Understanding
BigBurgh™.com

Pittsburgh's Safety Net Web-App

Pittsburgh's BigBurgh.com surprised everyone: it's getting much more usage than homeless services apps for cities many times its size. In fact, on a per capita basis, it's been getting 10 times the usage of the homeless services app for all of Australia. This kind of viral, city-wide adoption has suddenly made all kinds of things possible.

www.informingdesign.com/bigburgh

What Happens When a City's "Safety Net" App Gets Thousands of Users . . . Every Month

"It's about empowering everybody in the city of Pittsburgh to be able to help their neighbors . . . It's very exciting, I feel like Pittsburgh is at the forefront of this innovation and technology."

Chris Roach, Outreach Coordinator, Operation Safety Net

"The app is revolutionizing how the Police are able to respond to our homeless community."

Anna Kudrav, Assistant Chief, Pittsburgh Bureau of Police

"Every day I find another kid has used the app and was able to get the resources that they needed."

Debra Smallwood, Volunteer Counselor,
Brashear High School

"Can you send us more of the [BigBurgh] business card info pieces? We can't keep them on the shelf!"

Sanita Balestreire, Director, Marketing & Communications,
Northland Public Library

Homeless on the street can get hands-on help in minutes

BigBurgh's "Email Street Help" function is a breakthrough networking platform for its elegance and simplicity: anyone — officials, bystanders, even the homeless themselves — can, with a single click, mass email all of the available street outreach workers and ask for help. The first worker to respond arranges for street-side assistance. When outreach workers are in the field (roughly 14 hours a day, 6 days a week), help is almost always initiated within 10 to 15 minutes.

Police and EMS are in the loop

In fact, BigBurgh.com was started at the request of City Police who didn't feel they had the tools they needed out on the street. Now Police and EMS are in the loop, able to summon help from outreach, able to alert outreach to issues with encampments, and able to guide homeless on the street to nearest meals, shelter and more.

Social Services feel connected, and reach-able, like never before

Yes, like other safety net apps, BigBurgh.com has the low down on hundreds of "good, free" social services for those in dire need. But as you'll see in the "Secret Sauce" section that follows, BigBurgh represents a radical departure in how the information is collected, organized and presented. The result? Social services feel connected and reachable like they have not been before – with some services reporting record attendance and use since the start of BigBurgh.

A potentially game-changing way to address the opioid crisis opens up

One of the most pressing issues in the crisis is how to arrange for a "warm hand-off" to a rehab counselor. The success of the "Email Street Help" button showed the way: in a few months BigBurgh.com will also feature an "Email Opioid Help" button. No need for expensive dedicated phone lines, intermediary operators or complex procedures, a City's entire body of peer rehab counselors can be reached directly by the patients, by their friends or family, by the Police on the street or the EMS at the emergency room.

BigBurgh's "Secret Sauce"

An App is not a magic wand. A pretty screen of whirring colors and buttons do not untangle a maze of social services on their own. However, this is not to say there was not some "magic" involved in the design of BigBurgh, a "secret sauce" as it were.
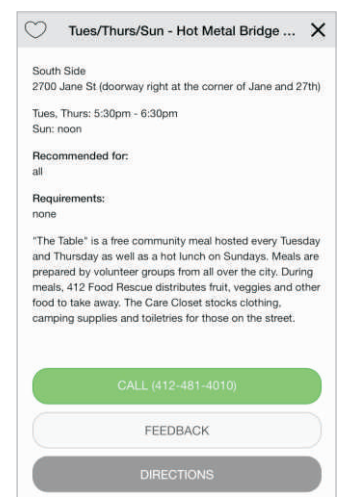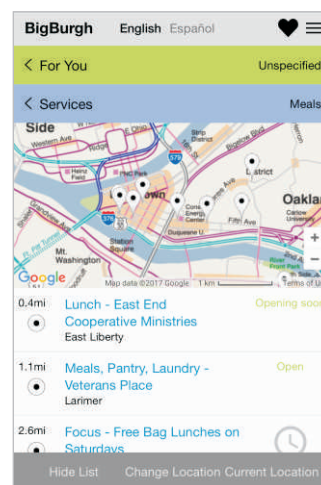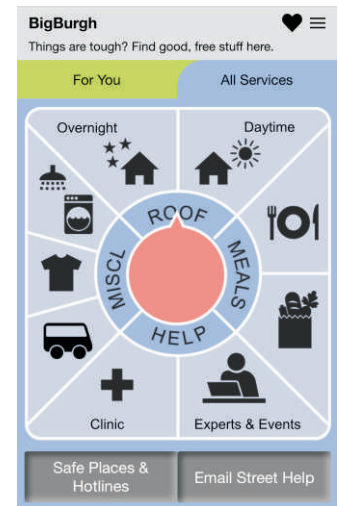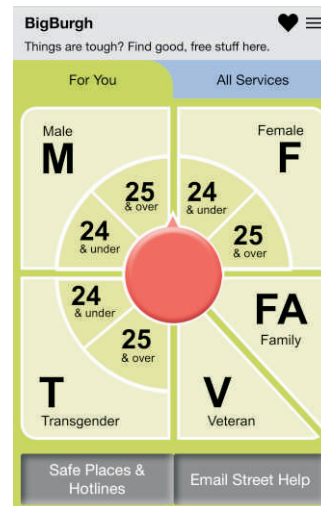
1st INGREDIENT:
A Unique Interface

Glance at the interfaces of other homeless and 2-1-1 apps, and they look nothing like BigBurgh. BigBurgh's two opening dials are designed to be fun and supremely efficient. By devoting a whole opening screen to "For You" filtering (as opposed to a sidebar or footnote function), the flow of the app feels smooth. Friendly icons on the Services dial are carefully constructed, and strictly limited, to make selections fast and simple. "High Stress" needs (Hotline and Street Help Buttons) are separated out from the everyday needs on the Services dial, providing for instant access to those services in panicky situations.

When lists of services are generated, they are listed in distance order (either from your current location or from a location of the user's choice). All of them are mapped on Informing Design's custom "untangled" maps, providing clear context in terms of neighborhoods, business districts and landmarks. Automatic "opening soon," "open," and "closing soon" alerts complement the list. When closed, a clock icon provides instant access to the service's schedule.

Click on a service, and a pop-up with a clear, concise description appears. Users can click the heart icon and save a full listing (which can be recovered even when there's no Wi-Fi or data connection). At the bottom of each popup, users can call the service (when applicable) and get directions (by car, on foot or via transit). They can also provide feedback.

Finally, you should know that BigBurgh is a mobile-optimized website. It would be easy to make it an app as well, but App stores lead users to believe they need a credit card, even for free apps. That's why most "homeless apps" are actually web-apps.

BigBurgh is designed to be fun and supremely efficient.

2nd INGREDIENT:
Social Services Information Packaged to Go, Go, Go

Up to 80% of apps are opened only once. Why? Often out of frustration: users expect action, quick action, when they press a button on an app. What we have found is that most current social services databases have not been assembled with this in mind. The information is not fine grain enough, or the information does not convey the actual steps the user needs to take, or the write-up lapses into professional insider-language.

Enacting a BigBurgh requires a big thing: a social services database reconstructed and refactored, from scratch. The information needs to be gathered from the git-go with the user, and their potential for misconceptions, in mind. Each service needs to be asked questions that put it into context, like: "how do users get confused?", "how does your service differ from similar sounding ones?", "what features are users most interested in?" Then the answers to those questions need to be related to the user in succinct, fine-grain, actionable detail. For example, the BigBurgh database has an "access narrative" field that is used to describe in detail how the appropriate entrance to the service can be found (like down an alley and through a fenced-in parking lot in the case of the Birmingham Free Clinic). We have been amazed to discover how often a correct door cannot be located using an address alone.

For an app to be "self-service," for an app to be successful in its mission to actually connect users to help, for an app to actually get users, the information has to be good, be completely up-to-date and be able to get absorbed fast. Language must be simple and to the point, with the information eminently enact-able by the user. A big part of the set-up of BigBurgh in a new city will be training the new team in how to assemble — and maintain — this kind of social services database. This is not a matter of agencies filling out a form now and then, it requires an intense, continuous and personal engagement with the services. The BigBurgh team makes three or four site visits, and phones or mails dozens more agencies, each week. That is what it takes to make this app "click."

That is what it takes to make this app "click."

South Side
44 South 9th St (entrance is off of fenced-in Salvation Army parking lot off of Cabot Way alley; fence gates kept open just enough for person to walk through)

Sign-In Hours:
Mon: at 5pm
Wed: at 12pm
Sat: at 9am
Appointments available Tues 1pm - 4pm, and Wed 8:30am - 11:30am

Recommended for:
all in need

Requirements:
none, for patients without health insurance; first-come, first-served; no appointments

Free walk-in clinic for both primary and acute care. On-site pharmacy for medications (with no narcotics). Services include physicals, chronic disease management, flu vaccines and health education. On-site specialties include cardiology (heart), dermatology (skin), vision, endocrinology (hormones and glands), and pulmonary problems (lung). Spanish translators available during all clinic hours.

3rd INGREDIENT:
A Tight, Untangling Database Schema

BigBurgh's most profound innovation may be in its information architecture, how it categorizes services for quick, natural "wayfinding" through the database. This may sound shocking to some, but we do not use a fixed taxonomy or schema, like that of AIRS (Association of Information and Referral Services) with its 9,500 categories. In fact, we don't even use relational database systems common with social service databases.

BIgBurgh is based on a recent technology (NoSQL databases in the cloud) developed to help firms like Apple, Amazon, Facebook and Google (at 1/100th the cost of relational data bases). NoSQL does not require fixed schema, which is fine with us. A natural, intuitive category scheme should emerge from the content, not from pre-conceived categories imposed from the top down. Categorization distinctions should emerge from the way the content inter-relates . . . which means schema can change as the relation between services change, and crucially, as the way people describe the differences between them change. We end up with, at most, maybe a couple hundred categories and sub-categories to guide users, not thousands. This cuts possible query paths by 80% or more. But even more importantly, the data is organized in narrowing ranges of comparative categories, with never more than 9 options to juggle at a time, so that it's really, really hard not to find what you want. We call this approach a tight, "untangling" one, since the paths through the data are clear and unambiguous. In giant-taxonomy based schema, it's not uncommon for the operators themselves to misplace services, or to put the same kind of service in different slots.

For example, consider how a BigBurgh app would breakdown a "Jobs" category vs. how it is currently broken down on an AIRS-style system.

BigBurgh-Style:	*From an actual AIRS-style system:*
JOB HELP	EMPLOYMENT
Mid-level Career Help	One-stop Employment Centers
Entry-level /Seasonal Job Help	Job Assistance Centers
Homeless Job Help/Life Skills	Resume Preparation Assistance
Vets Job Help	Job Search/Placement
Disabled/Special Needs Job Help	Regional Occupational Programs
Spanish Language Job Help	Career Counseling
Training/Apprenticeship Programs	

See how in a BigBurgh, the categories describe an unmistakable range of job help options in terms of the job-seeker's background, all in concrete, disambiguating terms. In the AIRS-style version, several categories overlap, sounding like the exact same kind of service. And professional insider language creeps in, such as "occupational" being used to mean job programs for those who are disabled or have special needs, but the layperson is unlikely to be able to distinguish between the meanings of "occupation," "job," and "employment."

In the start-up phase of a BigBurgh, our team would build the initial information architecture, using this as a training exercise for the new operator as well. We would then consult on a continuing basis to ensure the database schema stays tight and "untangled."

> BigBurgh's most profound innovation may be in its information architecture, how it categorizes services for quick, natural "wayfinding" through the database.

Easy to Get Started, a Serious Effort to Maintain

BigBurgh operates as a cloud service - Informing Design handles 100% of the tech backend.   Each application gets its own administrative dashboard that works over the web. This is where all the information is entered, categories and sub-categories added or changed, and professionals credentialed.

It typically takes an initial $5,000 to $10,000 to adapt BigBurgh to a particular service area and set up the cloud service (depending on degree of customization). Monthly cloud service maintenance then ranges between $500 and $1,250 per month. Each application can have it own URL and "brand" (like "LouieConnect.com" in Louisville).

We do believe a big part of what enabled BigBurgh to "take off" was the commitment to fund a senior professional (3/5 time, varies depending on size of service area) for ongoing outreach and information updating. For Pittsburgh, one day per week was spent on the later and up to two days per week for the former (including regular Police training and agency and street outreach presentations and meetings).

It takes a serious, on-going commitment of resources for a BigBurgh to succeed.

BIGBURGH BUDGETS

	Typical startup cost	Typical monthly maintenance *
100,000 MSA	$5,000	$500
500,000 MSA	$7,500	$750
1-2,000,000 MSA	$10,000	$1,250

* Includes cloud database, storage and communication services; online admin dashboard; and on-going information architecture support. BigBurgh system modifications requiring coding is extra. Content maintenance would take as much as 1/20, 1/10 or 1/5 FTE senior professional, respectively. Outreach efforts would be on top of that.

Continuing Outreach Gets Results

Pittsburgh's famed Dr. Jim Withers recently told folks at the International Street Medicine Symposium, "BigBurgh is the only app of its kind that I've seen take off."

We think a key reason is BigBurgh's continuing outreach effort. From the very start, the Police, street outreach professionals and volunteers have been an integral part of the program. The BigBurgh staff maintains continuous contact with all these front line groups through monthly meetings and Police training sessions. Moreover, services included in the web app are contacted several times a year. Most get an initial site visit, and follow-ups as needed when facilities change or expand. BigBurgh is also a regular participant in community programs and events, like Stand Down for Vets. Libraries, churches, medical facilities and facilities serving homeless have also been a key contact point for those in need. 5,000 business cards are distributed monthly through acrylic holders.

As all these groups learn of BigBurgh, we learn from them, enabling the app to become a vital and reliable tool to help the homeless and those in need. And not just in Pittsburgh. Louisville too committed to this kind of outreach (for LouieConnect.com), and its site visit counts grew even faster than those in Pittsburgh.

"BigBurgh is the only app of its kind that I've seen take off."

5,000 BigBurgh business cards are printed each month and distributed to libraries, agencies, and professionals.

BIGBURGH SITE VISITS

Year One* 2016-17	Year Two 2017-18	Year Three**
27,780	37,281	50,334
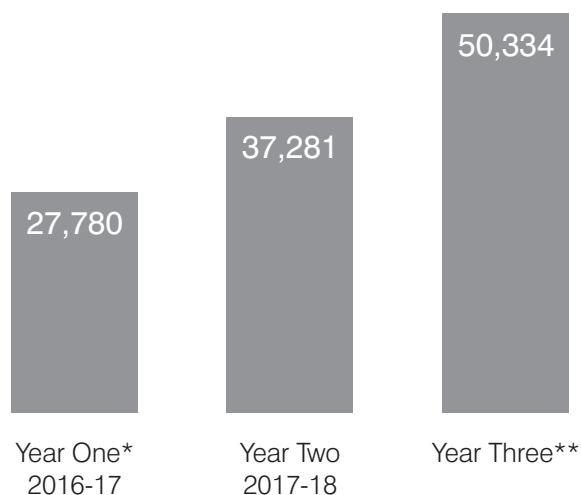
* Not counting PR-related usage   ** Annual rate of first 3 months

The BigBurgh Origin Story

Early in 2015, the Homeless Children's Education Fund (HCEF) and the Pittsburgh Child Guidance Foundation hosted a series of focus groups bringing youth and Police into the same room. The youth included ones living in a shelter, ones who had experienced homelessness, and others who had had interactions with the Police. One of the biggest takeaways from these sessions was this: when the Police come upon a homeless person in distress, it could be unclear which agency or service could handle the situation at that moment, at that place. The only resource the Police had readily available was a one-page print-out of service options, options that were typically many months out-of-date and that did not cover most of what was available.

Joe Lagana, the founder of HCEF, had been working closely with then Deputy Chief Maurita Bryant on how to help Police in these interactions. Then one day Maurita asked, "Could there be an app for that?" Joe responded, "Maybe, and I know a person who might be able to help."

Joe brought that question to Bob Firth and his firm, Informing Design, Inc. Bob agreed to research what it would take to build a homeless services app. After nearly a year of agency visits and task force meetings, and a study of current literature and existing apps, Bob was ready with a conceptual design for BigBurgh. HCEF was able to garner quick support from local foundations, and work began in early 2016. The web-app came out in beta in May of that year, and went public with a County Executive/Mayor press conference that August.

Could there be an app for that?

BigBurgh press conference, August 31, 2016; Allegheny County Executive Rich Fitzgerald

BigBurgh press conference, August 31, 2016; Pittsburgh Mayor Bill Peduto

About Informing Design, Inc.

Informing Design was founded by Bob Firth to fuse his mathematical training with his interest in information design. Pittsburgh itself posed the most interesting research question to the firm: can road map complexity be resolved into a comprehensible graphic? Starting with his best-selling atlas in the early 90s, "Pittsburgh Figured Out," and then evolving from the design of many of North America's largest city wayfinding sign systems, Bob and his team came up with an answer. It's called "Use-Access Island" mapping, a method that is able to visually untangle road maps, bike maps, even complex transit maps, without eliminating any detail or distorting any of the geography. Bob's theoretical mapping treatise was accepted for publication this year by the International Conference on Spatial Information Theory, to whom Bob presented his paper in Italy in September 2017.

What does cartography have to do with social science databases? Quite a bit, as it turns out. The same information architecture that renders complex maps comprehensible also applies to complex narrative databases. The key is in understanding inter-relationships between the units of data, in ever-narrowing comparative ranges. Indexing schemas based on this enables a stunningly fast human search, yielding just what's relevant to the user. We believe this insight is one of the contributing factors to the impact of our BigBurgh homeless services web-app. This same approach is integrated into our two new commercial apps, beginning with the NashGR app (Nashville Green Transportation, also online at nashgr.com) and then the citytunr.com web-app (for Pittsburgh, now in beta).

What does cartography have to do with social science databases? Quite a bit.

Contact

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