BH Resolve Mobile

A Mobile application to connect the citizen with the Municipality

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PREFEITURA
BELO HORIZONTE

PRODABEL

Abstract

The **BH Resolve Mobile** is an innovative solution for Android and iOS that makes the request and monitoring tasks of municipal utilities simpler for Belo Horizonte citizens. It makes use of geo-referenced information and is integrated into the service of the city of Belo Horizonte management system (SACWEB) being not face another channel for use by citizens.

The application uses the digital map of the city (BHMap), developed and maintained by Prodabel for geolocation of requests to be registered.

Today, the city of Belo Horizonte receives an average of nearly 200,000 public service requests per year.

Content

- Objective;
- Sacweb;
- Challenges;
- BH Resolve Mobile - Architecture;
  - BHMap;
  - Geocoder;
  - PostGIS;
- Mobile Development
  - Ionic Framework;
- BH Resolve Mobile;
- Final Considerations

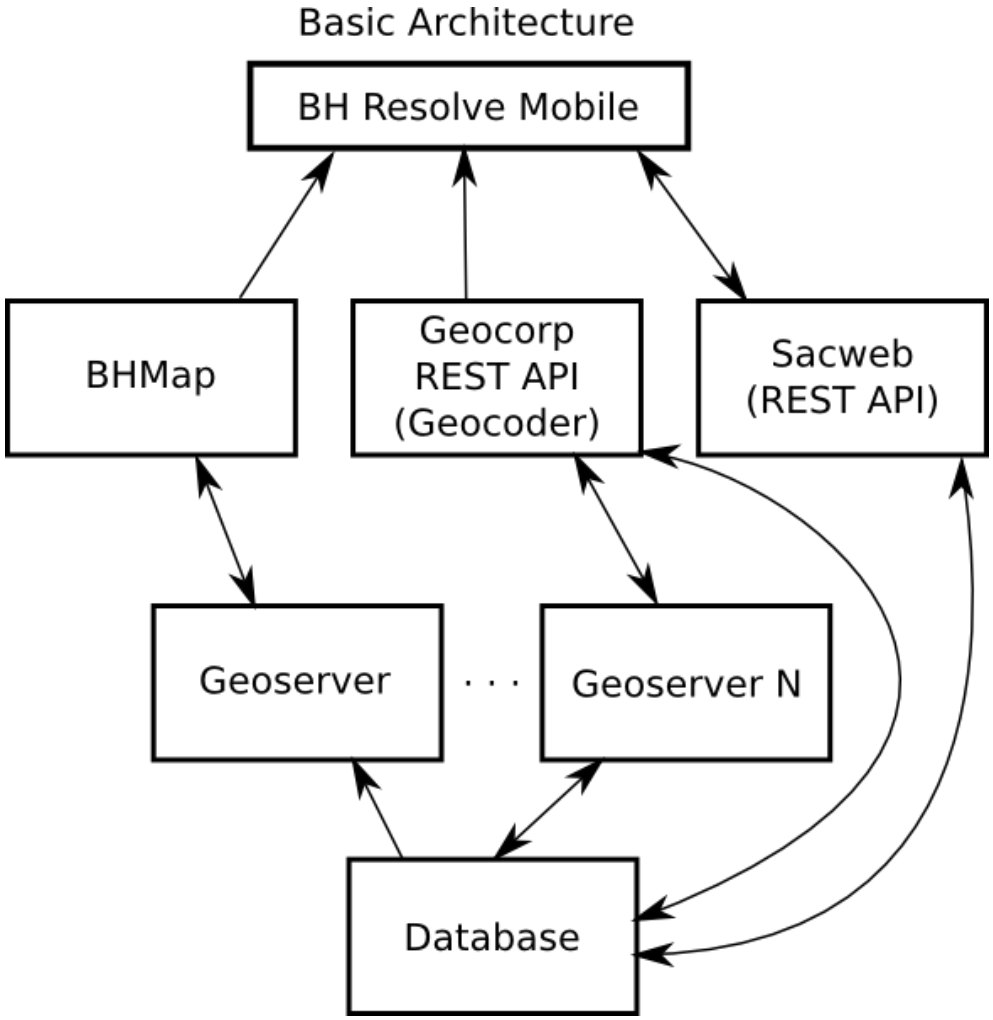
Objective

- Qualify Prodabel to develop applications for mobile platform;
- Bring our best enforces in geospatial technology to citizens;
- Simplify the interactions of citizens with the municipality;

Challenges

- Developer for Apple platform requires specific hardware and software;
- Acquire specific hardware in public administration is hard, because bidding legislation which intend to avoid frauds;
- Support multiple platforms with different software stack, frameworks and languages;

BH Resolve Mobile - Architecture



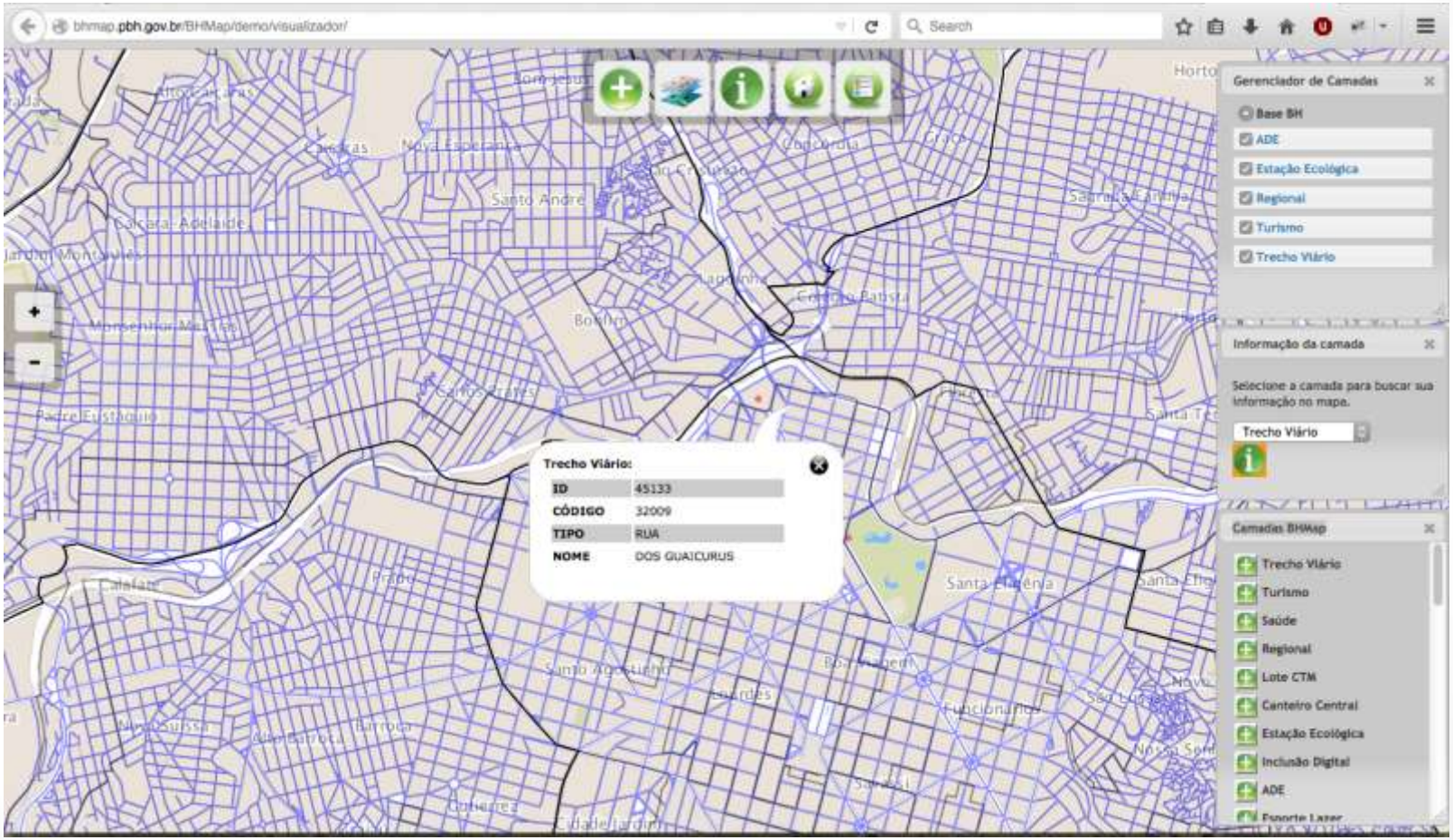
Sacweb - Citizen Assistance System

- Sacweb is the main application for citizen attendance for Belo Horizonte City Hall;
- It provides 380 different services online;
- Citizens also can request some of Sacweb services trough #156 phone number;
- All the flow of attendance for the requests, even those originated by phone are concentrated in Sacweb;
- Duplicated demands are treated by the application;
- This system exists for about 7 years;
- Unfortunately one drawback of the system is the necessity of user access the website and complete a extend form to open the request;
- Not adapted to mobile devices and small screens;

BHMap

- A Web Map to given freedom;
- Google Maps are great, but it isn't free and their data are not as accurate as ours;
- We need a platform to provide independency and make easy for any web developer at Prodabel to build geospatial applications;
- Built on top of OpenLayers;

BHMap sample



Geocoder

- REST Web Service;
- Identify addresses of Belo Horizonte, by text our coordinates;
- Uses the official address database from Belo Horizonte;
- Geospatial data in JSON and WKT
- Daily updated;

Mobile Development

- The app was developed using open source technologies:
- Front-end:
  - Ionic Framework – Hybrid Mobile Framework ,
    - Apache Cordova / Adobe Phonegap;
    - AngularJS
  - BHMap – Web Map based on OpenLayers
- Back-end:
  - Web Service REST - Java Jersey;
  - Geoserver – For provide the layers;

BH Resolve Mobile

- This is the first version of the app
- The 10 most requested services at Sacweb represent about 60% of all the 200,000 yearly requests.
- We selected 5 out of 10 most requested services through the Citizen Assistance System - SACWEB and make it available at mobile
  1. Pothole-filling,
  2. Disposal of soil and civil construction waste on public areas,
  3. Rat control,
  4. Tree pruning on public areas,
  5. Dirty vacant lots.

BH Resolve Mobile

- Available for the two major mobile platforms, Android and iOS;
- Build and supported only with Open Source technology;
- Zero dependency of licensee or third platforms. Every piece of software are under domain of Prodabel and runs in it own Datacenter;
- Friendly for mobile and easier for users;
- Geospatial information are transparent for the users;
- Requests are enriched by photos with spatial information embedded;

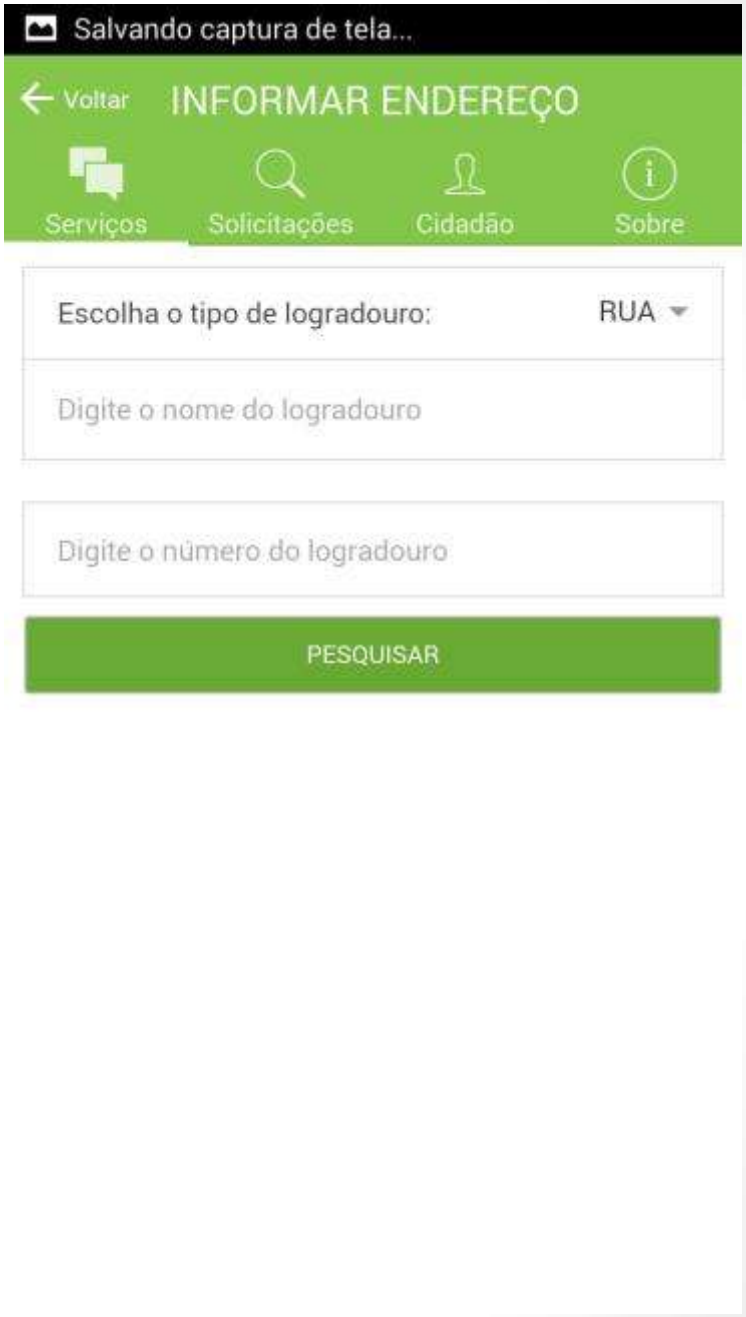
97% 18:41
BH RESOLVE
CENTRAL DE SERVIÇOS DA PREFEITURA
MOBILE
Carregando...
PREFEITURA
BELO HORIZONTE

97% 18:41
RELAÇÃO DE SERVIÇOS
Serviços
Solicitações
Cidadão
Sobre
Tapa Buraco
Terra, Entulho e Bota-fora depositados em área pública
Controle de Roedores
Corte e Poda de Árvores em área pública
Lotes Vagos Sujos e/ou sem Capina
Discar 156
Ligando 156 você poderá solicitar outros serviços

75% 09:13
Voltar
SOLICITAR SERVIÇO
Serviços
Solicitações
Cidadão
Sobre
Tapa Buraco
Descreva sua solicitação:
PESQUISAR ENDEREÇO
LOCALIZAR NO MAPA
ENVIAR

75% 09:13
Voltar
BHMAP
RUA DA BAHIA
Endereço selecionado:
RUA GOIAS, 99 - Bairro Centro
Cancelar
Confirmar
RUA GOIAS
AVENIDA ALVARES CABRAL
BHMAP
Onde Estou?

75% 09:14
Voltar
BHMAP
Centro
VIADUTO SANTA TEREZA
RUA RIO DE JANEIRO
RUA GOIAS
RUA DOS GUAJAJARAS
RUA DA BAHIA
AVENIDA JOAO PINHEIRO
AVENIDA AFONSO PENA
RUA DOS AIMORES
Boa Viagem
BHMAP
Onde Estou?

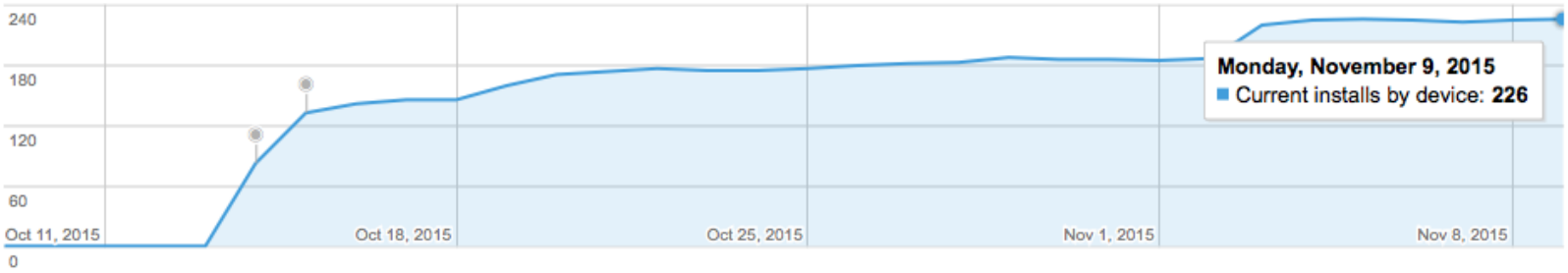

Salvando captura de tela...
Voltar
INFORMAR ENDEREÇO
Serviços
Solicitações
Cidadão
Sobre
Escolha o tipo de logradouro:
RUA
Digite o nome do logradouro
Digite o número do logradouro
PESQUISAR

Final considerations

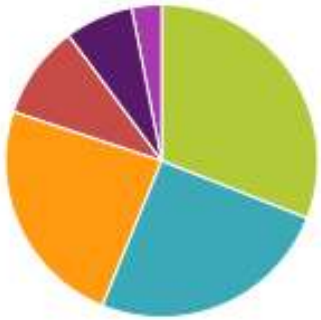
- The app can be downloaded at Google Play https://goo.gl/CH043O
- We are waiting for the Apple Store authorization for publishing it in iOS platform;
- In less than a week, 100 Android devices had the application installed. Even before any media advertised the application;
- Now, less then a month from the launch there are almost 300 Android devices with the application;
- The repercussion in television, newspapers and magazines was beyond the expectation;
- Ranked with 4,25 stars at Google Play;
- **Since it was based on open source technology, this app could be a model to be used by any municipality.**

Final considerations

The number of active devices on which the application is currently installed. Learn more

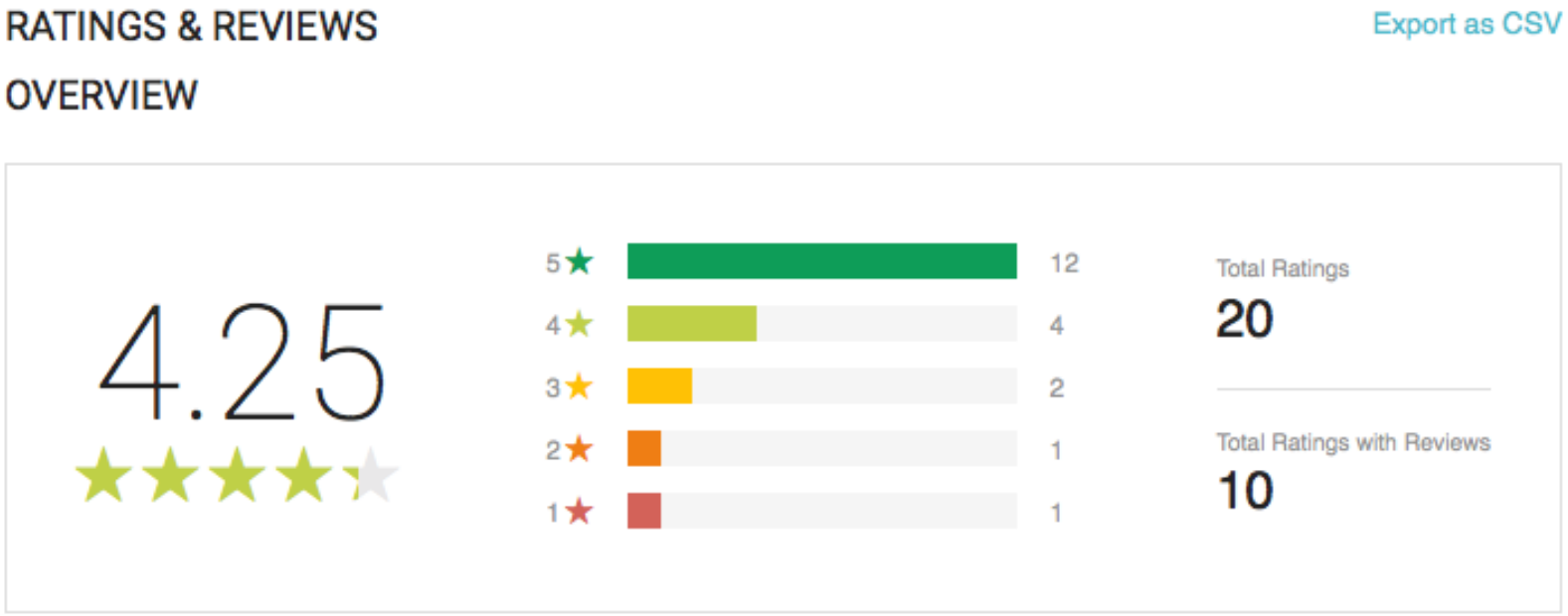


CURRENT INSTALLS BY DEVICE ON NOV 9, 2015



	YOUR APP	
Android 4.4	70	30.97%
Android 5.0	57	25.22%
Android 5.1	54	23.89%
Android 4.1	22	9.73%
Android 4.2	16	7.08%
Android 4.3	7	3.10%

Final considerations



Thanks!

- Questions?
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