City of Lafayette Staff Report

For: City Council
By: Sarah Allen, Assistant Planner
Meeting Date: June 23, 2014
Subject: Streetline Parking Sensors

Executive Summary
Streetline, a Foster City-based parking technology company, has approached the City proposing to install digital sensors in approximately 800 on-street parking stalls for a period of ten years at no cost to the City. The parking sensors will provide real-time information on how the parking spaces are used in the downtown and, through a mobile phone application, can locate available spaces for consumers. The data can then be used to analyze habits and patterns and will allow the City to implement parking management strategies to improve the use, function, pricing and availability of parking spaces in the downtown.

Background
In 2013, upon referral from the Contra Costa Transportation Authority (CCTA), Streetline approached the City to discuss its technology and applications. After meeting with the Mayor, City Manager and City Engineer, Streetline made a presentation to the Parking Ordinance Committee (POC) last September. The original fee-based proposal, which is attached to this report, called for the installation of sensors (also called “pucks”) into the asphalt in each parking space. These pucks would:

- Sense vehicle occupancy in real time.
- Guide residents and visitors to available parking.
- Enable decision making using data, including real-time status applications and historical analytics reports.
- Provide tools to optimize parking enforcement.

At that time, the cost associated with this management program was approximately $200,000 annually including initial startup costs in order to cover the 777 metered spaces along Mt. Diablo in the downtown core.

In April 2014, Streetline came back with a second, no cost, sponsorship-based proposal. The PowerPoint slides provided by Streetline are attached to this report and further explain the details of this proposal.
Revised Proposal
The revised proposal calls for several advertising and sponsorship options that the City could consider to allow a company to pay for the cost of the installation and service fees, resulting in zero cost to the City for the basic technology and management tools. Streetline has indicated that:

- The City has discretion over what type of advertising it would allow. Examples could include digital messages in the meters, banners at BART, flyers for Art & Wine festival, and messages in the City and Chamber websites reading “Smart Parking provided by Streetline and paid for by XX (sponsor)“.
- Sponsors could include banks, oil companies, car companies, and other corporate or local businesses.
- The contract would be for ten years, but currently, the funding partnerships are in five year increments. Streetline is responsible for securing financial sponsorship for each period.
- Even if the City agrees on a contract, Streetline would still need to secure sponsors so there is no guarantee the program would actually be implemented.

Parking Ordinance Committee
Both the recently adopted Downtown Specific Plan and the City’s General Plan provide directives to improve and better manage parking in the Downtown. As part of a two-year Planning Department Work Plan task, the City Council authorized the formation of a limited duration Parking Ordinance Committee (POC) to update the Parking Ordinance. This committee (Tom Chastain, Bill Loudon, Matt Branagh) has been meeting for approximately nine months and has developed the framework for a parking management strategy. To assist in the development and implementation of a comprehensive management strategy, the POC has determined a need to better understand the parking habits of downtown customers, residents and employees; i.e., how parking is used, where vacant or underutilized parking spaces are located, how much people are willing to pay for parking, when spaces are occupied and for how long.

On June 5, 2014, Streetline presented the no-cost proposal to the POC at a public meeting. After discussions, the POC members unanimously agreed that the Streetline proposal was worth pursuing and recommended that the City Council begin discussions with Streetline on the terms of an agreement. Given that the work that the committee is undertaking could benefit from this type of data collection and analysis, the POC offered to work with the City Council in this effort. The POC identified several questions and concerns that it felt should be considered when negotiating the agreement. They are:

1. Scope of the proposal
   To make this program truly effective, the pucks should be installed in both private and public parking stalls. We need critical mass to make this program successful. Will Streetline consider increasing the number of spaces to be monitored?

2. Sharing of technology and data
   Are other sensors (such as IPS) compatible with the technology Streetline uses? Will Streetline be willing to share its data? Are there costs associated with data sharing?
3. **Track record of the company**  
   Are other communities satisfied with the product, data and service? Is Streetline adequately backed and will the company be around in 5-10 years?

4. **BART’s participation**  
   Getting BART to add sensors to its parking spaces would be a huge benefit as the data from the sensors could be transmitted to freeway riders alerting them that the Lafayette lots are full. This could potentially reduce traffic on local Lafayette streets. Is BART willing to participate and share data with the City? How do we encourage BART to participate?

5. **Ability to add spaces**  
   Is it possible to increase the number of spaces with sensors at any time during contract period? Would these spaces also be free of charge?

**Fiscal Impact**  
Streetline has indicated there is no financial commitment required for the basic services, but that additional services could be provided at the City’s cost. For example, an additional service could include an iPad application that facilitates better and more efficient enforcement of the parking meters.

**Staff Comments**  
Staff concurs with the POC that this is an idea worth pursuing and that the POC should assist in fleshing out the details of the proposal. The final negotiated contract should be reviewed by the City Council to ensure it meets the City’s needs and maintains the values of the community.

**Recommendation**  
Direct the City Manager to begin negotiations with Streetline on the terms of an agreement in conjunction with the Parking Ordinance Committee. Bring back the negotiated proposal for City Council review and approval.

**Attachments**  
A. Original fee based Streetline proposal dated October 18, 2013  
B. Current no cost concept (sponsorship program) dated May, 2014  
C. Streetline company profile  
D. Parking Ordinance Committee draft goals and strategy  
E. Articles regarding smart parking
Streetline Smart Parking Proposal

City of Lafayette
October 18, 2013

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Executive Summary
Streetline is at the forefront of Smart Parking. With the rapid evolution of sensing equipment, software, and information services, Streetline is able to offer proven technology and creative information systems allowing cities to better serve their communities — providing improved service to merchants, residents and visitors while optimizing city workforce and revenue.

Overview
Smart Parking involves a fully integrated parking ecosystem that benefits residents, visitors, merchants, and the City. In order to accomplish this, it is critical that parking is viewed holistically to include on street metered and non-metered spaces, city-owned off-street parking, as well as private parking supply that is available to the public. Lafayette has all of this plus Bart, a major contributor to parking issues in the City. Streetline provides the tools necessary to change motorist behavior that helps to optimize the utilization of parking inventory and productivity of enforcement operations. Cities that have selected the Streetline solution enjoy reduced congestion, better space utilization, and increased commerce for merchants, resulting in increased sales tax revenue for the City.

Most cities have sufficient parking inventory and based on the studies conducted for the City, Lafayette is no different. The issue is changing behavior of motorists so that they are able to find and use the parking inventory efficiently. Streetline applications provide the tools necessary for the city to optimize existing parking inventory and as a result, the city can realize the following key benefits:

- Increase commerce and sales tax revenue by drawing motorists to a city where parking can be more easily located and found more quickly
- Increase meter revenue by changing the behavior of motorists
- Improve compliance with parking policies
- Avoid the expense of constructing new parking structures

Integration
The Streetline system has been designed to seamlessly integrate with single space credit card meters of all brands, including the IPS meters used in Lafayette today. Additionally, the Streetline system supports integration of existing Duncan Eagle coin operated single space meters, making them “smart meters” so that the City can extend the life of these meters, deferring replacement costs. Streetline sensors can also be deployed in un-metered, time-enforced spaces and the guided enforcement application eliminates the need to chalk tires. This application can also be used to automatically detect and direct officers to expired meter violations. Streetline sensors can be used in parking restricted spaces and parking prohibited spaces for comprehensive data analysis, enforcement and policy management. All public and private off-Street surface lots can publish location, prices, and policy on our mobile application - Parker. For drivers, this means they can
find a place to park, whatever their preference. For the city, this means they have the capability to understand parking dynamics in any part of the city using Streetline’s applications and analytics, and make the most effective policy and pricing decisions based on highly accurate, real time data. For the merchant community, this means optimal availability and turnover so their customers can enjoy all that downtown has to offer without the frustration and time-consuming task of looking for parking.

**Products & Solutions**

The comprehensive Streetline solution includes sensors, networking equipment and a suite of hosted web and mobile applications, analytics and reporting. Many elements of the system are modular, and may be combined or integrated with products from other vendors such as dynamic message signs, or third party applications. Streetline owns, installs, operates and maintains the network and cloud-based smart parking applications and takes full responsibility for their continuous operation.

As the premier Smart Parking solution provider, Streetline offers the most comprehensive portfolio of products and services, as well as the deepest expertise in the industry.

Streetline provides services covering a broad spectrum of Smart Parking systems including:

- **Parker™**, the motorist guidance platform, that guides residents and visitors to on-street and off-street parking and allows them to pay for the transaction (if mobile payments are implemented) by phone in a single easy-to-use app
- **ParkerMap™**, the web-based guidance map which can be embedded into any website (retailer, city, etc.)
- **ParkSight Analytics™** provides graphical reporting about parking usage, meter usage and officer actions 24 hours a day 365 days per year
- **ParkEdge™**, the off-street parking inventory system, that directs motorists to off-street parking owned by the city and private off-street providers
- **ParkSight Guided Enforcement™** directs officers to potential violations, increasing productivity while reducing patrol hours, often increasing enforcement effectiveness by approximately 200% - substantially increasing revenue in the process.
- **Meter Monitor™** is a retrofit for existing Duncan Eagle meters to integrate them into the system

**Benefits:**

- Support and help stimulate commercial and retail business by enabling the city to manage parking availability at levels of approximately 85% per block, thereby reducing congestion and insuring availability for merchant’s customers.
- Monitor and manage on-street parking in commercial, retail areas. Provide real-time and historical information regarding occupancy, revenue and enforcement actions.
- Easy-to-use, web-based and smartphone-enabled navigation system so residents and visitors can locate convenient affordable parking in real time, thereby reducing traffic congestion. Studies have shown that 30% of traffic in cities is a result of motorists circling the block looking for parking.
- Manage payment rates and time based on supply and demand resulting in fair and equitable pricing of valuable parking real estate. This promotes convenient, easy, safe, competitively priced parking experiences and is the cornerstone that helps normalize availability so that merchants can enjoy availability on street for their customers.
- Direct officers to potential violations, reduce patrol hours, improve workforce productivity, and improve revenue, while increasing fairness in citation issuance.

Smart Parking includes not only sensors, but also and more importantly a change in the way parking is understood, managed, and interacts with stakeholders. It gathers real-time data about parking occupancy and payment status. Analytics use these new sources of data to empower city leaders to improve policy and pricing based on real information about supply and demand and enforce that policy more effectively. A Smart Parking system communicates real time information to drivers so that they can make better decisions, locate parking quickly, and pay using modern technology, improving compliance and optimizing the utilization of parking assets.

A Complete Picture for the Best User Experience
A major advantage of Streetline’s technology is that it is an integrated platform that was designed for optimal user experience. By integrating data from various sources, Parker has the capability to display the most complete picture of parking availability and policy to drivers. This includes:
- On-street metered spaces (Duncan Eagle, IPS and most other brands)
- On-street non-metered spaces
- Off-street surface lots

Proposal Scope
This proposal is focused on City owned parking assets including on-street metered and time-enforced spaces and one city owned lot. As part of this proposal Streetline will add static data for all private off-street lots including the Bart lots and those of merchants that allow public parking. Static information includes name, location, capacity, hours of operation, rate (if any), time limit and number of special use spaces such as ADA spaces and EV charging stations.

Streetline can also collect occupancy data from private lots through the installation of sensors, third party loop counters or cameras. Pricing in this proposal does not include any real time data collection from private lots; however the system is designed to easily add this in the future.
Streetline Products and Services Overview

Streetline Company Overview
Streetline is the premier industry leader, offering the most comprehensive portfolio of Smart Parking products and services, as well as deepest expertise in the industry.

Products & Solution Structure
The Streetline solution is complete and includes installed sensors, networking equipment and a suite of hosted web and mobile applications, analytics and reporting. Many elements of the system are modular, and may be combined or integrated with products from other vendors. The following graphic illustrates the interrelated structure of Streetline's parking solutions, and how they integrate into one solution platform, providing valuable benefits to all parking stakeholders.

Expertise
Streetline draws on the depth and knowledge of a team of highly committed employees who are experts in parking detection, information technology, and project management. With deployments in many US cities and Europe, Streetline employees bring valuable practical experience gained in the industry and specialize in transferring that knowledge to users through broad product and services offerings. Streetline operates a 10,000+ square foot facility in Foster City, CA, which encompasses an R&D lab where the detection, networking and meter interface technology is designed. All manufacturing is currently done in Silicon Valley and focuses on high levels of quality assurance.
Vehicle Sensing
The Streetline Sensing system provides reliable vehicle detection at parallel, diagonal, and perpendicular parking spaces, at a low total cost of ownership. Each sensor monitors a single marked parking space.

Embedded Parking Sensors are designed for rapid, high quality installation, completely flush with the roadway surface. The low profile of the sensor (only 1.25" deep) allows for installation without breaking the pavement surface course, this is critical to avoid water penetration and subsequent destruction of the pavement that can be experienced when drilling deeper.

There are no moving parts, and no openings or removable elements on the sensor. Batteries sufficient for four years of operation are sealed inside the unit. When batteries are exhausted, sensors may be removed and replaced, re-using the same hole created for the initial install.

Meter Monitor: Meter Retrofit

The Streetline Meter Monitor enables Duncan Eagle single-space meters to be fully integrated into the Streetline sensing system. The Streetline Meter monitor can send real-time information about coin payments and inform the meter shop when repairs are needed. Streetline meter monitors easily fit into single-space meter heads without changing the look or requiring an upgrade to expensive new meters. This is an extremely cost-effective way to modernize legacy infrastructure without large investments in new hardware or installation projects.
Parker™: Parking Guidance Mobile Application

Parker™, Streetline’s mobile parking platform, provides city residents and visitors, with “a complete parking assistant in the palm their hand.”

With Parker™, Streetline offers a fast, low cost way for customers to find parking close to their destinations and understand parking policies and prices. Motorists spend less time in traffic, save money, and park closer to their destinations. Parker™ also contributes to policy compliance by providing drivers with improved information on rules, more ways to pay for parking, and reminders when time limits and paid time are about to expire. When on-street and off-street spaces are instrumented with sensing technology, Parker may be used as a full featured real-time motorist navigation app guiding motorists to available parking throughout the city. Parker™ runs on iPhone and Android smartphones, as well as iOS and Android tablets.

Finding the Right Spot

Parker allows the driver to search for spaces based on location, price, or distance from a destination. Voice guidance guides them to open spaces, while a line indicates the route to the best parking location (based on search criteria or distance), which is updated as the driver moves. Using the search filters and guidance features of Parker, drivers are sure to find the perfect parking spot.
User Experience
The user experience of Parker is intuitive and helpful for the complete journey. Motorists using Parker can see their current location or a selected destination in the familiar Google Maps interface, with indicators on each surrounding block to show how many parking spaces are currently open and available. In the next version of Parker, as the motorist zooms in, they also see availability by blockface. Off-street parking is also displayed to provide a complete menu of choices for the motorist looking to park.

Parking Information and Guidance
Parker provides motorists with detailed maps of on- and off-street parking, including information on capacity, availability, policies, and pricing. Motorists can refine their results to find parking that meets their needs, including facility type, payment method, handicapped parking and EV charging locations. Voice guidance features improve the user experience and driver safety — guiding drivers to a space using voice directions, making Parker a true hands-free application. Motorists are also guided back to their vehicle when they wish to return.
Capacity and Availability
Parker is the first commercially available smartphone app to use live information from on-street parking sensors to guide motorists to open parking spaces. Motorists using Parker today can see their current location or a selected destination in the familiar Map interface, with indicators on each surrounding block to show how many parking spaces are currently open and available. Locations of garages and parking lots are also displayed, to provide a complete menu of choices for the motorist looking to park.

Policy, Pricing and Payment Options
The same policy database also allows Parker to provide motorists with current rates, time limits and metered hours of operation, and times when no parking is allowed. Users may search using filters to show only parking stalls where the meters take credit cards, or find the least expensive options for parking near a chosen destination. During hours when parking is restricted, Parker shows a “No Parking” icon.
Payment and Compliance Support
Once parked at a metered space, Parker provides mobile payment options, in partnership with the city and select mobile payment providers. Payments can be made within the Parker app, without the motorist having to launch a separate app. Streetline is partnered with both Parkmobile and PayByPhone, the premier providers of mobile parking payments, to offer integrated mobile payments on Parker. In the event that a city wished to integrate this technology into their meters using one of these vendors, mobile payments would be readily available on Parker. Motorists may also set timers to remind them of meter and time limit expirations. Where complete policy information is available, they may also be sent reminders of policy change times.

Parker's Footprint
Parker's on-street capabilities have been adopted in more than 30 cities. Off-street locations cover 65 cities and over 20,000 facilities. Performance of the Streetline sensing system has been exceptional and unparalleled in the Smart Parking industry. Parker was the winner of the prestigious Global Mobile Awards, winning Best Mobile Innovation for Smart Cities at the 2013 Mobile World Congress in Barcelona.

Parker is free to download and use on iPhone or Android devices via the link or by scanning the QR code below.

http://www.streetline.com/find-parking/parker-mobile/
**ParkerMap™ – Online Parking Guidance**

Parking guidance can be achieved and/or supplemented with guidance using web applications. A ParkerMap web widget for parking guidance is available from Streetline that can be embedded in a website simply by pasting an embed code into the website HTML. This can assist customers in finding or reserving parking ahead of time so that they can streamline the parking process, leaving more time for enjoying what downtown has to offer.

The ParkerMap displays all the same parking availability and policy data that Parker does, but online. A map can easily be created online, which generates HTML code for embedding in websites. Using ParkerMap, city departments’ or merchants’ services web pages could display available parking nearby, and let a visitor know where they should park before driving to the building. This map is free to use and is already being used by corporate campuses, cities, merchants, and universities to publish parking online.

With information on more than 25,000 parking locations in Streetline’s database, as well as real-time parking availability data for more than 30 cities globally, the ParkerMap can help merchants or anyone with a website show nearby on- and off-street parking options.

Using ParkerMap a user enters a location name and address, and a real-time parking map HTML code is generated that can be easily embedded in any website for free.
ParkEdge – Off-street Publishing to Parker

Using ParkEdge, City-owned and private lots can publish locations on Parker, along with occupancy, policy and pricing information. ParkEdge offers two principal benefits – it exposes lots to the public and, by pushing the information to Parker, provides for a complete motorist user experience. ParkEdge takes the hassle out of managing parking data, it serves as a database for all off-street parking options, both private and public. ParkEdge provides the City a communication channel to drivers to convey a variety of important and differentiating information through an easy, intuitive user interface.

Using a secure account on ParkEdge, Streetline's Parking Management Portal, the city and private lot owners can:

- Claim lot ownership
- Update and change Basic Listings information
- Publish availability, hours, and pricing on Parker
- Publish promotions on Parker

Streetline does not charge for ParkEdge basic, this is a version that displays static information such the name and address of the lot along with the capacity, number of ADA and EV spaces, hours of operation and other policy information. ParkEdge Basic can and should be used by all parking stakeholders in the city.

ParkEdge Premium is able to display real time occupancy in private lots, the data can come from a variety of sources including Streetline sensors, cameras, loop detectors, gate counters or a combination to create a hybrid solution.
Streetline Parking Management System
The Streetline parking management system (ParkSight Portal) is for internal use by city staff to aid in the collection and analysis of parking data. This parking management system will act as a ‘dashboard’ and includes the capacity to view, in real-time, the entire parking operation at a glance and show the status of each parking space (vacant, occupied and paid, occupied and unpaid). The parking management system is capable of generating reports including (a) occupancy, (b) turnover (arrivals and departures), (c) compliance (potential violations & enforcement), and (d) demand index by the hour (hourly occupancy). The parking management system is also be capable of generating custom reports, tailored by date range, block, area, and officer.

ParkSight Portal
In a complex transit system with multiple sources of demand ranging from commuters headed to work to motorists traveling into the area for shopping, restaurants, and nightlife, parking managers need to compare current dynamics with historic trends in order to understand the impact that policy & pricing changes are having on parking availability, revenue, and compliance. This also helps provide information to engage with local merchants and residents around parking issues.

Real Time Data
ParkSight Portal Home, Occupancy, and Enforcement are delivered in near real-time, meaning that they are updated frequently with changes in status. This provides the city with true real-time information about current parking conditions in areas of the city that have deployed Streetline’s sensors and networks. Analytics, however, collect historical information daily that can be viewed by different user-selected specifications such as area, date range, time range, and days of the week.
Real-Time Applications

Home
- Total spaces available
- Current Occupancy
- Average Stay
- Spaces Available by Block
- Recent News and Alerts

Occupancy
- Current Occupancy by Block
- Occupancy Hotspots
- Compare Day’s Occupancy to Historic Trends
- Spaces Available and Total Spaces by Block

Enforcement
- Total Potential Violations by Blockface
- Violation Hotspot Blocks
- Today’s Actual vs. Potential Revenue by Hour

Historical Analytics
- Tailor reports by:
  - Area
  - Date Range
  - Time Range
  - Days of the Week
Advanced Analytics Reporting
Streetline's Client Services Team consists of parking & transportation experts skilled at providing tailored reports across areas in which customers wish to have more detailed information & metrics for deeper analysis. These areas include occupancy, turnover, and enforcement analytics, if the city chooses to pursue Guided Enforcement technology. In addition, real time reporting and historical analytics is provided by Streetline’s ParkSight Portal application. Reports present information in an intuitive format and include analysis of patterns and observations (see samples below). Client Services reports also offer valuable insights into parking activity as well as benchmarking against comparable cities that provide critical decision support for city managers and planners.
Streetline Guided Enforcement

Guided Enforcement is a navigation and data collection system designed to optimize workforce productivity. Streetline has the largest and most utilized deployment of Guided Enforcement in the United States. Streetline's Guided Enforcement offers a map view of real-time data from sensors and meter status data to guide officers to vehicles parked and unpaid (potential expired meter violations), as well as parked over time limit (potential over limit violations).

Thousands of officer hours have been assisted by Guided Enforcement, resulting in substantial increases in revenue for cities, as well as field user feedback that has been integrated into the application, making it easier to use and more effective for the officers who use it in the field every day. The combination of dedication to user-centered design and the most extensive field deployment in the world make Streetline's Guided Enforcement simply the best system in the global market today.

As an officer approaches a decision point, such as an intersection, Guided Enforcement provides real-time information, including locations of potential violations, empowering the officer to make optimal routing decisions.

Example of the Application in Normal Use

- An Officer using the application initially sees a street map with a marker showing the Officer's own location and markers on each surrounding showing the current
number of unhandled exceptions at that location. Based on this bird’s eye view of available workload, the Officer selects the next stop on their patrol.

- When the Officer arrives at the target block, the List View is selected presenting a table showing the relative location of each exception on the block, and a selection of high-level actions the Officer can take for each exception. High-level actions include Ticket, Exempt, and NIV (Not in Violation).

- When the Officer sees that there is a disabled placard displayed, the Officer records the placard in the app. The exception is marked as ‘handled’ and is no longer visible to Officers using the application, until the vehicle departs and a new vehicle arrives.

Timed Enforcement
Timed Enforcement™ eliminates the need for chalking on time-limited parking spaces and for meter over limit parking. Developed with and for enforcement officers, Guided Enforcement identifies and directs officers to parking violations in real time, while providing parking management personnel with essential information to design an effective enforcement model and enhance officer productivity.

By tapping data from Streetline’s real-time sensor network, the timed enforcement feature captures arrival times and digitally tracks overstays, eliminating the need for chalking. The app also includes support for disabled placard enforcement and exemptions. With a click of a button, potential exemptions such as disabled placards — are filtered out, guiding officers to blocks with the highest probability of finding a violation.
Powerful Results

In a controlled pilot, citations per officer day were tracked for a group of officers using Guided Enforcement and a group following standard enforcement practices. An improvement of over 150% was seen for all officer days for the group using Guided Enforcement. Meanwhile, Officers interviewed for the report gave Guided Enforcement very positive reviews as a useful tool for their daily work. The following table and chart display the results of this pilot, which demonstrate the proven effectiveness of Streetline's system.

<table>
<thead>
<tr>
<th></th>
<th>Control - Expired Meters</th>
<th>Pilot - Expired Meters</th>
<th>Pilot vs Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Officer Days</td>
<td>Citations</td>
<td>Citations / Officer Day</td>
</tr>
<tr>
<td>All Officer Days</td>
<td>11,711</td>
<td>33,264</td>
<td>8</td>
</tr>
<tr>
<td>Top 75%</td>
<td>8,956</td>
<td>29,311</td>
<td>10</td>
</tr>
<tr>
<td>Top 50%</td>
<td>6,080</td>
<td>16,030</td>
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<tr>
<td>Top 25%</td>
<td>3,165</td>
<td>5,573</td>
<td>17</td>
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<tr>
<td>Top 1%</td>
<td>120</td>
<td>4,722</td>
<td>39</td>
</tr>
</tbody>
</table>

![Graph showing average expired meter citations per officer day for both control and pilot groups. The graph shows a significant increase in citations for the pilot group compared to the control group across all officer days and top percentages.](image-url)
ROI and Price

Based on the assumptions in the table on page 21, the City would be expected to generate incremental revenue from expired meter and over-limit citations of approximately $142,000 annually after Streetline fees. Approximately 70% of the initial investment can be returned in the first year and the entire investment can be returned in approximately 17 months.

<table>
<thead>
<tr>
<th>Annual results - metered spaces</th>
<th>Current</th>
<th>Streetline</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expired meter citations per space / per year</td>
<td>20.16</td>
<td>30.23</td>
<td>10.08</td>
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<tr>
<td>Citation fine</td>
<td>45.00</td>
<td>45.00</td>
<td>-</td>
</tr>
<tr>
<td>Revenue per space</td>
<td>907.01</td>
<td>1,360.52</td>
<td>453.51</td>
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<tr>
<td>Quantity of spaces</td>
<td>308</td>
<td>308</td>
<td>-</td>
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<tr>
<td><strong>Subtotal Expired meter revenue</strong></td>
<td>279,360</td>
<td>419,040</td>
<td>139,680</td>
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</table>

<table>
<thead>
<tr>
<th>Annual results - time enforced over limit</th>
<th>Current</th>
<th>Streetline</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over Limit citations per space</td>
<td>2.14</td>
<td>10.68</td>
<td>8.55</td>
</tr>
<tr>
<td>Citation fine (average)</td>
<td>45.00</td>
<td>45.00</td>
<td>-</td>
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<tr>
<td>Revenue per space</td>
<td>96.14</td>
<td>480.70</td>
<td>384.56</td>
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<tr>
<td>Quantity of spaces</td>
<td>469</td>
<td>469</td>
<td>-</td>
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<tr>
<td><strong>Subtotal over limit citation revenue</strong></td>
<td>45,090</td>
<td>225,450</td>
<td>180,360</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual results - expired meter and over limit</th>
<th>Current</th>
<th>Streetline</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expired meter citation revenue</td>
<td>279,360</td>
<td>419,040</td>
<td>139,680</td>
</tr>
<tr>
<td>Over time limit citation revenue</td>
<td>45,090</td>
<td>225,450</td>
<td>180,360</td>
</tr>
<tr>
<td><strong>Total citation revenue</strong></td>
<td>324,450</td>
<td>644,490</td>
<td>320,040</td>
</tr>
<tr>
<td>Annual System Fee</td>
<td>n.a.</td>
<td>177,552</td>
<td>177,552</td>
</tr>
<tr>
<td><strong>Net annual citation revenue improvement</strong></td>
<td>324,450</td>
<td>466,938</td>
<td>142,488</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Return on Investment</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Investment</td>
<td>$203,010</td>
</tr>
<tr>
<td>Return on Investment</td>
<td>70%</td>
</tr>
<tr>
<td>Payback after implementation (months)</td>
<td>17.1</td>
</tr>
</tbody>
</table>

Citation rate per space for expired meter enforcement is in line with what Streetline has observed other cities at 20 citations per space per year. While it is not possible to calculate your actual capture rate without having space level occupancy data, we typically see a 7-9% baseline capture rate using manual methods increasing to 16-20% (increase of 80%-170%) with guided enforcement, the table on page 19 shows an example of a city achieving a 150% increase. For the purposes of estimating the Lafayette ROI above, we used a 75% improvement to calculate the results. Streetline fees are based on a quantity of 777 instrumented spaces.

Capture rate for overstays in Lafayette appears to be low at just over 2 per space per year. This may be a result of not enforcing over limits at paid metered spaces. For the
purpose of the ROI analysis we did not assume you would change your policy on this, however this is an area where you can expect a high level of increase in productivity and the proposed technology provides a way to do this easily, without chalking. We have not calculated workforce productivity improvements as part of this proposal. Guided enforcement enables the city to stretch its workforce so that your 2.5 FTE’s can do the work of more officers.

We have included all costs including installing a Streetline meter monitor in each of your Duncan Eagle meters, so to the degree you continue to replace these with networked meters where the Streetline system communicates directly with the server from your meter vendor, the cost can be reduced by $5.00 per month per space (this is the monthly fee for the Streetline meter monitor for Duncan eagle meters).

The ROI analysis does not include some of the softer returns, for example with the Streetline meter monitor for your Duncan meters we can alert you when a meter is down including the reason (coin jam etc.) allowing your meter shop to repair faster and start re-generating meter revenue faster.

We have also not included the ROI for congestion reduction through the use of parker and parker map for merchants; this will increase commerce resulting in higher sales tax revenue for the city.

ASSUMPTIONS (Provided by City)

<table>
<thead>
<tr>
<th>Assumptions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>METERED SPACES</strong></td>
<td></td>
</tr>
<tr>
<td>Meter violation fine</td>
<td>$45.00</td>
</tr>
<tr>
<td>Meter violations written per year</td>
<td>6,208</td>
</tr>
<tr>
<td>Annual expired meter violation revenue</td>
<td>$279,360</td>
</tr>
<tr>
<td>Divided by number of spaces (146 IPS + 162 Duncan)</td>
<td>$308</td>
</tr>
<tr>
<td>Average violations per space per year</td>
<td>20.16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ON STREET TIME ENFORCED OVERSTAYS</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overstay fine</td>
<td>$45.00</td>
</tr>
<tr>
<td>Overstay violations written per year</td>
<td>1,002</td>
</tr>
<tr>
<td>Annual overstay violation revenue</td>
<td>$45,090</td>
</tr>
<tr>
<td>Divided by number of spaces (418 street + 51 lot)</td>
<td>469</td>
</tr>
<tr>
<td>Average violations per space per year</td>
<td>2.14</td>
</tr>
</tbody>
</table>

Notes
Quantities and assumptions made are based on information collected and stated in the assumptions; improved productivity may differ based on the policy and adaptation of
the city. The numbers presented in this ROI analysis are for modeling purposes only and not a guarantee of results.

Pricing and ROI assumes a total of 777 spaces to be instrumented with Streetline sensors made as follows:

- 469 non-metered time-enforced spaces
- 146 metered spaces using IPS meters integrated with the Streetline system
- 158 metered spaces using Duncan Eagle meters with a Streetline meter monitor installed
- Assumes a contract term of 36 months.

With Streetline there are never additional fees such as communications, data, batteries, maintenance etc. Streetline fees are all inclusive.
**Streetline: Additional Information**

**Industry Experience**
Streetline has recorded more than 190 million parking sessions from its real-time smart parking deployments across the U.S. (California, Delaware, Florida, Indiana, Maryland, Massachusetts, Michigan, Nevada, New Jersey, New York, Oregon, South Carolina, Virginia, Washington, D.C.), and Europe (in the UK, Germany, and France). Streetline is the leader in parking sensing equipment and applications.

**Customer Feedback**

"The reports we are getting from the Client Services team at Streetline are invaluable. We get to see what’s happening in our city in terms of parking, in real-time, and compare that to historical data. That is the way informed and educated decisions are made to improve the city"

- Lisa Costa Sanders, City Planner for City of San Carlos

"[Streetline and Cisco’s smart parking platform] is consistent with San Mateo’s strong technology industry and is an example of the City’s commitment to efficiently managing parking to support our downtown."

- City of San Mateo, California

"...the system has paid for itself in spades. ‘The merchants I’m talking with are thrilled...because the system has freed up prime spaces and eased the city’s perceived parking crunch.’ ”

- Ken Ulman, County Executive, Howard County, MD from Parking Revolution – American City and County Magazine
“At Oregon State we value diversity [...] the purpose of this project is to facilitate access for people with disabilities, but this technology will also benefit all commuters to campus.”

- Oregon State University

“We have exceptional experience with [Streetline’s] performance, and we trust them as a service provider. The user interface, both for consumers, as well as parking enforcement officers, is exceptional.”

- Jaime De La Vega, General Manager, LADOT

“We are constantly looking for ways to make life easier for visitors, commuters and residents while lessening our carbon footprint...with Streetline’s smart parking platform, we achieve both of these goals and more.”

- Mitchell Karon, Executive Director of New Brunswick Parking Association

“We’re seeing improving parking conditions already, and we’ve received calls from residents thanking us for the parking app in those locations... We’re seeing more revenue because it’s efficient. People have the ability to find spaces instead of getting frustrated and driving off. They can find city parking locations quickly and very efficiently.”

- Brian McKelligett, Parking Services Manager, City of Fort Lauderdale
Awards and Recognition

As featured in the Wall Street Journal, USA Today, Wired, Forbes, Reuters, Bloomberg News, and on CNN, Fox, NBC, and CBS, among many others, Streetline is making parking simpler for drivers and more financially sustainable for cities. The company was named one of Fast Company’s 10 Most Innovative Companies in Transportation, as well as IBM Global Entrepreneur of the Year. In October 2012, Streetline was named a finalist for the prestigious 2012 World Technology Awards. Recognized as one of today’s most innovative companies by the following organizations:

June 19, 2013
Frost & Sullivan 2013 North American Intelligent Parking Solutions Competitive Strategy Leadership Award

Frost & Sullivan, a global research organization of 1,800 analysts and consultants who monitor more than 300 industries and 250,000 companies, awarded Streetline with the 2013 North American Competitive Strategy Leadership Award in Intelligent Parking Solutions.

February 26, 2013
Parker Named Best Mobile Innovation for Smart Cities at 2013 Mobile World Congress

The Global Mobile Awards recognize excellence and innovation within the mobile communications industry. To select the winners for the 2013 awards, more than 160 independent analysts, journalists, academics and subject matter experts throughout the world participated in the judging process. Parker™ by Streetline was revealed at Best Mobile Innovation for Smart Cities at the 2013 GSMA Mobile World Congress in Barcelona.

October 20, 2012
Streetline Named Top 20 for appAttack Awards at GMIC SV 2012

The appAttack Awards, a global competition for the latest and greatest mobile apps, selected Streetline in the Top 20 apps at the Global Mobile Internet Conference Silicon Valley.

October 17, 2011
Winners of the 2011 Wall Street Journal Innovation Awards

From computing systems to wireless, the most innovative technologies by category. The Innovation Awards judges chose winners in 16 categories this year.
June 23, 2011
Cool Vendors in Automotive, 2011

Gartner®

Coolness in 2011 often involves delivering and consuming services to result in stronger business outcomes. The increased focus on service delivery and consumption is part of a consumer-driven desire for technology to take a back seat in favor of good service. This behavior is a continuation of trends we outlined in the 2010 Cool Vendors’ reports — namely a focus on enabling people to deliver better business results through consumption of both services and technology.

May 2, 2011
TechAmerica Foundation Names Streetline a 2011 American Technology Awards Finalists

TechAmerica Foundation today unveiled the finalists for the American Technology Awards, which bestows the only national “Best Of” awards that recognize all technology products and services across the technology industry. Nominations for the American Technology Award's “Terman” awards were vetted by industry experts and technology companies. These awards were named after Frederick Terman, who is widely credited as being the father of Silicon Valley.

April 18, 2011
Streetline, Inc. Named 2011 TIE50 Finalist

Silicon Valley’s premier annual awards program contested by technology startups worldwide. Other participant privileges include significant investor exposure, online virtual showcasing and technology and business partnering/networking.

March 14, 2011
The 10 Most Innovative Companies in Transportation

Streetline — For smart-parking and traffic-control technology. Streetline has spread to seven cities, including New York and Los Angeles. The aim is to have 15 percent of all parking spots open at any given time.

November 18, 2010
Streetline Named IBM Global Entrepreneur of the Year

IBM today named Streetline the IBM Global Entrepreneur of the Year and winner of the 2010 SmartCamp World Finals in Dublin, where the company announced plans to expand its Global Entrepreneur Initiative and future SmartCamps in emerging markets including Brazil, China, Mexico, Poland and Turkey. Streetline, which uses sensors that allow citizens to find inexpensive parking fast while helping cities manage their parking resources more efficiently, was selected from more than 600 SmartCamp entries worldwide based on its outstanding technology, innovative business plan, and alignment with IBM’s Smarter Planet strategy.
Recent Press
Streetline is regularly covered by the press for its ongoing innovation and developments. Recent articles include:

May 23, 2013
*Parking Tech: An Accelerator to the Connected City...the Human City*

*THE HUFFINGTON POST*

After years of imagining, the Internet of Things (IoT) is finally here. The Internet is no longer limited to your laptop or smartphone. It's connected to your body, regular household items, car and so forth. Wish you could turn on your lights remotely? Wouldn't it be great to warm up your house on your way home?

April 9, 2013
*Video: Mayor Bloomberg Unveils Finding & Paying for Parking in NYC*

Watch as New York City Mayor Bloomberg and Transportation Commissioner Sadik-Khan unveil a new program to find parking, as well as pay for parking meters remotely via smartphone apps PayByPhone and Parker.

April 1, 2013
*Use an app to find parking*

*CNN*

Learn how Streetline works with cities to place sensors in parking spaces and uses data to help drivers find an open spot with our app, Parker™, alongside our CEO, Zia Yusuf.

March 31, 2013
*Listen up and you'll find that elusive parking spot*

*THE SUNDAY TIMES*

If you have driven into a town centre on a Saturday afternoon, you know the drill: head to your favourite back street looking for a parking space; then, when you discover the bays are full, join the holding pattern of other cars as they circle, waiting for someone to move. Unless you pay a premium for a multistorey car park, or steer clear of town centres altogether, joining a convoy of cars patrolling jam-packed streets in the hunt for a free space is all but inevitable. But this inconvenience could soon become a thing of the past, banished, with other driving annoyances such as wind-up windows, by technology.

December 4, 2012
*App aims to make search for parking easier*

*ABC 7*

Watch ABC 7 News go on site with Streetline in the City of San Mateo for the joint Cisco smart parking launch in the cities of San Mateo and San Carlos, California.
December 4, 2012
Streetline Partners With Cisco To Bring Real-Time Parking Info To Cities

TechCrunch Finding parking is always a chore, but there are new tools and companies coming to make finding a place to leave your vehicle easier than ever. One startup focused on this problem, Streetline, is getting a big boost for its real-time parking data through a partnership with Cisco that could help get its parking sensors deployed in more cities around the country.

September 11, 2012
New Program for Midtown Parking

KOLAS NEWSNOW There's a parking lot in front of Junkees Clothing Store, and the owner says she's lucky. Too often, she says, other business owners in the area complain the two-hour parking limit in the neighborhood isn't being enforced, and they are missing out on additional customers. "On a business to make it, you've got to turn it and burn it. So the 2-hour parking is perfect to get a sandwich, a coffee, or to go into a dress shop," says Jessica Schneider of Junkees.

May 21, 2012
Video: New Mobile App Locates LA Parking, Prices

LA A new program unveiled Monday is poised to change the way Los Angeles drivers find and pay for parking, according to the mayor. The LA Express Park pilot program pairs real-time data from 6,000 parking spaces to a mobile application that lets users find, reserve and even pay for parking through their phones.

April 18, 2012
Boston to get eco-friendly park and charge facility

MNT Electric vehicle owners will have a new place to charge and park their cars in Boston. Boston real estate developer Dinosaur Capital Partners LLC said Wednesday it will revamp an old gas station in Boston's Bulfinch Triangle and turn it into Green Park & Charge.

April 10, 2012
The Daily Start-Up: Citigroup, Streetline Want To Help You Find That Parking Spot

THE WALL STREET JOURNAL Citigroup said it has extended a $25 million credit facility to Streetline in collaboration with IBM to fund new parking technology for cities around the world. Streetline’s platform detects the presence of cars in parking spaces through a network of low-power wireless sensors. This information is then made available to municipal authorities as well as consumers, via the company’s Parker application.
A unique opportunity to invest in the future of your City. Smart parking as a cornerstone for your Smart City platform.

Municipal Partnership Opportunity for the City of Lafayette

May 2014
PARKING: THE GREAT UNSOLVED URBAN CHALLENGE

The Impact of Parking:

- 30% of city traffic is caused by people looking for parking
- Average time spent searching for parking is 18-20 mins
- 6 of 10 drivers abandoned parking search at least once

A one-year UCLA study of 15 blocks in LA found:

- 950,000 excess vehicle miles driven
- 47,000 gallons wasted gas
- 730 tons of carbon dioxide greenhouse gas emitted

It’s time to rethink the parking experience!

Sources: Shoup, D. (2007); IBM (2012); ITSA (2013)
PARKING PAIN POINTS

Parking in major metropolitan areas has long been a major source of congestion, economic waste and negative environmental impact.

Cities/Universities
- Revenue loss
- Severe congestion
- Inefficient enforcement/resource allocation
- Environmental impact

Consumers
- Time/fuel waste
- Ineffective payment, pricing & policy systems
- Search based on luck
- Source of stress

Merchants
- Loss of business due to lack of parking
- Customer frustration
- Limited ability to influence conditions
Across all dimensions, Streetline is the leader in street-level sensing

- Patented sensing technology and award-winning applications
- Proven ROI
- 200+ million parking events...and counting
- Extensible platform to accommodate other sensing types (sound, road surface temp)
- 40+ customers
- 24 key partners including Cisco, Citi, IBM, Orange, Siemens, Telefonica
THE STREETLINE PLATFORM

1. Every parking activity is detected in real-time via Streetline's patented sensing technology; integration with existing meters; path to meterless environment as the future evolves

2. Motorist is guided to available parking options via Parker, ParkerMap, on street signage and, soon, in-car navigation systems

3. Motorist parks (at any paid or unpaid space)

4. Motorist activates timer & pays by phone via Parker

5. Local merchants, garage operators engage w/consumers via Parker and ParkerMap (in-app ads, special offers)

6. City receives analytics for policy and parking asset management via ParkSight; optimized enforcement via Guided Enforcement
PARKING AS THE FOUNDATION FOR A SMART CITY

The Streetline Platform can be expanded to include other sensing types:
- Road surface temperature
- Noise levels

How is the road temperature impacting our local climate, environmental impact?

Benefits:
- Maximize resources and funds
- Respond in real time as issues happen
- Analyze trends, set policies based on data
- Deploy resources or implement environmental impact plans based on real, actionable data
THE STREETLINE SOLUTION PORTFOLIO

Parking Providers  
(municipal, garages, universities)

STREETLINE
Connecting the Real World

ParkSight™  
On-Street Parking Platform

Sensor-enabled applications, policy management & analytics for on-street parking management

ParkEdge™  
Off-Street Parking Platform

Software-as-a-Service parking management platform for off-street parking

Parker™ & ParkerMap  
Consumer Services

Consumer parking guidance for smart phones, web & in-car navigation systems

Consumers & Merchants
ParkSight™ (on-street parking)
- Policy management and analytics
- Reduce congestion
- Increase revenue
- Real-time data + cloud-based parking apps = Smart Parking for Cities

“We’ve always believed technology would help us to more easily make decisions based on data. [With Streetline], we are increasing turnover on Main Street, attracting customers, helping businesses and making visiting Ellicott City easier.”

- Ken Ulman, County Executive
  Howard County, MD
ParkEdge™ (off-street parking)

- Publish facility location, hours, & policies
- Provide real-time availability to motorists
- Offer advance reservations
- Run promotions and special offers
- Increase occupancy and revenue
- Improve operations

"[ParkEdge] allows MSU Parking and Transit services to communicate parking information using existing resources and infrastructure. Within seconds, parking status is available to users via Parker and the web-based ParkerMap."

- Mike Harris, Director of Parking & Transit Services, Mississippi State University
PARKING MADE EASY
Find spaces that are open right now with Parker™, Streetline’s award-winning parking guidance app.

Parker™ by Streetline
- Motorist guidance
- Hands-free functionality
- Easily find and pay* for parking
- Reduce driving time and vehicle miles traveled

“We tried out the (Parker) app and wish it were already available in every city we’ve ever driven!”

W I R E D

*select markets 10
ParkerMap™
- Easily embedded in any website
- Show visitors where to find parking
- Free for local merchants, universities...any website!

“Adding ParkerMap to our website allows us to inform guests of the parking options near our restaurant. It is a clear way to show where parking is available in relation to our location and it was simple and easy to use.”

- Basim Nimri, Owner
Mandaloun Restaurant

Mandaloun
ParkerData™ for the Connected Car (In Development)

- Integrated real-time parking data guides drivers to open spaces in a seamless experience.
- Offers drivers guidance for the complete journey.
- Natural integration into traditional in-car navigation.
- Value-add for motorists...and a win for fighting congestion in our communities.
SAMPLE CUSTOMERS

U.S. Cities
- Boston, MA
- Beverly Hills, CA
- Cincinnati, OH
- Ellicott City, MD
- Fort Lauderdale, FL
- Indianapolis, IN
- Jacksonville, FL
- Los Angeles, CA (Express Park, Hollywood, Venice)
- New Brunswick, NJ
- New York City (The Bronx)
- Redwood City, CA
- Reno, NV
- Roosevelt Island, NY
- San Carlos, CA
- San Mateo, CA
- Vancouver, WA
- Wilmington, DE

Corporate Campuses
- Cisco Campus
- GM Campus

Universities
- Case Western University
- Clemson University
- Mississippi State Univ.
- Montclair University
- Oregon State University
- University of Pennsylvania
- University of Maryland

International
- Barcelona, Spain
- Birmingham, UK
- Braunschweig, Germany
- Manchester, UK
- Montreal, Canada

“We’re seeing improving parking conditions already, and we’ve received calls from residents thanking us for the parking app in those locations.”
- Brian McKelligent, Ft. Lauderdale
Smart parking = tangible results:
• Reduced congestion
• Increased revenue
• Increase in parking turnover
• Data-driven decisions
• Retail growth
• Quality of life

“Parking is the first thing and the last thing a consumer experiences when visiting our downtown. Showing them where to find adequate parking is essential to a thriving downtown.”

- Jessica Evans, Executive Director, Downtown San Mateo Association
WHAT THEY’RE SAYING...

The Washington Post
“City-management issues, from parking to water use, are going high-tech as cities seek to use analytics and information to improve their operations.”
– May 2013

The Sunday Times
“The only conclusion is that the app is brilliant!”
– March 2013

American Way
“What California-based startup Streetline is attempting to do feels borderline miraculous.”
– April 2013

npr
“If you live and drive in the city, you’ve probably suffered at least one of the many perils of parking. But the tech world is approaching the perennial parking problem full force.”
– September 2013

Entrepreneur
“...there’s nothing worse than circling the block hoping to find a parking space. Parker solves that problem by delivering parking options in real-time.”
– May 2013

CNN
“A silver bullet for urban traffic problems...”
– April 2013

Mashable
“Streetline’s system helps drivers locate parking spots, lowering emissions and improving traffic flow.”
– November 2013

USA Today
“Smartphone app puts parking spots at your fingertips”
– March 2013
A UNIQUE OPPORTUNITY.

Streetline is proposing a smart parking deployment at no cost to the City.

- Opportunity to add Smart Parking deployment and lay foundation for future Smart City initiatives in Lafayette.

- Long-term partnership between City of Lafayette, Streetline and Corporate Partner to provide funding for valuable civic programs outside of traditional city budget.

- Data and analytics to further improve utilization of City resources and increase revenue.

- Opportunity to position City of Lafayette as a leader in tapping the power of technology to improve quality of life and services for residents, visitors and merchants.
**PROPOSED SMART PARKING DEPLOYMENT**

- Installation of up to 800 sensors in areas of the City

- No additional cost to the City; financing to be provided by Streetline and corporate partner(s); **10 year term**

- Applications provided to the City include **Parker** (for consumers), **ParkerMap** (for merchants), **ParkSight** (parking analytics), **ParkEdge** (for local garage operators)

- Option to add additional applications and services including Guided Enforcement, advanced analytics, sound and road surface temperature sensing

*Streetline retains rights to data for use in ParkerData API*
REQUESTED PROMOTIONAL SUPPORT FROM THE CITY

- Deployment to be paid for in part via inclusion of corporate partners
- Corporate partners will be selected based on mutual goals and "fit" with City priorities and community
- To minimize City of Lafayette cash investment, we propose that the City provide Streetline with promotional assets to be used for:
  » Communicating benefits of the program to residents and businesses
  » Appropriately promoting potential corporate underwriting sponsor(s)

Proposed assets listed on the following slides
1) CONNECTIONS, ACCESS AND RIGHTS*

- Access to City of Lafayette marks for promotional purposes
- Rights to promote project in success stories, infographics and other relevant materials
- Access and promotion in tourist/historic areas, and at major events, venues, and shopping areas such as:
  - Lafayette Park Theater, Lafayette Town Hall
  - Lafayette Community Park, Lafayette Community Garden, Lafayette Reservoir
  - Lafayette Library and Learning Center
  - Lafayette Jazz Festival, Lafayette Gallery and The Art Room, Winter Nights Program, Lafayette Farmers’ Market, Veterans Memorial Building, La Fiesta Square
- Membership in key merchant groups with corresponding benefits, including but not limited to:
  - Lafayette Chamber of Commerce

*Representative ideas for discussion 19
2) SUPPORT FOR OUT-OF-HOME CAMPAIGN*

- Community/local merchant outreach
- Window posters in merchant, corporate, government offices
- Signage or stickers on kiosks or other on-street infrastructure
- Transit – BART, The County Connection
  - Exterior signage/wraps
  - Interior signage (placards, etc.)
  - Transit station and bus stop signage
- Street pole banners
- Signage at parking lots and garages
- Other community promotions – for example, partnership with high school to promote parking program at athletic, cultural events

*Representative ideas for discussion 20
3) PARTICIPATION IN MEDIA/PUBLICITY*

- Co-branded press release with statement from Mayor’s office
- Media event with Mayor
- Ad/recognition in transit brochures
- Ad/recognition in special event transit guides
- Promotional campaign in area newspapers
- Support with media opportunities with local and national media outlets

*Representative ideas for discussion
4) SUPPORT FOR SOCIAL, WEB AND MOBILE PROMOTION*

- Participation in relevant online and social media activities
- Recognition on City’s social media
- Promotion on relevant City/community web and mobile properties:
  » Ci.lafayette.ca.us
  » Lafayettechamber.org
- City parking microsite
- City transit apps

*Representative ideas for discussion 22
LOOKING TO THE FUTURE.

Streetline believes Lafayette is poised to set an example for how technology can reshape the future of cities.

- Let’s outline how we bring smart parking to Lafayette at no cost to the City.

- Let’s detail how expanded data and analytics can improve utilization of City resources and increase revenues.

- Let’s increase community and merchant engagement and demonstrate tangible results from the smart parking investment.

- Let’s showcase Lafayette as a thought leader and an example for how cities can tap the power of technology and fund valuable civic programs outside of traditional city budget.
As featured in the Wall Street Journal, USA Today, Wired and on CNN, Fox, and NBC, Streetline, Inc. is the leading provider of smart parking solutions to cities, garages, airports, universities and other private parking providers. Streetline aims to make smart cities a reality through the use of sensor-enabled mobile and web applications.

With the introduction of Parker™, the first real-time parking guidance application for smartphones and in-car navigation systems, Streetline enables drivers to find parking quickly and easily. Experts estimate that 30% of urban traffic is caused by motorists looking for parking. Additionally, vehicle emissions and drivers looking for parking are so closely linked that a yearlong study found that drivers in a fifteen block district in Los Angeles drove in excess of 950,000 miles searching for a space and produced 730 tons of carbon dioxide. By connecting the real world with critical information, Streetline is revolutionizing the way we live and work, while making cities more efficient and lessening their environmental impact.

Streetline is a privately held company headquartered in Foster City, Calif. The primary investors are Sutter Hill Ventures, RockPort Capital Partners, Fontinalis Partners (co-founded by Ford Motor Company Chairman Bill Ford), True Ventures, Citi, and Qualcomm Incorporated, acting through its venture investment group, Qualcomm Ventures.

Streetline has recorded more than 250 million parking events and has real-time smart parking deployments in the United States, Canada, and Europe.

Streetline was named one of Fast Company's 10 Most Innovative Companies in Transportation, as well as IBM Global Entrepreneur of the Year. In October 2012, Streetline was named a finalist for the prestigious 2012 World Technology Awards.
<table>
<thead>
<tr>
<th>#</th>
<th>Goal</th>
<th>Strategies</th>
<th>Applicable GP/DSP Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Encourage parking that supports an attractive, sustainable, small-town and protects neighborhoods.</strong>&lt;br&gt;a. Provide adequate, reasonable, convenient, &amp; safe parking&lt;br&gt;b. Develop and reward parking that promotes walkability&lt;br&gt;c. Appropriately site parking lots (front, side, rear)&lt;br&gt;d. Make it easier and safer to bike&lt;br&gt;e. BART&lt;br&gt;   i. Where do they park&lt;br&gt;   ii. Ensure residents can park there&lt;br&gt;   iii. Shuttle? For residents and customers&lt;br&gt;f. Residential parking permits</td>
<td>a. Encourage optimal shared parking and minimize driveways&lt;br&gt;b. Promote alternative paving materials; tandem, compact; hybrid electric&lt;br&gt;c. Adopt bike parking requirements - ratio/type/size based on development</td>
<td>1. <strong>GP LU-7.1.3:</strong> Encourage cooperation among business and property owners in parking lot design to minimize driveways, optimize parking, and facilitate more integrated site planning.&lt;br&gt;2. <strong>GP LU-10.3.1:</strong> Consider revisions to the Zoning Ordinance requiring the siting of buildings in the Downtown Core to be adjacent to the sidewalk with parking at the rear or side.&lt;br&gt;3. <strong>GP LU-11.2.1:</strong> Consider modifying Mt. Diablo Boulevard between Carol Lane to Pleasant Hill Road to control traffic speeds, provide additional public parking and to facilitate bicycle and pedestrian circulation.&lt;br&gt;4. <strong>GP C-8.2.3:</strong> Require adequate bicycle parking in new commercial developments, and at the BART station. Encourage adequate bicycle parking in commercial areas.&lt;br&gt;5. <strong>DSP 11.1.3:</strong> Review off-street public parking proposals for on-site and off-site bicycle parking.</td>
</tr>
<tr>
<td>2</td>
<td><strong>Foster a self-supporting parking system.</strong>&lt;br&gt;a. Appropriately priced in-lieu fees that are consistently applied toward public parking (spaces, agreements, maintenance, etc.)&lt;br&gt;b. Adequate off-site parking with appropriate ratios</td>
<td>a. Parking assessment district&lt;br&gt;b. Public/private partnerships for shared parking&lt;br&gt;Add <strong>DSP Policy 11.2:</strong> Increase the supply of off-street public parking</td>
<td>1. <strong>GP LU-8.2.2:</strong> Encourage public/private partnerships to provide public parking throughout the downtown.&lt;br&gt;2. <strong>GP LU-8.2.3:</strong> Encourage the establishment of parking assessment districts in the Downtown.&lt;br&gt;3. <strong>DSP 11.1.1:</strong> Pursue opportunities to acquire land for public parking focusing on Plaza Way/Golden Gate Way, Shield Block, and on Mt. Diablo Boulevard between Happy Valley Road and Oak Hill Road.&lt;br&gt;4. <strong>DSP 11.1.2:</strong> Continue to explore shared parking arrangements with property owners and developers.&lt;br&gt;5. <strong>DSP 11.3.4:</strong> Acquire land for public parking (Plaza Way)</td>
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<td>3</td>
<td><strong>Improve utilization of existing parking.</strong>&lt;br&gt;a. Connected lots to minimize vehicular circulation&lt;br&gt;b. Document agreements and partnerships&lt;br&gt;c. Compact, efficient, and well utilized parking&lt;br&gt;d. Pricing for better occupancy – meters / off-street (how does this work? What does it mean)</td>
<td>a. Shared parking with incentives, such as reduced ratios&lt;br&gt;b. Calculate parking by block/district – not by parcel</td>
<td>1. <strong>GP LU-8.2.1:</strong> Encourage shared parking, parking lot consolidation, and common driveways and access ways.&lt;br&gt;2. <strong>DSP 11.2.1:</strong> Work with owners of underutilized parking lots to allow the public and/or employees to park in those lots. As a priority, contact the owners of the parking lots on Golden Gate Way.&lt;br&gt;3. <strong>DSP 11.2.2:</strong> Work with owners of adjacent properties to connect their parking lots. As a priority, contact the owners of properties fronting Mt. Diablo Boulevard between Lafayette Circle West and Lafayette Circle East to determine their interest in connecting the lots to improve access and ease circulation.&lt;br&gt;4. <strong>DSP 11.2.3:</strong> Provide feasible incentives to property owners who participate with the City in using underutilized parking lots.&lt;br&gt;5. <strong>DSP 11.2.4:</strong> Work with banks and similar businesses, particularly in the Core, to allow the public to use their lots after business hours to increase the supply of parking in the evenings.&lt;br&gt;6. <strong>DSP 11.2.5:</strong> Encourage businesses and nearby residential uses to enter into</td>
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## POC Goals – September 2013

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<th>#</th>
<th>Goal</th>
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<td>4</td>
<td><strong>Ensure enough parking is provided to maintain strong commercial and retail district.</strong>&lt;br&gt;a. Establish appropriate parking ratios using state-of-the-art criteria&lt;br&gt;b. Employee parking – separately calculated and located? Differentiate not just by use, but by time&lt;br&gt;c. Create a strategy for non-conforming, historically under-parked buildings (major topic weaved throughout goals)</td>
<td></td>
<td>1. GP C-4.2.2: Ensure that new developments provide adequate on-site improvements, such as delivery access, on-site vehicle, bicycle and pedestrian circulation amenities, public transit facilities, and off-street parking, as appropriate.&lt;br&gt;2. DSP 11.4.1: Develop options for allowing employees to park for longer hours.&lt;br&gt;3. DSP 11.4.2: Work with businesses to provide, educate, and promote alternative modes of transportation, such as pre-tax transit ticket purchase programs and ride share.&lt;br&gt;4. DSP 11.4.3: Facilitate agreements between businesses and residents of nearby neighborhoods that would allow employees with permits to park on residential streets. Funds collected pursuant to the agreements would be used to improve the neighborhood streets and provide neighborhood streetscape amenities.&lt;br&gt;5. DSP 11.4.4: Facilitate agreements between businesses and residents of nearby neighborhoods that would allow employees with permits to park on residential streets. Funds collected pursuant to the agreements would be used to improve the neighborhood streets and provide neighborhood streetscape amenities.&lt;br&gt;6. DSP 11.4.4: Acquire land for long-term employee parking.</td>
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<td>5</td>
<td><strong>Create a system which offers flexibility and certainty.</strong>&lt;br&gt;a. Reduce the number of categories; change net floor area requirement&lt;br&gt;b. Differentiate not just by use, but by time&lt;br&gt;c. Incentives&lt;br&gt; i. End of trip facilities (shower, lockers, etc.)&lt;br&gt; ii. Shared parking (public parking)&lt;br&gt; iii. Connected parking&lt;br&gt; iv. Electric chargers, carshare, etc.&lt;br&gt; v. Reductions to automotive demand&lt;br&gt;d. Reductions&lt;br&gt; i. Proximity to BART, public transit, shuttle&lt;br&gt; ii. Proximity to public parking&lt;br&gt; iii. District based parking standards&lt;br&gt;e. Bottom load process with pathways for the discretionary process and expected outcomes&lt;br&gt;f. Track parking generation and supply (business registration or parking tables)</td>
<td>a. Address how to calculate mixed uses.</td>
<td>1. GP C-7.1.2: Establish incentives for new commercial developments to provide hoteling (shared office facilities), cafeterias, day-care facilities, lunchrooms, showers, bicycle parking, home offices and other amenities which encourage the use of transit, bicycling, walking or telecommuting as commute modes to work.&lt;br&gt;2. DSP 11.3.2: Consider providing flexibility for businesses in the area (Plaza Way) in meeting the City’s parking requirements, given the block’s historic and unique character.&lt;br&gt;3. DSP 11.5.1: Review the City’s parking regulations for updating to current standards, including parking requirements for different uses and the parking in-lieu fee.</td>
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Smartphone Parking on the Agenda in Bay Area Cities

Chalking tires parked in time-limited spaces, feeding parking meters, and circling a block looking for an empty parking space could soon go the way of the pay telephone.

Several Bay-Area cities such as San Carlos and San Mateo have for some time been piloting an electronic parking system that begins with sensors embedded in each parking space, and ends with a smartphone app that shows which spaces are occupied and which vacant. Connecting the two is a wi-fi system.

It's very helpful to a motorist looking for a space. Instead of circling the block, increasing traffic congestion and air pollution, the motorist simply glances at the app, locates the vacant spaces on a map, drives to one and parks. It's helpful for local businesses if shoppers can predict how much parking is available and park on main street rather than getting frustrated and driving to a big box store with acres of parking.

And there are some additional bells and whistles. For example, the system can log the time in and alert the parking patrol when the time elapses. No more tire chalk. And the potential exists to replace parking meters entirely with electronic payments by smartphone.

San Carlos, which has been testing the “Parker,” mobile app by Foster-City based Streetline, will decide Monday night whether to expand the system to another 95 spaces, according to the Daily Journal.

San Mateo last week discussed expanding its pilot at no cost using corporate sponsorships and advertising.
SAN CARLOS, Calif. (KGO) – The City of San Mateo is testing a new parking app that’s good for drivers and the meter maids trying to ticket them.

KGO's Cathy Whitman reports that over 100 parking spots in downtown San Carlos area are filled with a sensor that looks like a hockey puck. The electronic system helps residents find open parking, it also notifies law enforcement when drivers have stayed over the limit.

The program has been in place in San Carlos for a year and on Monday the city will vote to expand it for another five years.

San Carlos doesn't currently charge for parking, but spaces do have a two hour time limit.

Public Works director Jay Walter says the program helps the city because it's no longer necessary to chalk tires. Parking patrol can sit back and watch from a computer screen instead.

(Copyright 2014 by KGO. All Rights Reserved.)
Report: Yes, smart parking apps can reduce congestion, pollution and other city woes

Yes, smart parking apps are still in their infancy, but there’s evidence they can indeed reduce traffic congestion, driver frustration, fuel consumption and exhaust emissions.

That’s the takeaway from a newly published report from Beecham Research titled “Smart Parking for Smart Cities.”

The report looks at a number of ongoing smart parking trials in major cities where road mounted sensors gather parking data in busy shopping or tourist areas. The collected data is analyzed to produce a map of free parking spaces — which drivers can access using smartphone apps. It is expected that auto companies may soon include such technology in their in-car telematics systems.

For the report, Beecham interviewed sensor manufacturers, wireless network designers, mobile operators, IT system developers, integrators and analysts. The research firm also captured the views and experiences of city authorities, funding bodies, concession owners and building contractors.

If you’re new to the world of smart parking apps, below are a few from the Smart Cities Apps Gallery. You’ll need to become a Smart Cities Council member (it’s free!) to access the apps gallery.

- Parker. This app uses sensor-based smart parking technology to help drivers find available spots in real time.
- Orlando parkIN. This parking app for downtown Orlando, Florida gives users a view of parking locations sorted by price and location. It also integrates with Google Maps to provide directions based on current location.
- ePark. With this app, people in Eugene, Oregon can enter an address or track a current location to see on-street and off-street parking options.

Does your city have good parking apps? Tell us about them in the Add new comment area of our Apps Gallery page.