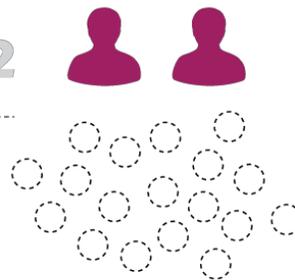


Sign Up¹



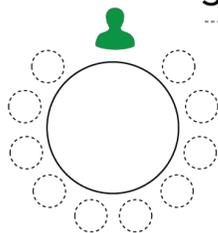
1) The assembly starts with participants signing in and preparing their name tags. Volunteers record all the necessary information to physical forms.

Presentation²

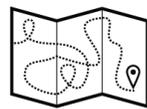


2) The PB team makes a presentation about the City, the City budget process, and participatory budgeting. They usually show a video and encourage participants to ask questions.

Small Groups³



Tools:



Map



Marker



Flipchart

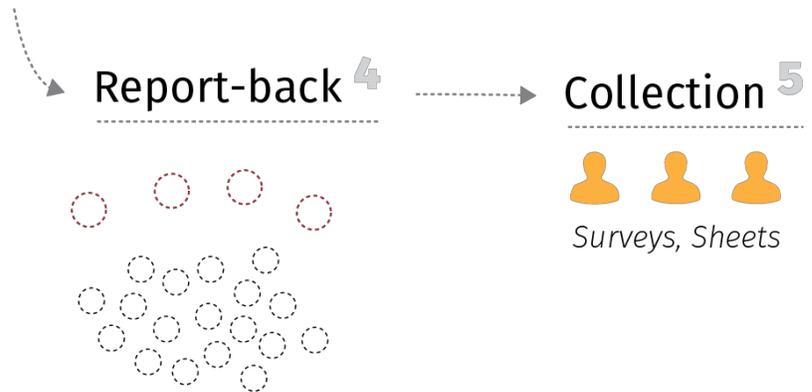


Dot Sticker

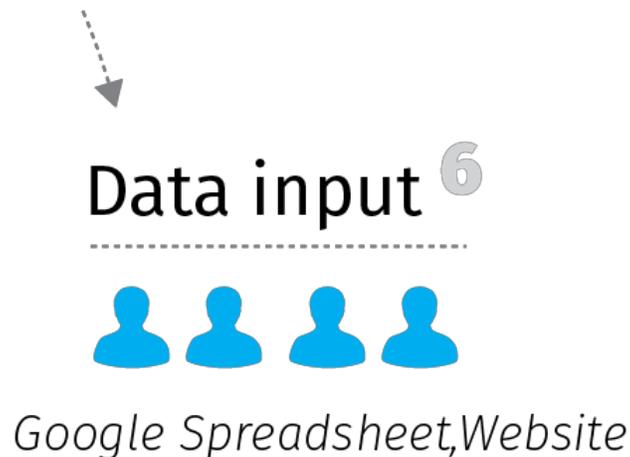


Survey

3) Participants break into small groups for 45 minutes, to brainstorm capital project ideas for their community. A facilitator directs the discussion and a note-taker records the what is being said. After the brainstorming session, participants start prioritizing ideas, and select budget delegates who will turn the ideas into full proposals



4)A representative from each group present group’s top three ideas, and to indicate who from their group is volunteering to serve as a budget delegate. After each presentation, volunteers collect the group’s sheet of project ideas.



5)PB Staff enter ideas from flip chart paper into PB Project Ideas google spreadsheet and they upload ideas onto City website

How can we improve this process?

Building on the feedback that we got from our client, we have identified our focus areas to improve this process. Our strategy includes series of online forms that are connected to each other and aggregate their results in a database.

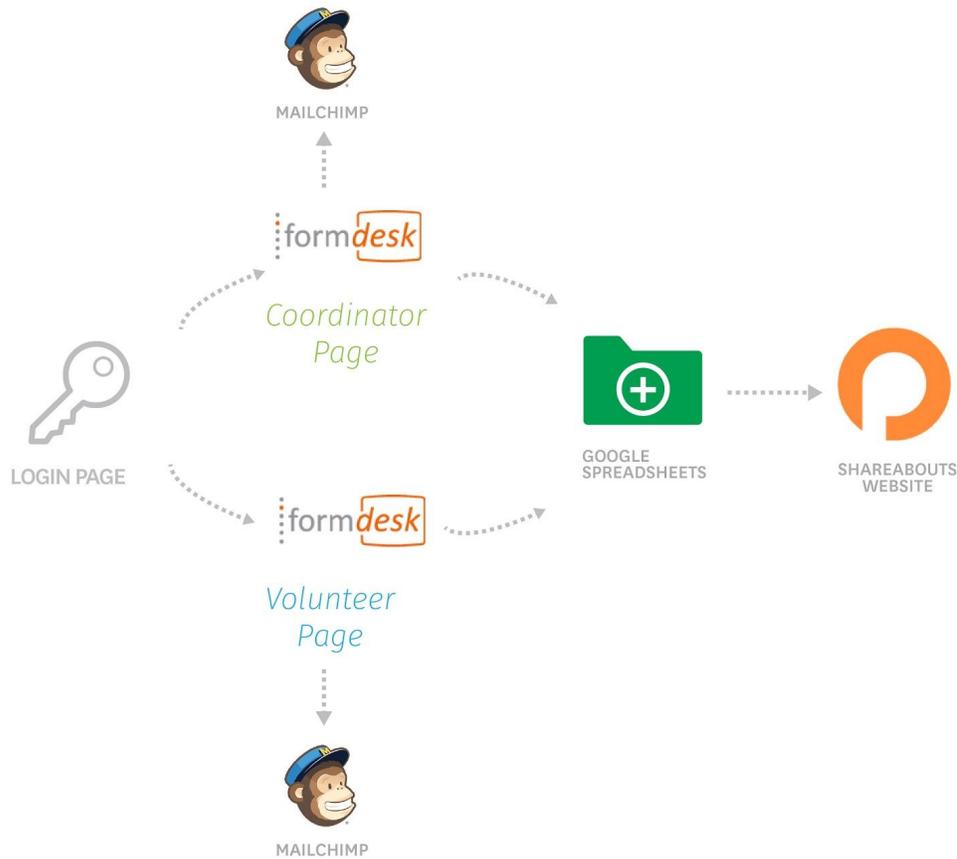
Our first focus area is Sign-Up Process. Live Assembly introduces digital sign in tools which lets us send RSVP mails before the assembly and see who is coming or not.

During the assembly, digital sign-in also allows the volunteers to tag the ideas with the participants so that interaction can continue in the digital website. Our second

focus area was Idea Collection. With Live Assembly volunteers can map the ideas, categorize and prioritize them in a single interface. It allows coordinators and volunteers to make necessary edits and organize entries before they are pushed into the website. The third focus area is follow up. By using webhooks, Live Assembly can feed its data to other service providers like Shareabouts or Mailchimp in order to expand the interaction of assemblies.

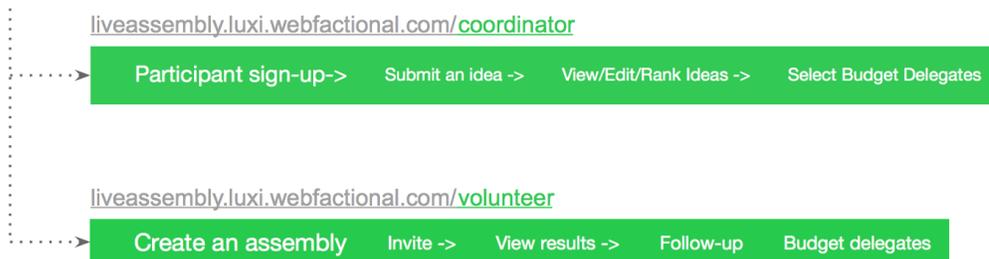


The Product and Technology



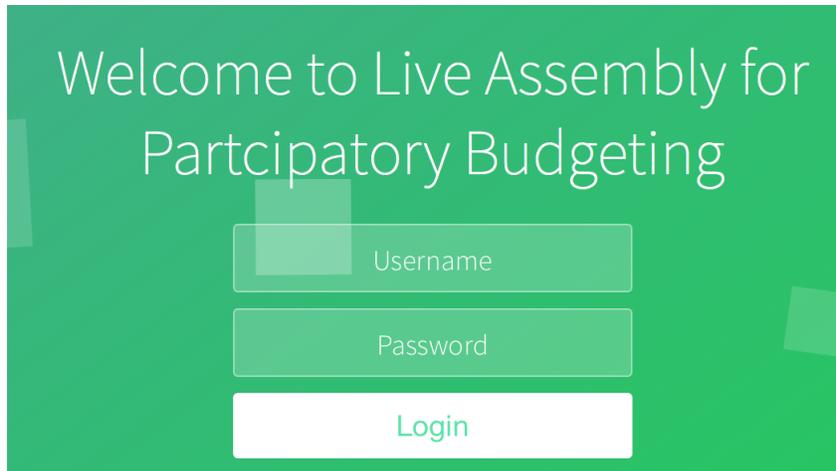
This diagram is an overview of the technology used to realize our product. We created three web pages powered by other online tools. The login page allows coordinator and volunteer accounts to login, and leads to different webpages. The coordinator page and volunteer page embeds forms from Formdesk for data input and Google spreadsheet for data output and editing. The ideas and participant information will then be fed from Google spreadsheet to the PB Shareabouts website.

login: liveassembly.luxi.webfactional.com



Login Page

The login page can help differentiate volunteer and coordinator. They will be led to their respective page. It also allows us to limit access from the public, to prevent an public user from editing the data collected from face-to-face assemblies.



The image shows a login page with a green background. The text "Welcome to Live Assembly for Participatory Budgeting" is displayed in white. Below the text are three input fields: "Username", "Password", and "Login". The "Login" button is white with green text.

Coordinator Page

Coordinator accounts will be directed to the “Coordinator Page”. It’s designed in line with the workflow of a coordinator’s job. Before the assembly, he can create one. Then send out emails or sms to invite community members and volunteers. An RSVP link will be embedded in the email. After that, he can view information of participant and volunteer that signed up to keep track of the event. During the assembly, the coordinator can view ideas submitted by volunteers. After the assembly, he can push the data into Shareabouts website and send “Thank you” emails with the link of ideas. He can also view budget delegates’ information for further contacts.

Volunteer Page

Volunteer accounts will be directed to the “Volunteer Page”. We try to make it as simple and straightforward as possible since volunteers need to get familiar with the interface in a short time before the assembly. When assembly starts, volunteers help sign up participants that arrive using the form from Formdesk. They will select the corresponding assembly from the drop-down menu. They will also ask for participant contacts - email, phone and/or twitter. This is for coordinators and budget delegates to follow up with them after the event. As the assembly starts, after the coordinator finishes the introduction and ice breaking, volunteers will use this tool to digitize participant’s idea during the group brainstorming. They can match the idea with the participant by choosing his/her name from

the drop-down menu. This drop-down menu is fed by data from previous participant RSVP and sign-up stage. After the brainstorming, volunteers can 1) see all ideas in an embedded Google spreadsheet, 2) edit ideas if needed, and 3) put down idea ranking results to capture the preference of participants. Lastly, volunteers can help people who are interested in being a budget delegate to sign-up using this form.

Sending RSVP email and “Thank you” email are functions offered by many existing mail management tools like Mailchimp. Therefore we didn’t focus on the mailing function, but are imagining that our tool can be used with Mailchimp.



This is a more detailed diagram of the technology we used. It shows how data is collected by Formdesk, transferred between different forms, and displayed in Google spreadsheets.

Why Formdesk?

	Server	Look-up	Mapping	Connect with Google Spreadsheet	Cost
	Formdesk	√	√	√	\$700/year
	FormAssembly	√			\$1560/year
	Google Form	√	√		Free
	Fulcrum	√	√	√	\$1200/year

We did a thorough research on potential online forms for data collection, and Formdesk stands out among them. It has its server to store data, has look-up function to display data collected from other forms in the drop down menu, has mapping service, and can be connected with google spreadsheet for easier data output. It also has a relatively cheap pricing.

Pre-release: Challenges

We foresee some potential challenges for the release:

- 1) Tablets or computers are required, 1 per table/group.
- 2) Internet connection is required for data input.
- 3) Volunteers need to learn how to use the tool before the assembly.
- 4) Note-takers (volunteers) need to keep up with the conversation while using the tool
- 5) Not every idea has a specific location

Release and Mock-up Assembly

We released the product last week, and organized a mock-up assembly at Harvard Graduate School of Design. I played the role of a coordinator, Hayro as facilitator to lead the discussion. Volunteer is a student who learned how to use the website only 10 minutes before the assembly.



Overall, the different functions and their connections worked. We also had some observation and got feedbacks from the volunteer who used the tool:

- 1) Volunteer needs to get familiar with the computer
- 2) What if something doesn't work?
- 3) Sometimes the discussion can be too fast to follow
- 4) Possibility of selecting multiple categories rather than a single one
- 5) Summarizing the idea was hard. Instead, one can put hashtags in front of keywords
- 6) Make people's name as button

Opportunities

The current Live Assembly website creates frameworks and opportunities for new features to be developed and connected

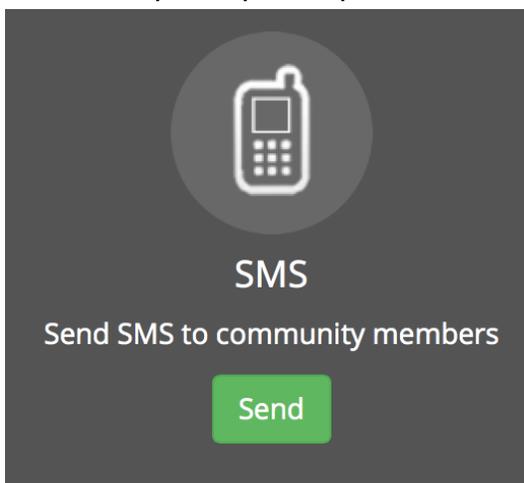
Real-time tweeting of assembly ideas

Tweeting functions can be developed by connecting digitized ideas with twitter. Coordinator can select submitted ideas during the assembly and tag the twitter of participants who brought up the idea. This can help promotion of the PB process, soliciting more ideas, and get comments from social media.



Group SMS to community members

Group SMS that is part of Formdesk system can be connected with the google spreadsheet that stores participant's' phone number. This is for follow-up of later process of PB.



Mobile phone interface for street idea collection

The website is also accessible by mobile phones. A potential use of the website is to collect ideas at pop-up event on the street for greater community outreach.



Handover strategies

1) Webpage(html codes and files) to be hosted on PB website, for example:
liveassembly.participatorybudgeting.org

2) Formdesk, Gmail and Zapier account turnover and account maintenance:

	Account	Password	Current subscription	Expiration date
Google account (gmail, drive, spreadsheet)	pbliveassembly@gmail.com	crowdsourcing	N/A	N/A
Formdesk		crowdsourcing	"Formdesk Small" \$49	05/08/2016
Zapier		crowdsourcing	trial \$0	05/11/2015
Mailchimp		OCrowdsourcing!	N/A	N/A

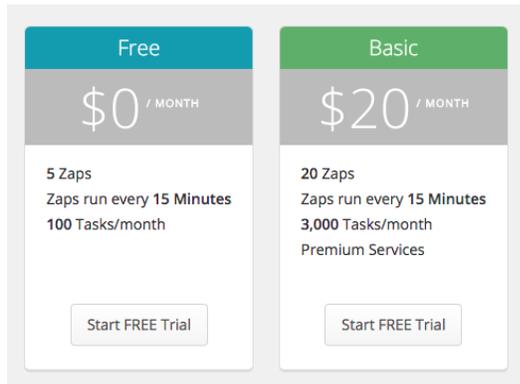
3) Budget: around \$1000/year, may vary depending on data submission and add-on features

Item	Cost
Formdesk Xlarge	\$499/year
Formdesk adds-on:	
a. look-up	\$99/year
b. Webhooks	\$99/year
c. SMS	\$99/year
Zapier basic	\$240/year (\$20/m * 12)
Google(gmail, google spreadsheet)	\$0
Mailchimp	\$0
Total	\$1036

	Small	Medium	Large	X Large	Bronze	Silver	Gold	Platinum
Stored Results [?]	250	500	1,500	3,000	1,500	3,000	6,000	12,000
Monthly form submissions [?]	250	500	1,000	2,000	1,000	2,000	4,000	8,000
Monthly requests [?]	1,000	2,000	6,000	12,000	6,000	12,000	24,000	48,000
File upload space [?]	5 MB	10 MB	25 MB	50 MB	25 MB	50 MB	100 MB	200 MB
Price for one year [?]	\$ 49	\$ 99	\$ 249	\$ 499	\$ 1,000	\$ 2,000	\$ 4,000	\$ 8,000

Feature			
 <input type="checkbox"/> Secure data transfer (ssl) [?]	\$ 99	 <input type="checkbox"/> Multi-page forms [?]	\$ 99
 <input type="checkbox"/> Group email [?]	\$ 99	 <input type="checkbox"/> Dependencies [?]	\$ 99
 <input type="checkbox"/> User Management [?]	\$ 99	 <input type="checkbox"/> PDF [?]	\$ 99
		 <input type="checkbox"/> Workflow [?]	\$ 99
		 <input type="checkbox"/> SMS [?]	\$ 99
		 <input type="checkbox"/> Webhooks [?]	\$ 99
		 <input type="checkbox"/> Lookup [?]	\$ 99
		 <input type="checkbox"/> Enhanced Validations [?]	\$ 99

Formdesk pricing



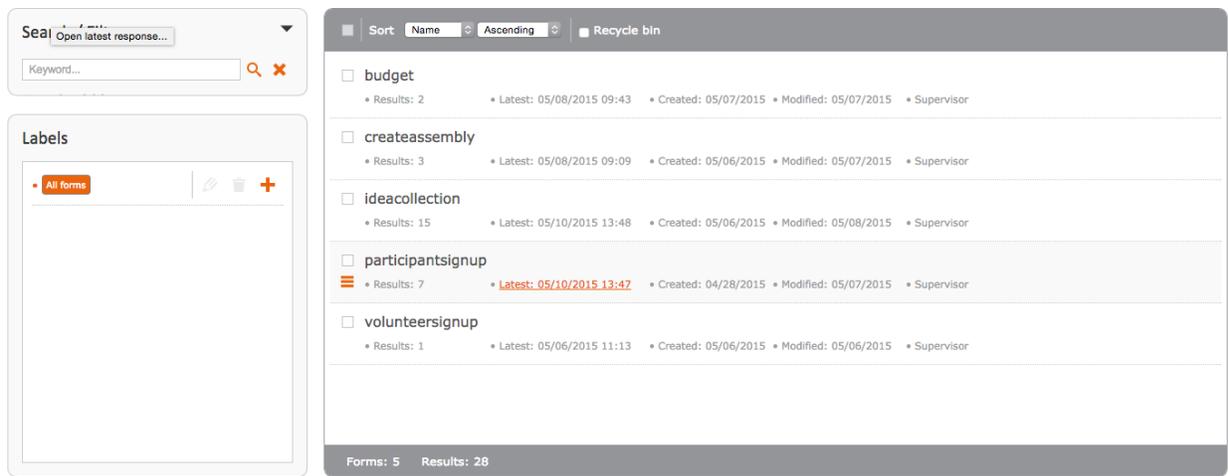
Zapier pricing

4) Developer needed for: Shareabouts data feed, login, group email

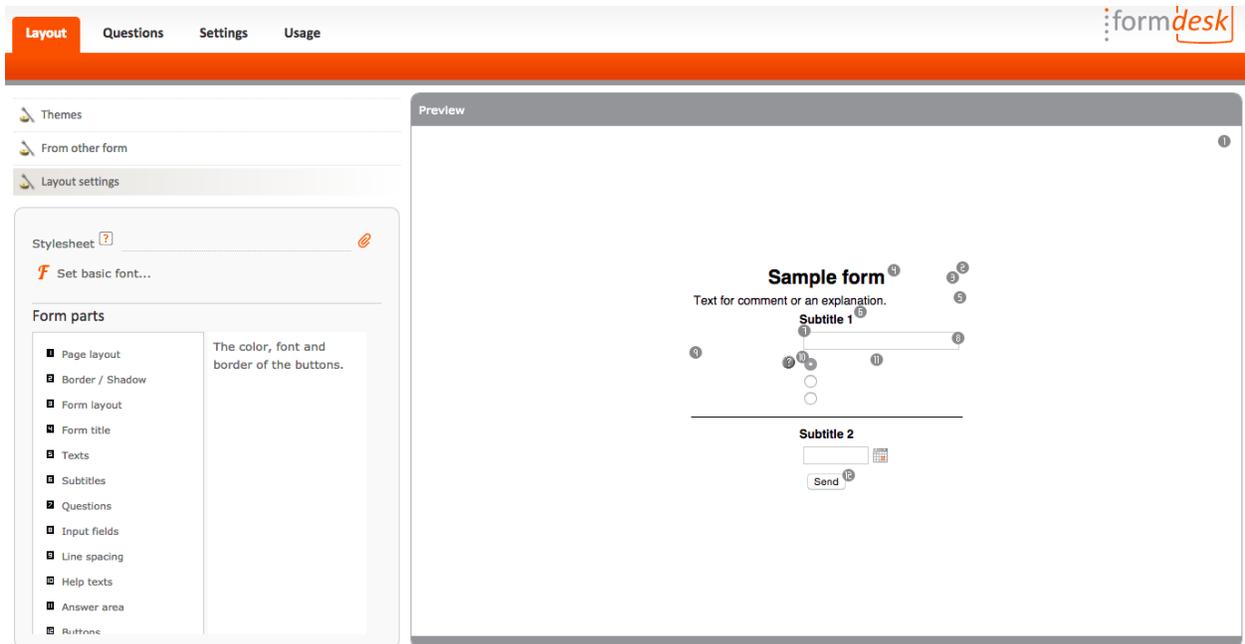
Handover Manual

Formdesk Interface

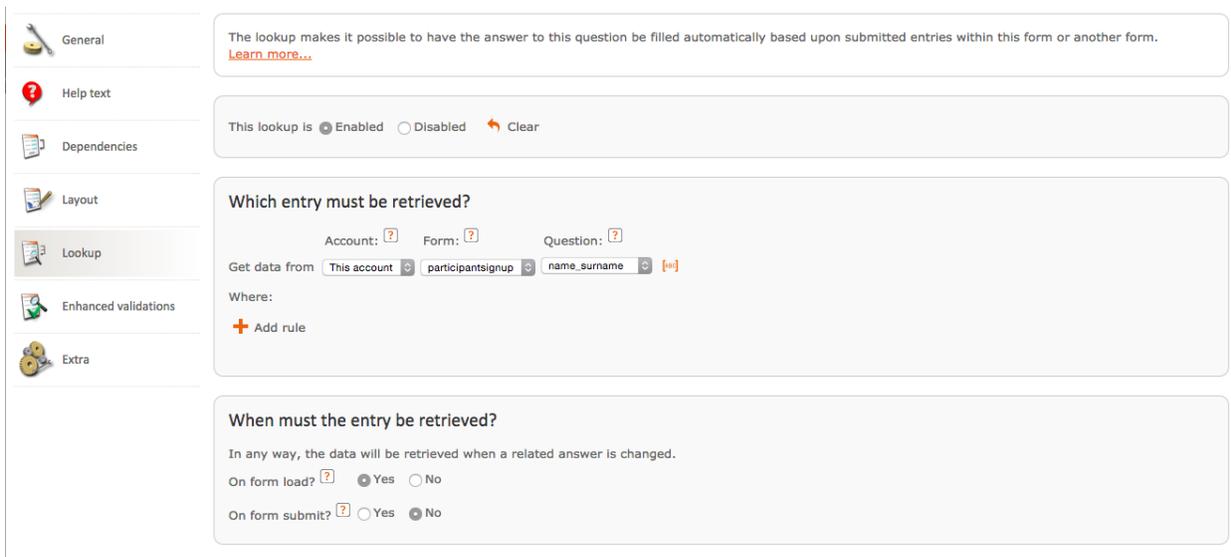
1-Each form can be reached and customized through formdesk



2-When you select a form, you have the option to style through their embedded interface and also customizing the questions according to your needs.



3- When you are creating a new question you have the chance to use the “lookup” function to create links with other forms. You can select which answers you want to bring from other forms.



4- Make sure that you enable the lookup function in the very first page

Answer(s)/feedback

Response required [?] Remember entry [?] Get options from submitted forms (lookup)

You can have the option list automatically be generated from entries of a lookup form. View the [manual](#).

Which entry must be retrieved?

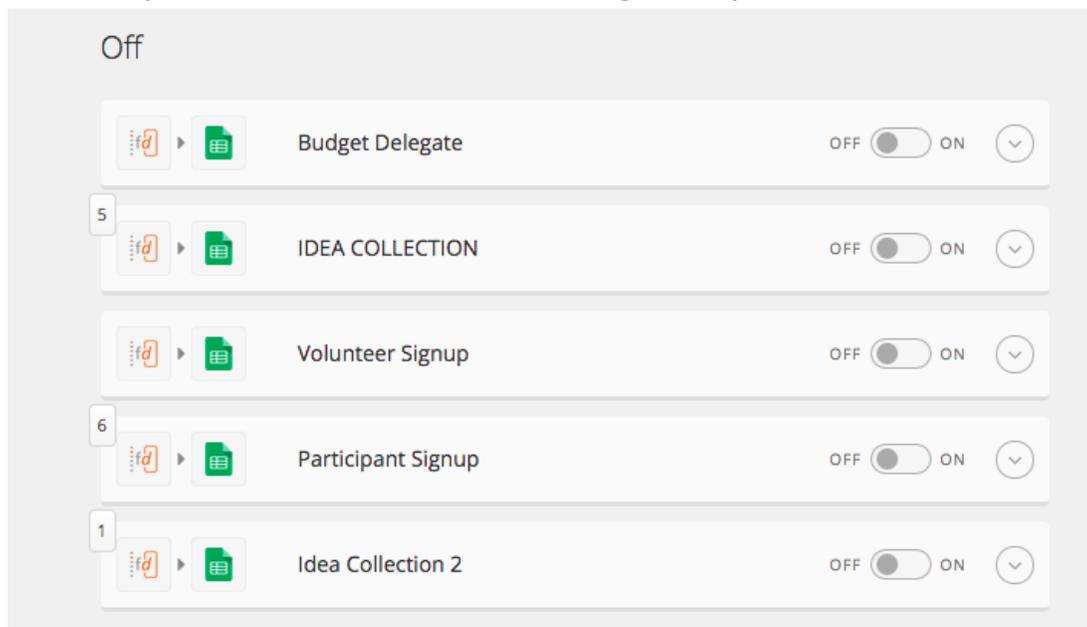
Account: [?] Form: [?] Question: [?]

Get data from

Where:

Zapier Interface

1- When you are logged in Zapier, you will see all the zaps that are connected to different forms. These zaps can be turned on or off according to the preference of the coordinator.



2- Each zap is connected to google spreadsheet. Whenever there is a new entry, zapier gets that information and puts it in the corresponding cell in spreadsheet. Those columns and fields can be customized in zapier through this interface.

5 Match up  Formdesk Submission to  Google Sheets Spreadsheet Row

Spreadsheet *(required)*

Idea Collection ▼

Worksheet *(required)*

Idea Collection ▼

e-mail *(optional)*

Field1 Insert  fields

keywords *(optional)*

Briefly Explain The Idea Insert  fields

latitude *(optional)*

Maps Latitude Insert  fields

favorites *(optional)*

Insert  fields

Mailchimp Interface

1-Templates for RSVP and Follow-up are created in the templates section.

 Campaigns Templates Lists Reports Automation

Templates

Folders ▼ Sort By Edited Date ▼ ↑ Search saved templates

 **RSVP**
Last edited on May 10, 2015 10:12 pm by PB Cambridge
Drag and drop

 **Followup**
Last edited on May 10, 2015 09:47 pm by PB Cambridge
Drag and drop

2-Each template can be customized through Mailchimp's system.

The screenshot displays the Mailchimp email editor interface. At the top, there is a navigation bar with 'RSVP | Rename' on the left and 'Help | Preview and Test' on the right. The main area is split into two panels: a live preview on the left and a content/design sidebar on the right.

Live Preview:

- Title: Participatory Budgeting Cambridge
- Link: [View this email in your browser](#)
- Image: A group of diverse people sitting together, some raising their hands.
- Section Header: **You are invited!**
- Text: Put on your thinking caps and join your neighbors at this Participatory Budgeting Assembly to brainstorm ideas about how to use \$500,000 of the City's FY 2016 Capital Budget to improve your community.
- WHEN**
December 08, 2014 at 11:30am - 1:30pm
- WHERE**
Cambridge Water Department
250 Fresh Pond Pkwy
Cafeteria (ground floor)

Content and Design Sidebar:

- Content:** Text, Boxed Text, Divider, Image, Image Group, Image Card, Image + Caption, Social Share, Social Follow, Button, Footer, Code, Video.
- Design:** (Currently empty)