Monitoring attendance to preserve and manage Urban Parks
Pioneer and leader in pedestrian and bike counting

By specializing exclusively in bike and pedestrian applications, our team has developed the most innovative and high-quality systems available on the market. Eco-Counter produces a broad range of systems, each designed for different counting needs. Our products have been deployed all over the world, from remote hiking trails to the bike lanes of New York City.
Urban Parks and Gardens Examples

- Rio de Janeiro (BR) - 25 Ctrs
- Royal Parks London (GB) - 49 Ctrs
- Abu Dhabi (AE) - 16 Ctrs
- Gardens by the Bay (SG) - 17 Ctrs
- Paris Botanical (FR) - 16 Ctrs
- Brisbane Botanical (AU) - 38 Ctrs
- Santiago (CL) - 10 Ctrs
- Dallas (US) - 25 Ctrs
Santiago Metropolitan Park, Chile
7 Million inhabitants
800 Ha
6 km long
15 km of Roads
25 km of Paths

Picnic Areas
Swimming Pools
Outdoor Fitness Classes
Museum
Virgin Statue
Outdoor Theater
Mountain Bike Paths
Hiking Paths
Sight Seeing Areas
Funicular
Restaurants
Souvenir Stores
Zoo
Botanic Laboratories
Green Houses
Japanese Garden
Objectives:
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Improve promotion
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Increase safety
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- Improve promotion
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- Adapt maintenance policy
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- Measure impact of programs and projects
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Improve promotion
Increase safety
Adapt maintenance policy
Measure impact of programs and projects
Evaluate bicycle and pedestrian activity
Challenges:
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- Configuration of the park: multiple entrances
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- Limited budget
Challenges:

• Configuration of the park: multiple entrances

• Limited budget

• Different usage of the park:
  • Weeks: open for cars
  • Weekends: reserved for bikes and pedestrians
Main entrances
Santiago Metropolitan Park, Chile

LA PIRÁMIDE ENTRANCE
PIO NONO ENTRANCE
PEDRO DE VALDIVIA ENTRANCE
Pedro de Valdivia access

Main entrance composed of 6 different gates
Pedro de Valdivia access

Temporary survey to identify the most used entrances
Pedro de Valdivia access

Temporary survey to identify the most used entrances
Pedro de Valdivia entrances

2 gates selected to place an automatic Eco-Counter

- 2 gates cover 80% of passages
- A coefficient allows estimating the total count
- Same process for all the 3 entrances

→ Good estimation of visitors with reduced cost!
Solution retained

Santiago Metropolitan Park, Chile

PIO NONO ENTRANCE
2 counters at entrances
+ 1 in hiking trail

PEDRO DE VALDIVIA ENTRANCE
2 counters at entrances
+ 1 on main road

LA PIRÁMIDE ENTRANCE
1 counter at entrance
Main frequentation in weekends: ~50%
RESULTS

2 100 000 visitors in 2014

70% of visitors come by bike

50% of visitors come during week-end

Decisions are taken based on counting results
Santiago

Primer conteo de visitas en Parque Metropolitano: 70% de usuarios son ciclistas

Patricio Coñé A.

El abogado Andrés Jiménez (37), sube una vez por semana el cerro San Cristóbal en su bicicleta. Desde que comenzó a hacerlo, hace más de tres años, ha notado un incremento constante de las personas que eligen este medio de transporte para llegar a las zonas más altas de este hito urbano, tanto para quienes lo hacen como deporte o de forma recreacional. "Es un lugar que te permite andar con distintos tipos de dificultad, tanto para los más expertos como para los que van de paseo, y en un marco de naturaleza y...

> Sistema debutó en enero y permite conocer la afluencia de personas que no llegan en auto o en funicular.

> De los 103 mil visitantes registrados por la moderna tecnología, 72 mil llegaron en bicicleta y 31 mil lo hicieron a pie.
Bicycle traffic
+14% - 1st semester 2015 vs. 2014

Santiago Metropolitan Park, Chile
Pedestrian traffic
+7% - 1<sup>st</sup> semester 2015 vs. 2014

Santiago Metropolitan Park, Chile
Nuevo plan vial del cerro San Cristóbal restringe acceso de automóviles a la cumbre.

Los ciclistas tampoco podrán llegar a la terraza Bellavista, y tendrán vías exclusivas para evitar atropellos de peatones.

Asciendo por las inclinadas subidas del sector de Pichón de Valdivieso, ProNueva y llega hasta la cumbre del cerro San Cristóbal es el ritual de buena parte de los 9 mil ciclistas que llegan en un edén cualquiera al principal paseo de Santiago. Muestra de ello son los signos destacados que muchos profesos al llegar a la terraza Bellavista o en los vías del tradicional mercado de huevos que venden en el mirador y muchos utilizados para celebrar la fiesta de subida de 250 metros, mucho en pendiente pronunciada.

A partir de este fin de semana, los ciclistas deberán encontrar nuevas formas de rememorar sus victorias. El sector quedará dividido en dos: el sector de Bellavista y el sector de Bellavista de la Cumbre. En el sector de Bellavista, se podrá acceder por la carretera de Valdivieso, mientras que en el sector de Bellavista de la Cumbre, se podrá acceder por la carretera de ProNueva.

Así mismo, los ciclistas tendrán vías exclusivas para evitar atropellos de peatones.

Bicycle access restricted to Bellavista Terrace

New bike lanes to protect pedestrians

New circulation plan of San Cristobal hill restricts car access to summit
Park usage on weeks

Santiago Metropolitan Park, Chile
Park usage on weekends
Santiago Metropolitan Park, Chile
After two years, 2 more counters to monitor inside the park!
Grand Parc Miribel Jonage, Lyon
2,200 hectare park
Context:

Plays an essential role in the area’s environmental and sustainable development: 350 hectares of lakes, swamps and forest
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The park offers many recreational activities
MASSIVE TRAFFIC JAMS!!

Where to start?
Methodology:

Get data from the car traffic
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Get data from the car traffic

Installation of 5 car counters on the main axis

► evaluate number of visitors coming in the park
Methodology:

Get data from the car traffic

Installation of 5 car counters on the main axis

⇒ evaluate number of visitors coming in the park

Installation of 6 pedestrian / bicycle counters at the entrances and main trails

⇒ analyze the dispersal of visitors between the outdoor activities area and the protected area

⇒ understand the impact of future decisions
Parking is impossible
Parking outside of designated areas (road-side parking)
Parking in designated car parks

Vehicle rotation in the Morlet-Fontanil area
Sunday, 19th June
Hourly traffic in Morlet-Fontanil area
Sunday 19th June

People leaving highway because of traffic jam and crossing the park to reach the city.
Daily traffic on Le Gue (North-South)

Threshold n°2:
- Dense traffic
- Concentration at North entrance between 2pm and 5pm
- 10 days/year

Threshold n°1:
- Dense traffic
- 45 days/year
Getting into the details...

Cars: too much traffic
  : difficulty parking onsite
  : cars moving around looking for parking / more traffic
  : cars leaving the highway
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Buses: up to 200 people waiting at a bus stop
  : bad level of service due to congestion / more traffic
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Buses: up to 200 people waiting at a bus stop
  : bad level of service due to congestion

Pedestrian: walking along the road

UNSATISFIED VISITORS!
Actions undertaken occasionally (very dense traffic)

Buses do not enter the congested area. They serve two main stops, then passengers have to walk to reach the leisure area.

Opening additional carparks at main entrances.

Providing shuttles from motorway exits.
Longer term actions

Fewer cars entering the park - make all cars park at the main entrance

Traffic flowing freely for buses (new stations)

Follow active transportation trends to improve the connection to the city by bike and by foot
THANK YOU

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