

BUILDING IMPACT

DEVELOPING SUPERIOR

PROCESSES

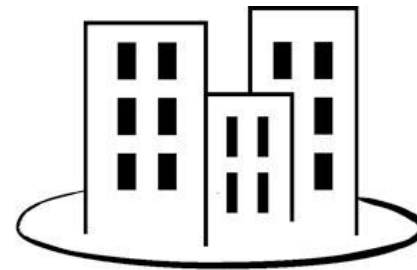
Volunteers

Fiona Ariaratnam

Michael Hockstein

Michael Lovejoy

May 11, 2012



buildingimpact

Creating Community... Building by Building

Introduction: Background

- BI has a non-profit network of 40+ organizations
- BI works with 47 buildings, 575 companies, and 20,000 people in the Boston area
- Events include:
 1. Donation drives in buildings and at companies every other month
 2. Volunteer events in the community
 3. Corporate Volunteer Days
 4. In-Office Volunteer Events
 5. One-Off Donations
 6. Blood drives

Introduction: Need

- Building Impact has been growing, as has the need for their services
- How should they define their customers?
- How should they define their products?
- How can the communication with the Non-Profit Partner Network be improved?
- How can calendars and plans for different types of projects be integrated with each other?

Introduction: Problem Statement

- Determine BI's clients and products
- Determine where to focus resources to improve products and provide quality service
- Streamline communications, execution of events, and coordination of event planning

Introduction: Objectives & Scope

- Create process flow diagrams to document current processes to identify risk, inefficiencies, and improvements
- Review sub-steps and worst-case scenarios to develop recommendations
- Specifically, review their
 - Communication
 - Events
 - Logistics
 - Organization

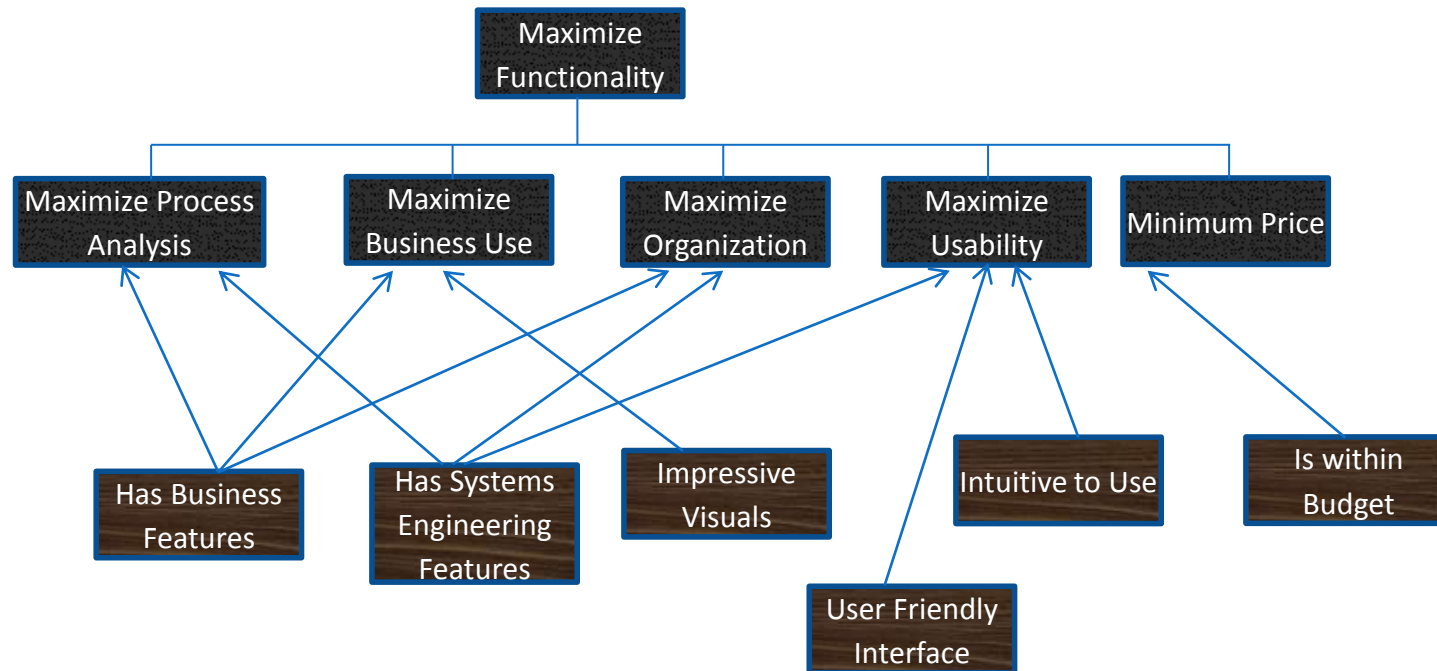
Why Process Modeling?

- What are the process models good for?
 - Helped BI and us better understand how BI operates
- What did we learn?
 - The many details involved in each event type
- Why did we bother?
 - BI needed documentation and more efficient processes
 - We needed to understand their processes in order to develop recommendations
- Did the models lead to any recommendations?
 - Yes! Understanding BI's processes and what could go wrong was essential to developing our recommendations

Choosing Software

- Decided to use Business Process Modeling Notation (BPMN)
 - Unified Modeling Language (UML) was also considered, but not chosen
 - BPMN similar to an activity diagram
- Chose Bizagi Process Modeler as our BPMN software
 - Used Multi-Attribute Utility Decision Analysis
 - Performed modified Method of Swing Weights

Objectives Hierarchy Network



This objectives hierarchy network was used to determine that the criteria would be: **Price, Usability, Quality, Features, and Visual Impact**

Choosing Bizagi: Modified Swing Weighting

	Price	Usability	Quality	Features	Visual Impact	Sum
Rank	2	1	4	3	5	
Best	free	13	13.5	12	14.5	
Worst	\$1,250	10	10	10.5	8	
Importance	0.71	1.00	0.43	0.57	0.14	2.85
Weight	25%	35%	15%	20%	5%	100%

Modified Swing Weighting

1. Sponsors determined weights using internal process
2. We took the weights and reversed engineered them to determine the importance values
3. Explained Method of Swing Weights to Building Impact
4. Showed BI the effects of their weights
5. Building Impact agreed that the values matched their goals

Technical Approach

- Qualitative analytical approach
 - Lack of available data
 - Lack of process documentation
 - Lack of time
- Information BI developed for us
 - Best-Case Scenarios
 - Sub-Steps
 - Worst-Case Scenarios

Technical Approach

- Created Bizagi process models using best-case scenarios with sub-steps
- Used the worst-case scenarios with the process models to develop our recommendations
- Created SRS document for implementing web-based recommendations

Bizagi Process Modeler

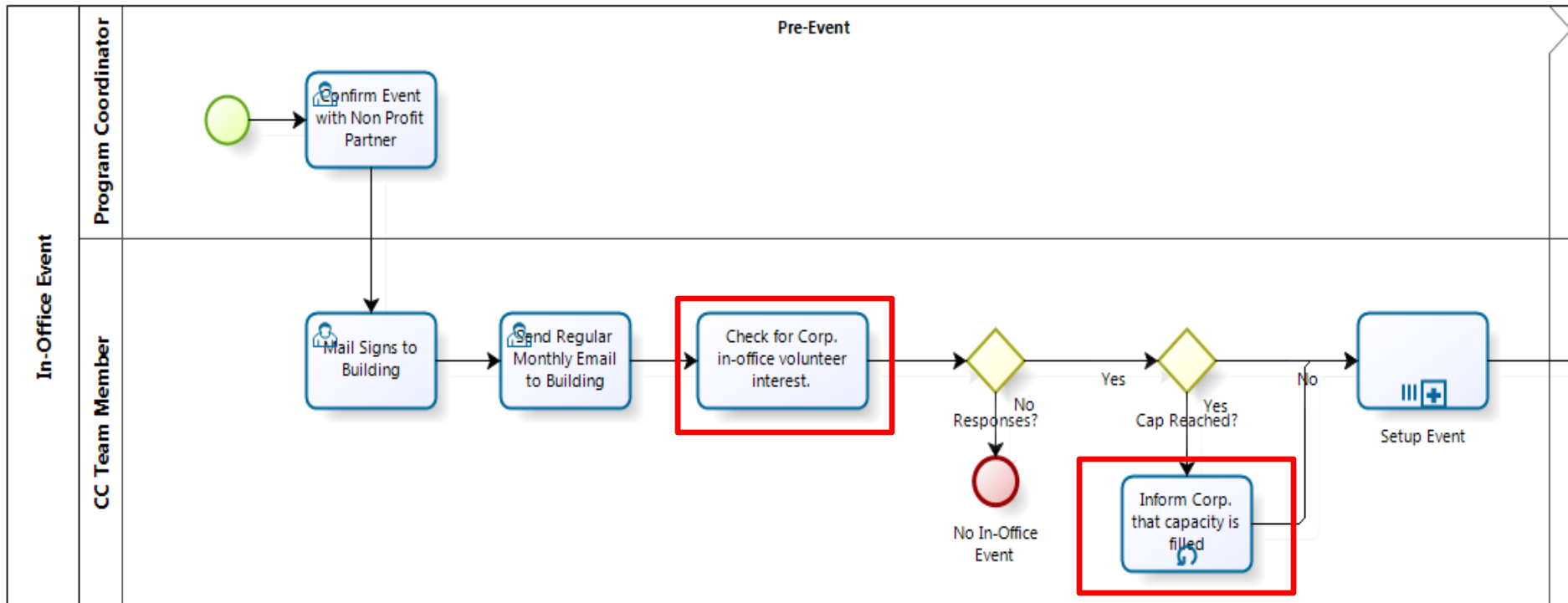
The screenshot displays the Bizagi Process Modeler application window titled "All_BI_Events - Bizagi Process Modeler". The interface includes a menu bar (File, Home, Format, View, Export / Import, Tools, Support), a ribbon with various tool groups (Clipboard, Diagrams, Run Workflow, Online Courses, Performers, Validate, Info, Share Model, Collaboration), and a palette on the left with categories like Flow, Data, and Artifacts. The main workspace shows a process diagram with a swimlane structure. The swimlane is labeled "Process 1" and is divided into two lanes: "Lane 1" and "Lane 2". The diagram contains two milestones: "Milestone 1" and "Milestone 2". To the right of the diagram, there is a palette of event and task symbols: Start Event (green circle), Intermediate Event (yellow circle), End Event (red circle), Task (blue rounded rectangle), Embedded Sub Process (blue rounded rectangle with a plus sign), and Gateway (yellow diamond). The bottom status bar shows a list of diagrams: Corporate_Volunteer_Event, Community Events, Donation Drives, Blood Drives, InOffice_Event, and Diagram 1. The zoom level is set to 100%.

Bizagi Process Models

- All models are separated into 3 sections
 - Pre-Event: communication and planning phase
 - Event: models the execution of the event
 - Post-Event: mostly concerned with gathering feedback from all parties involved in the event

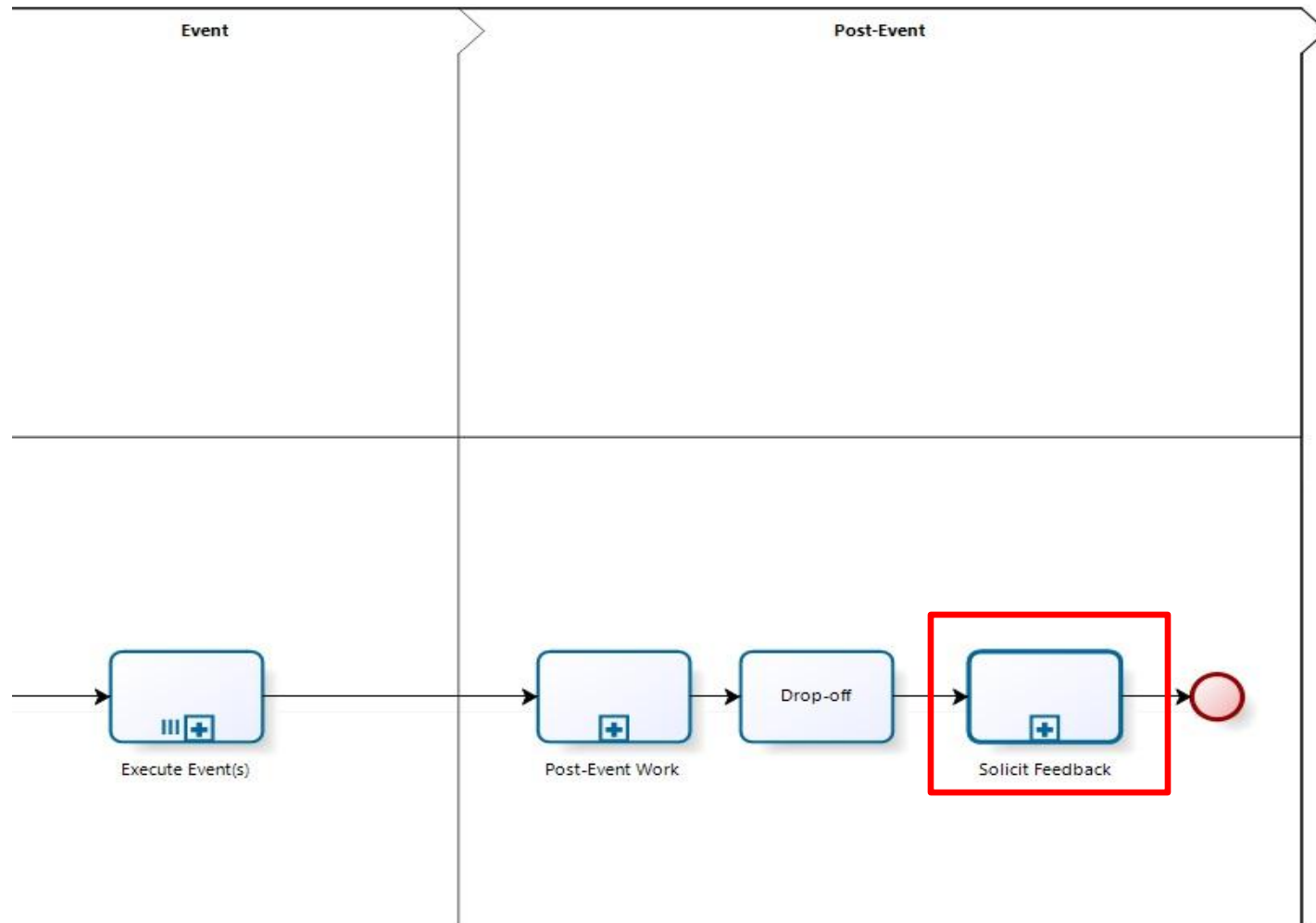
Modeling with Bizagi

In-Office Volunteer Events (Pre-Event)



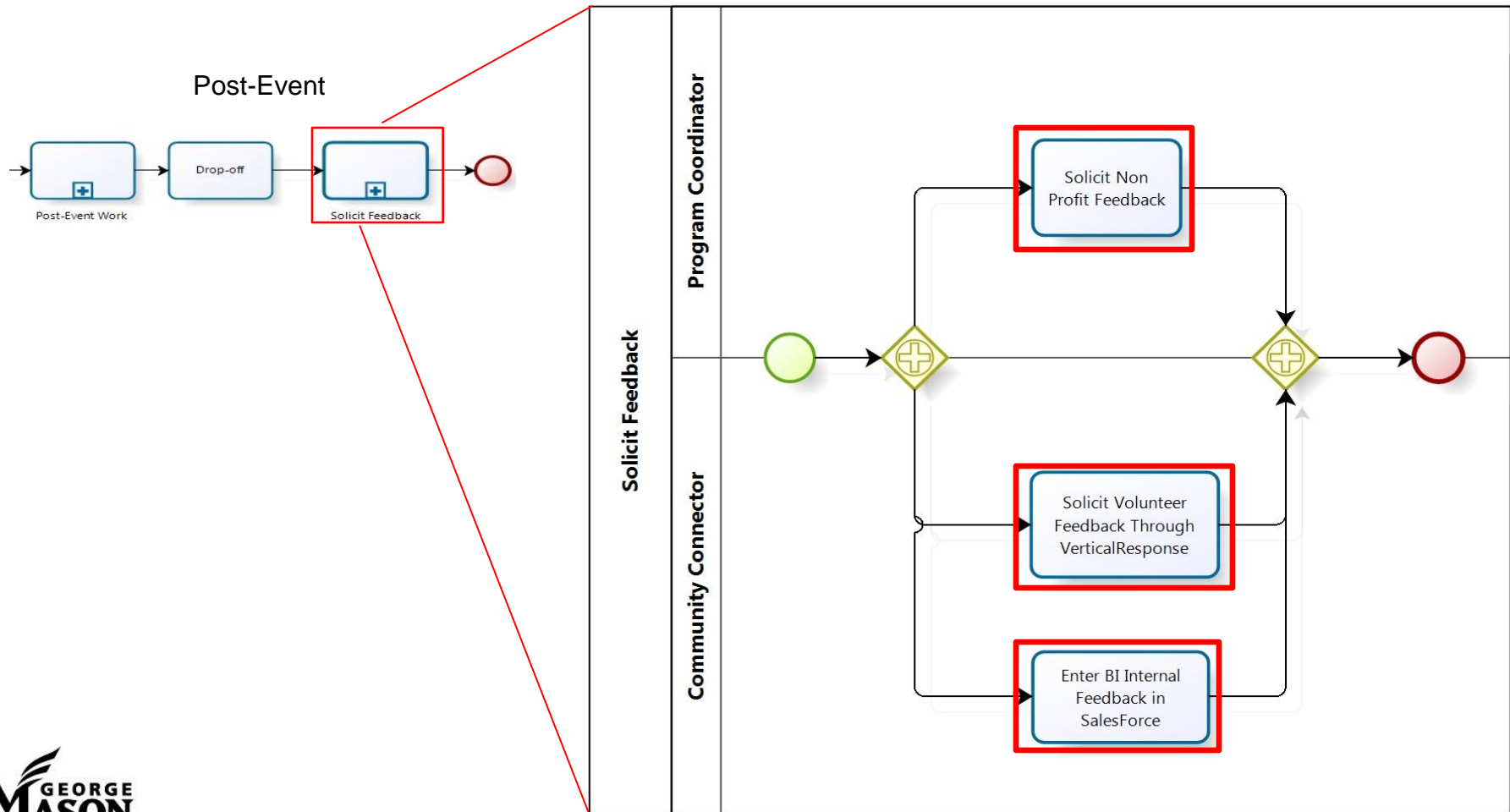
Modeling with Bizagi

In-Office Volunteer Events (Event & Post-Event)



Modeling with Bizagi

In-Office Volunteer Events (Solicit Feedback)



Worst-Case Scenarios

In-Office Events

Pre-Event	Event	Post-Event
<ol style="list-style-type: none"> 1. Unable to confirm the event in time for the annual calendar 2. After event is published, non-profit no longer needs event, sponsor company now has no event to perform 3. Only companies who receive annual calendar can sign up for event due to size limits 4. Sponsor companies are unable to acquire supplies 5. No BI staff available to run event 	<ol style="list-style-type: none"> 1. Not enough employees attend to make event worthwhile 2. Sponsor company does not have enough supplies 3. BI staff forgets to take photos 4. Not enough clarity for volunteers on how to complete project properly 5. BI staff gets postponed at event, possibly incurring Zipcar late fee 6. Volunteers do not complete project in allotted time 	<ol style="list-style-type: none"> 1. BI unable to collect or donate items immediately 2. BI staff does not fill out Salesforce data 3. BI does not get feedback from corporate sponsor to ensure event was a positive experience 4. BI does not get feedback from Non-Profit Partner to ensure project was valuable

Recommendations: Development

- Developed from examining worst-case scenarios and process models
- Used worst-case scenarios to help identify problem areas
- Qualitatively analyzed process models and worst-case scenarios to develop recommendations

Recommendations: General

- Communication Standardization
 - Standardize communication response wait times for corporate and non-profit partners
 - Communicate enforced deadlines (otherwise, can't guarantee a match)

Recommendations: General

- Task Management
 - Quarterly Calendar
 - Will create more accurate publication
 - More events confirmed in time to include in calendar
 - More events that get changed or canceled won't end up published
 - Asana – online checklist application for task management
 - Created checklist templates (documents every task, assignee, and due date)
 - Sync tasks with Outlook calendar

Recommendations: Asana

The screenshot displays the Asana web application interface. The browser address bar shows the URL <https://app.asana.com/0/691774471023/691774471023>. The page title is "Blood Drives TEMPLATE". The left sidebar contains the Asana logo, a search bar, and a navigation menu with sections like "BI PROCESS IMPROVEME...", "Fiona's BI Process Improvements Tasks", "PROJECTS", "TAGS", "PEOPLE", and "Blood Drives TEMPLATE". The main content area shows a project list with tasks numbered 1 through 16, including "PRE-EVENT:", "Confirm event with NPP:", "Confirm event with building:", "Confirm Bloodmobile location with PM or confirm building location with PM or I", "If Bloodmobile parking in city/public property ensure NPP confirms city permit", "If PM requests COI then secure from NPP", "Edit messaging:", "Edit website messaging", "Edit email messaging", "Edit signs messaging", "Edit one pagers messaging", "Create communication pieces:", "Create website communication pieces", "Create email communication pieces", "Create signs communication pieces", "Create one pagers communication pieces", and "Edit and customize final communication pieces:". A context menu is open over the project title, showing options: "Sync to Calendar", "Print", "Duplicate Project", "Archive Project", "Delete Project", and "Convert Project to Tag". The right sidebar shows the "Activity Feed" with a comment from Fiona: "Fiona created project. Saturday". The bottom of the interface features a footer with navigation links like "Feedback", "About", and "Share Asana", along with keyboard shortcuts.

Recommendations: Website

- General Redesign
 - Suggestions to current website pages with events
 - Search for events by geographic region
 - Display month-by-month calendar of events
 - Provide event status and updates, and e-mail notification to participants

Recommendations: Website

- Online Sign-ups and Automation
 - Automate sign-up process on the website
 - Generate automated confirmation e-mails with links to cancel
 - Deactivate sign-up after capacity is reached
 - Send 48 hour advance notice reminder e-mails

Recommendations: Customer Portals

- Online portal for corporate and Non-Profit Partners (NPPs) for event planning and sharing information such as calendars, event updates, and reports
- Require login to keep proprietary information confidential
- Especially useful for In-Office Events and Corporate Events

Recommendations: Customer Portals

- Criteria matching algorithm
 - Match Corporate Events to NPPs
 - Company fills out event questionnaire with event requirements to post event request to portal
 - Algorithm should compare event requirements to NPPs to determine matches
 - Incorporate importance rankings for each requirement to provide alternative options with different levels of matching

Recommendations: Event-Specific

- Blood Drives
 - Add appointment time selection to online sign-up
- Community Events
 - Electronic liability waiver to be signed during event sign-up
- Donation Drives
 - OptiMap – route optimization software

Recommendations: OptiMap

OptiMap - Fastest Roundtrip Solver

► Destinations

► Route Options

► Export

▼ Edit Route

Drag to re-order stops:

- 1 200 state street, Boston, MA
- 2 148 State Street, Boston, MA
- 3 160 Federal, Boston, MA
- 4 99 Summer Street, Boston, MA
- 5 75 Park Plaza, Boston, MA 02116
- 6 200 CLarendon St, Boston, MA
- 7 263 Summer St, Boston, MA
- 8 50 Congress, Boston, MA
- 9 70 South Bay Ave, Boston MA

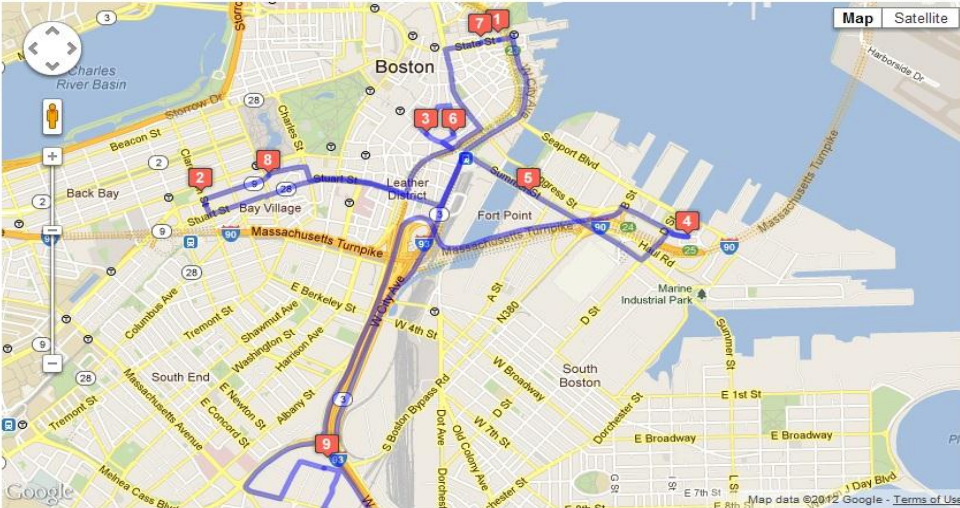
Reverse

► Help

► About

Calculate Fastest Roundtrip

Calculate Fastest A-Z Trip



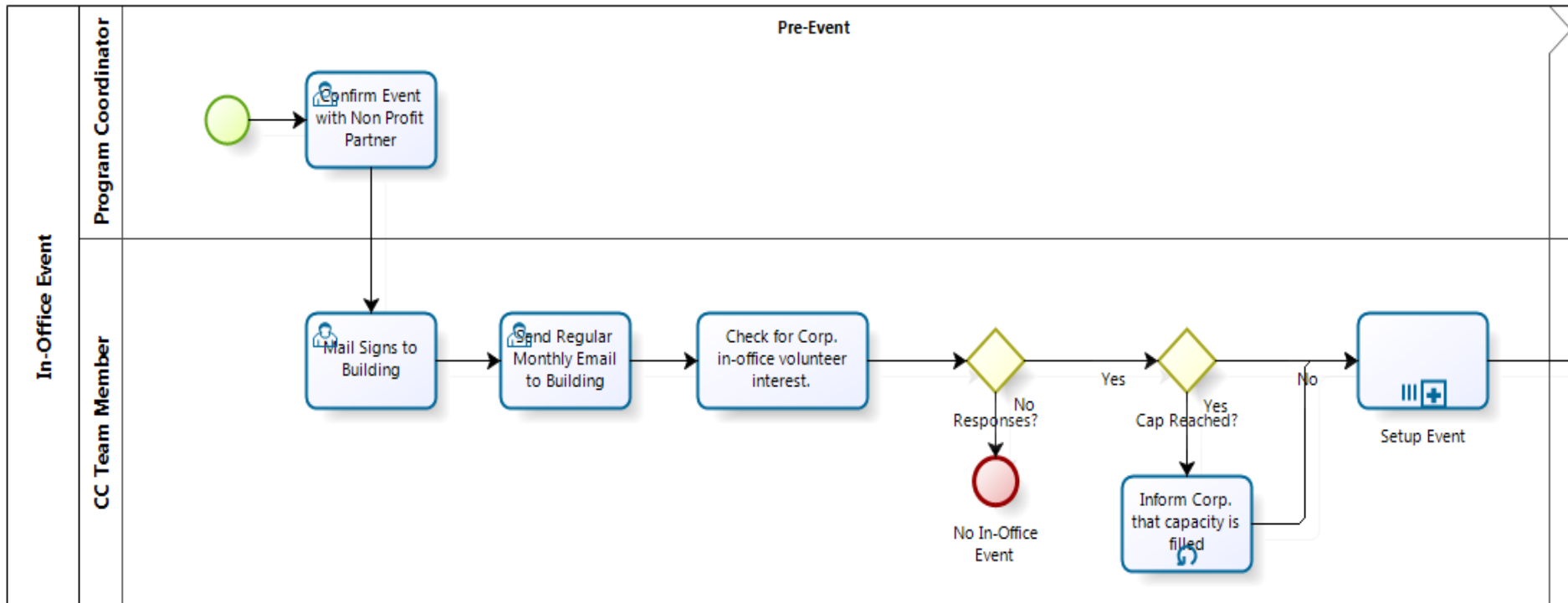
Trip duration: 40 min 44 sec
Trip length: 17 km (10.8 miles)

- 1 200 state street, Boston, MA
Head **west** on **State St** toward **McKinley Square**
Destination will be on the right
364 ft
- 2 148 State Street, Boston, MA
Head **west** on **State St** toward **Chatham Row**
0.1 mi
Turn **left** onto **Congress St**
0.4 mi
Turn **right** onto **Purchase St**
0.1 mi
Turn **right** onto **Summer St**
236 ft
Take the 1st **right** onto **High St**
262 ft
Take the 1st **left** onto **Federal St**
Destination will be on the right
52 ft
- 3 160 Federal, Boston, MA

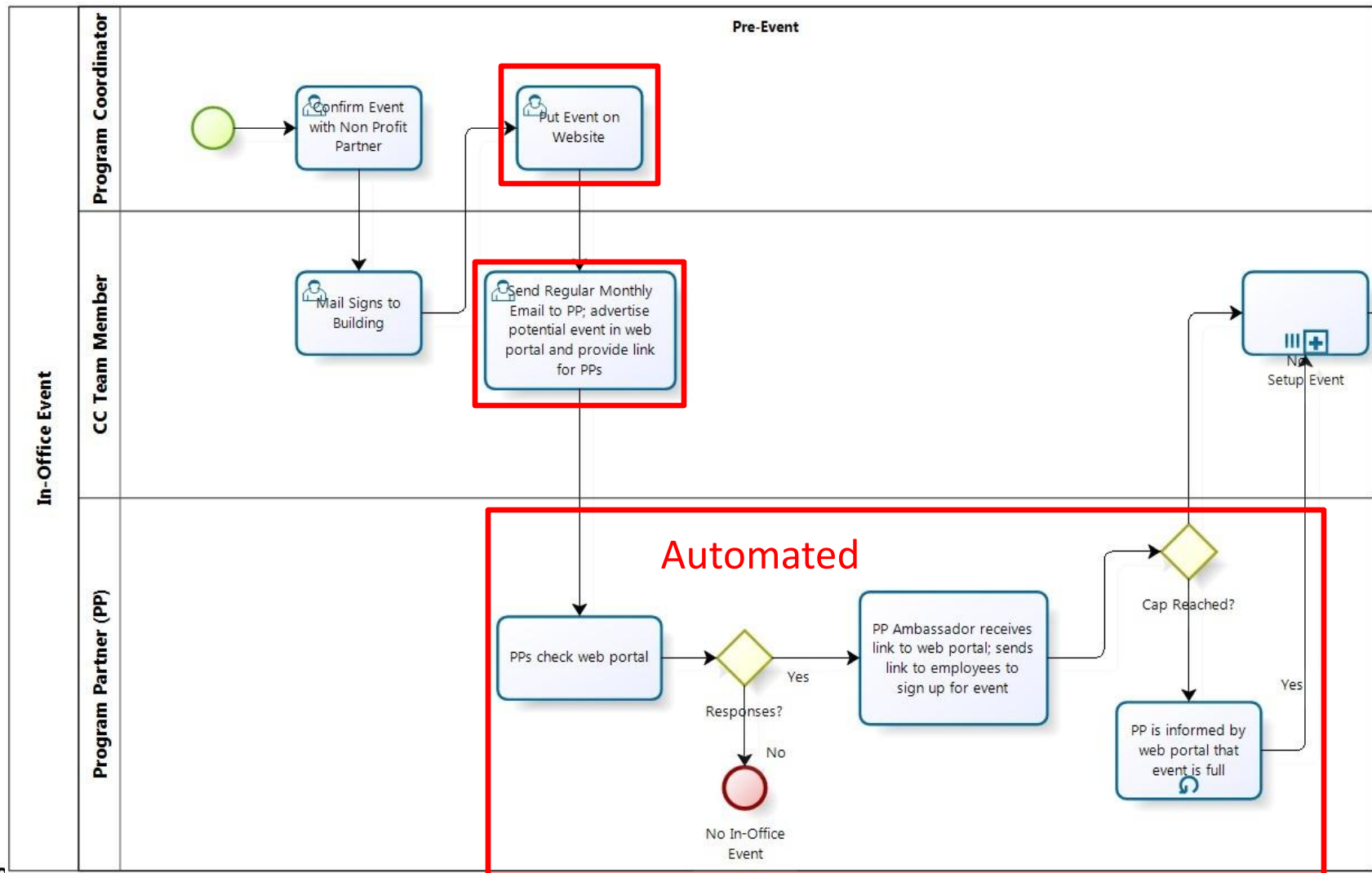
Recommendations: Event-Specific

- In-Office Events
 - Use website portal for sign-up process
- Corporate Events
 - Event request form to be posted on website portal for matching with NPP
- One-Off Donations
 - Offer donations to Boston ReStore or Furniture Trust if unable to find a match

In-Office Event: Pre-Event (Current)



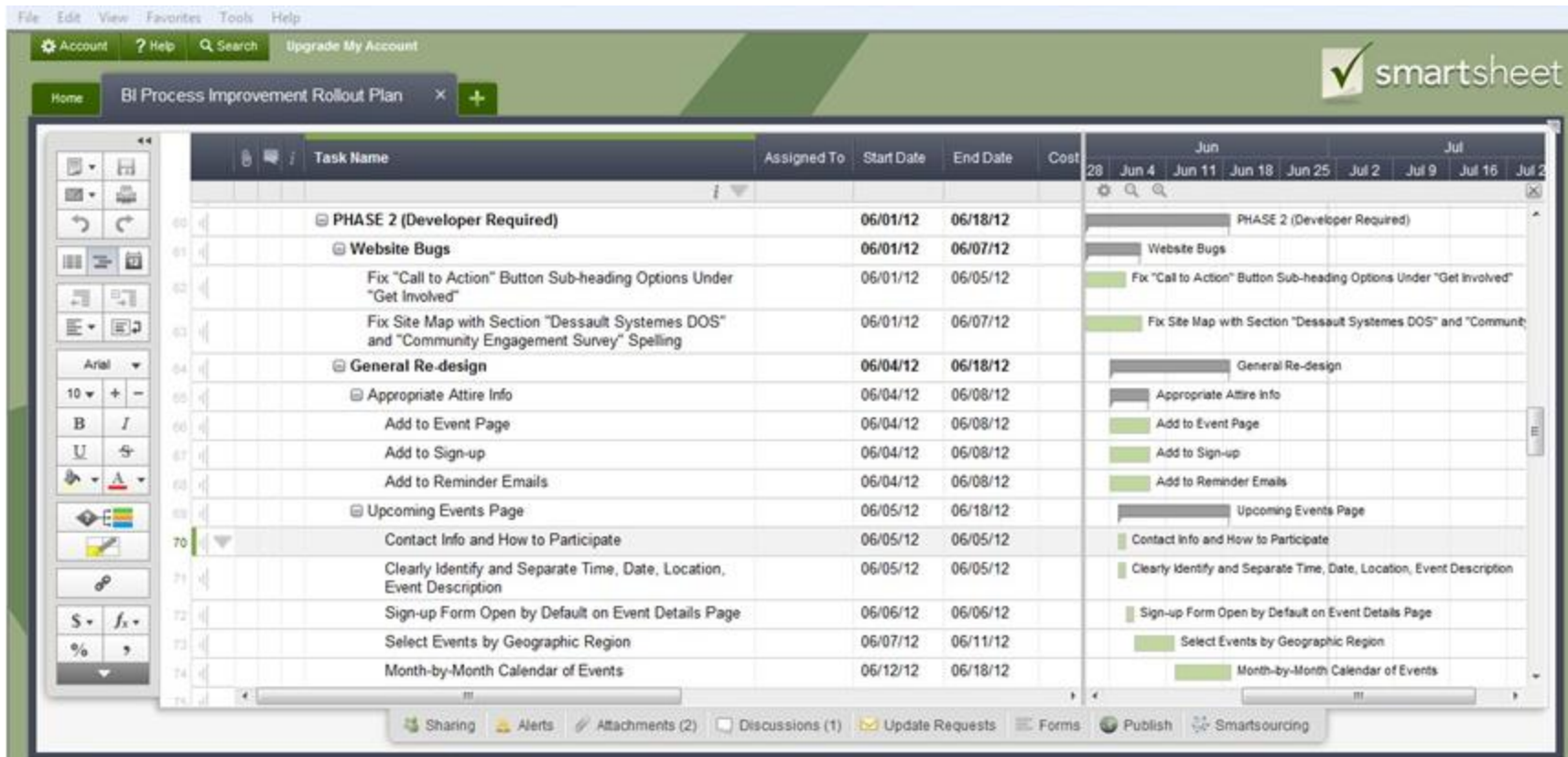
In-Office Event: Pre-Event (Improved)



Implementation of Recommendations

- Rollout plan consists of two phases:
 - Phase 1 – process improvements that can be implemented without outside technical support
 - Phase 2 – process improvement requirements that require expertise of software developers
 - Rollout plan was created in *Smartsheet*
- Phase 2 software developer
 - Common Impact
 - Catchafire
 - Elance

Implementation of Recommendations



Future Work

- BI should become more data-driven
- We want BI to be able to work with another SE/OR project group in about a year and be able to do a simulation
 - Record data on when events begin at BI
 - Record hours spent on each task for each event by each staff member
- BI should also consider working with an MBA project group to get additional assistance on understanding their products and customers

Acknowledgements

- Thank you to our sponsors at Building Impact:
 - CEO – **Charlotte Streat**
 - Program Director – **Alison Spindler**
 - Communications & Operations Director – **Amanda Ferrante-Owen**
- Thank you to our advisor, **Dr. Laskey**
- Thank you to George Mason University

“You are not here merely to make a living. You are here in order to enable the world to live more amply, with greater vision, with a finer spirit of hope and achievement. You are here to enrich the world...”

-Woodrow Wilson