Active Transportation

eco counter®

COUNTING PEOPLE, ANALYSING DATA

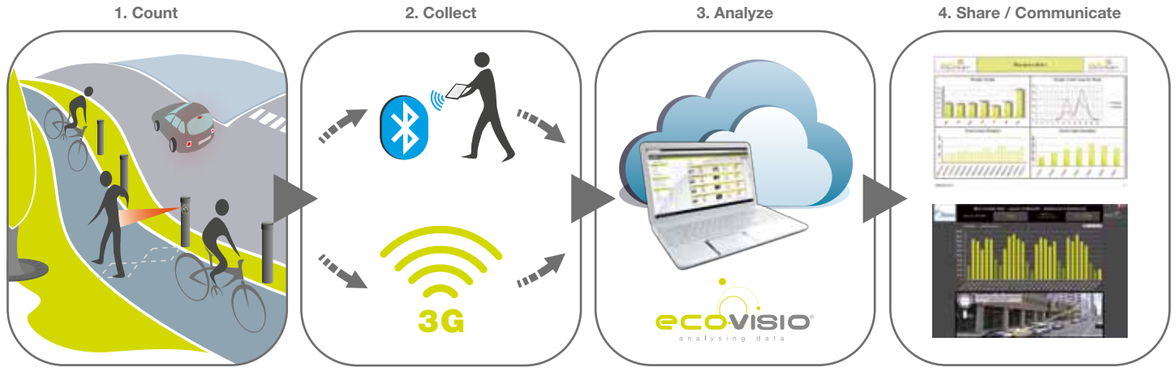
Would you like to measure active transportation in your city?

Would you like to measure active transportation in your city?

Start measuring today with Eco-Counter!

Global Monitoring Solutions and Data Analysis

- Unmatched expertise in monitoring pedestrians and cyclists in urban and natural environments, for over 15 years
- More than 10,000 counters installed in over 45 countries
- Service offices in France and Canada
- A worldwide network of distributors for local support
- A highly innovative Research and Development team
- High-quality technology, internally produced and tested in France
- User-friendly software to compile and share data and produce graphs, charts and reports.



Why count?

Plan

- Establish before and after counts to plan and justify new infrastructure investments, city plans, and pilot projects such as cycling lanes, footbridges, etc.
- Understand usage patterns for cyclists and pedestrians on city infrastructure according to time, weather, and season.
- Evaluate trends over time to help guide future investments in city planning and infrastructure.

Increase Safety

- Handle dangerous crossings for pedestrians and cyclists.
- Measure pedestrians' and cyclists' exposure to accidents.

Communicate

- Provide accurate data for key stakeholders to communicate the value of city and non-motorized transportation infrastructure.
- Display the number of cyclists on major cycling facilities to the public with an on-site Eco-TOTEM.
- Display cyclist frequency statistics on your website to communicate visitation at specific sites.

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ZELT inductive loops

· Reliable
· Invisible
· Waterproof
· Battery Powered

How it works

Eco-Counter's unique and patented **ZELT** Inductive Loop technology has been continually improved by our Research and Development Team for over 5 years. The **ZELT** loop precisely analyzes the electromagnetic signature of each bicycle wheel, with 13 differentiation criteria. Its unique algorithm allows an extreme precision in any configuration (shared road, bicycle boulevard, etc.).

Features & Benefits

- **Selective counting on shared roads**
- **Precise for groups of cyclists**
- **Battery powered (1 to 2 years)**
- **Bidirectional detection**

- **Invisible installation**
- **No maintenance**
- **Installation in any type surface**
- **2 year data storage**

Permanent or Semi-permanent
> 6 months

Shared Roads: ZELT Selective

- Monitors **bicycles on roads in mixed traffic** (bicycle lanes, shared bicycle/bus lanes)
- **Ignores motorized vehicles** (scooters, motorbikes, cars, and buses)
- Counts only bicycles, even in heavy traffic
- **High accuracy** on shared roads (over 95% of bicycles detected)

Shared Lanes

The **ZELT Selective** Loop can be used to accurately count bikes on shared bicycle/bus/taxi lanes. This system has been installed in front of the Louvre in Paris.

Contra-flow

In Paris as in San Francisco, several bidirectional counters have been installed to monitor contra-flow cycling.

Did you know?

With the ZELT CONNEX option, it is possible to connect the ZELT directly to any traffic management system.

Groups of Cyclists: ZELT Greenways

- Monitors **bicycles on dedicated bicycle lanes and greenways**
- Counts **bikes riding side-by-side** or closely following each other
- Extreme sensitivity (accuracy +/- 5%)
- Allows Use Conflict Management

Permanent or Semi-permanent
> 6 months

Groups of Cyclists

The **ZELT Greenways** has been designed to count groups of cyclists on bicycle boulevards. This system is used in Ottawa, where more than 11,000 cyclists per week bicycle on the Laurier Bike Lane.

Heavy Bike Traffic

The **ZELT Greenways** is commonly used in the Netherlands, where bike traffic is often heavy.

EASY ZELT

- For temporary counting (1 to 6 months)
- For specific configurations (e.g. bridges)
- Easy and quick installation (30 min per loop)
- No engineering work
- Safe and non-intrusive sensor
- Sensor is flush with the ground

Temporary
< 6 months

In Vancouver, Easy ZELT withstood the passage of more than 1 million cyclists in one year.

Pneumatic TUBEs

· Accuracy +/- 3%
· Waterproof
· Battery Powered

How it works

Two Pneumatic **TUBEs** sensors are laid over the road or bicycle lane, perpendicular to traffic flow. The system automatically monitors the speed and distance between the two bicycle wheels. With this information, the Pneumatic **TUBEs** sensors are able to distinguish bicycles from motorized vehicles in mixed traffic, extract directional data and accurately count the number of cyclists in a group.

Features & Benefits

- Selective counting on shared roads
- Precise for groups of cyclists
- Battery powered (10 years)
- Bidirectional detection

- Easy and versatile installation
- Instant data collection
- No engineering work
- Mobile

Mobile or Semi-permanent
< 3 months

Shared Roads: TUBEs Selective

- Temporary monitoring of **bicycles on roads in mixed traffic** (bicycle lanes, shared bicycle/bus lanes)
- Ignores motorized vehicles (scooters, motorbikes, cars, and buses)
- Counts only bicycles, **even in heavy traffic**
- A special insert in the tube dismisses signal rebounds that may be generated by a fast car or truck
- High accuracy (+/- 3%, even in heavy traffic)

Bicycle Boulevard Network

Over 30 **TUBEs Selective** sensors have been installed on the bicycle boulevard network of Vancouver, Canada.

Shared Bicycle/Bus Lanes

On Milwaukee Avenue, Chicago, **TUBEs Selective** sensors have been installed to monitor bicycles on a shared bicycle/bus lane.

Mobile or Semi-permanent
< 3 months

Groups of Cyclists: TUBEs Greenways

- Specifically designed to monitor bicycles on dedicated bicycle lanes and greenways
- Mini-tubes to maximize cyclist comfort
- Specific filter to ensure an **accuracy of +/- 3%**, even for **groups of cyclists**
- Counts bikes passing side-by-side or closely following each other

1.6 Million Cyclists

Over 1.6 million cyclists a year use the Hawthorne Bridge linking East Portland to the city center.

Research

McGill University in Montreal, Canada, uses **TUBEs** sensors to monitor the cycling networks of Montreal and Quebec.

Bike Count Displays

· Real-time
· Accurate

How it works

The **Eco-TOTEM** works in conjunction with **ZELT** loops which are installed on the bike lane or bike path adjacent to the **Eco-TOTEM**. The **ZELT** loops are responsible for registering cyclists, while the **Eco-TOTEM** is responsible for displaying the counts in real-time with daily and cumulative year-to-date formats. The **Eco-TOTEM** benefits from the **ZELT**'s unique patented technology which allows extreme accuracy in any configuration (shared roads, bike boulevards, etc.)

Features & Benefits

- **Visible at night (backlight)**
- **Customizable graphic design**
- **Customizable display (barometer, digit lines, and date)**

- **High Accuracy in any situation (ZELT sensor)**
- **Can be installed on shared roads (Selective Counting Mode)**
- **Data displayed on the Web**

Eco-TOTEM: High Impact and Eye-catching

The Eco-TOTEM is an effective and prominent tool that can help make cyclists a visible part of the urban landscape.

- **Customizable**
- **Visible**
- **Accurate**
- **Simple and effective**

Portland, USA

The city of Portland installed an **Eco-TOTEM** on the Hawthorne Bridge, which links the East Side to Downtown.

Placed at one end of this major bike route, the **Eco-TOTEM** is a visible sign of the city's commitment to active transportation development.

Montreal, Canada

The City of Montreal has installed an **Eco-TOTEM** on Laurier Avenue. In 2011, a vehicle lane was removed to create a new bike lane. The **Eco-TOTEM** is a great way to show the success of this new infrastructure.

VEKSØ & eco counter

Eco-Counter is pleased to partner with VEKSØ, one of the co-founders of the Cycling Embassy of Denmark, which produces a list of services and products for bicycle-friendly urban spaces.

Specifications

- **Dimensions:** 230 cm x 46 cm x 16 cm (90.5 x 18.1 x 6.3 inches)
- **Weight:** 100 kg / 220 lbs
- **Waterproofness:** IP55
- **Operating temperature:** -30 °C to +50 °C (-22 °F to 120 °F)
- **Material:** Aluminum frame and shock-resistant polycarbonate Grafitti-proof and Rust-proof powder coating
- 6 or 8-digit green LED display or bargraph for daily/yearly counts
- Automatic adjustment to ambient light levels

Only a few months after the first Eco-TOTEM was launched, it had already been chosen by several major North American cities to highlight their cycling commitment. The Eco-TOTEM can be customized to fit your requirements.

Eco-DISPLAY: Mobile and Elegant

Promote cycling infrastructure and highlight active routes to cyclists with an elegant and clear sign.

- **Custom-designed**
- **Easy to transport and install**
- Extra **low power consumption**
- **Simple configuration**
- **Vandal proof**
- **Options:**
  - Wireless
  - Solar Powered

Mobile or Permanent

Specifications

- **Dimensions:** 75 cm x 51 cm x 5 cm (29.5 x 20 x 2 inches)
- **Weight:** 8 kg / 17.6 lbs
- **Waterproofness:** IP55
- **Operating temperature:** -30 °C to +50 °C (-22 °F to 120 °F)
- **Material:** Aluminum frame and shock-resistant polycarbonate (Lexan with Margard Coating)
- 7-digit white LED displays for daily and yearly counts
- Automatic adjustment to ambient light levels

Pyroelectric Sensors

· Reliable
· Invisible
· Waterproof
· Battery Powered

How it works

The **PYRO** sensor uses a combination of passive infrared pyroelectric technology and a high precision lens to detect a change in the detected temperature when a person passes in the range of the sensor. Thanks to its extremely high sensitivity, the sensor can detect two different people with only a small gap between them.
The sensor is self-calibrating for simple installation.

Features & Benefits

- Valuable trends over time
- Pedestrian and fast bicycle detection
- Bidirectional detection
- Non-intrusive technology
- No permission needed for installation
- No maintenance

- High autonomy: 10 year battery life
- 2 year data storage
- Waterproof
- Range up to 15m / 50'
- Hourly or 15 min. recording intervals

Mobile or Permanent

PYRO-Box

- Self-contained non-distinguishing **pedestrian and bicycle counter**
- Specifically designed for the urban environment
- Can be **installed in a few minutes** on any existing post
- Barely visible in the urban environment
- Resistant to vandalism
- **Works in all weather conditions**
- Can easily be moved between multiple counting locations

Multi-User Paths

The **PYRO-Box**, as a multi-purpose counting system, is perfect for counting pedestrians and cyclists on multi-user paths. The sensor can detect the heat of a cyclist's body, even if riding fast.

Wide Sidewalks

The **PYRO-Box** is able to count pedestrians on wide sidewalks, up to 15 m / 50'.

Dimensions: 23 x 10 x 18 cm (9 x 3.9 x 7 inches)
Weight: 2.6 kg (5.9 lb)
Operating Temperature: -40 °C - +50 °C (-40 °F to 120 °F)
Waterproof: IP 66
Material: Shockproof polyurethane
Color: Grey (others may be available on request)
Range: up to 15 m/50'

Permanent or Semi-permanent

Urban Post

- **All-inclusive**, non-distinguishing pedestrian and bicycle counter
- Specifically designed to blend into the urban environment
- Very **resistant and discreet**
- Ultra robust for protection against any vandalism
- Mounting system requires minimal **engineering work**
- Color can be adapted to match specific urban environments

Robust & Invisible

In a rough suburban area near Paris, France, where vandalism is a real issue for public investors, the **Urban Post** has been chosen for its ability to resist vandalism.

Reliable Trends

The **Urban Post** is perfect for counting pedestrians and bicycles on sidewalks or shared-use paths. It produces reliable trends, with a range of 1m/3'3" to 15 m/50'.

Dimensions: h: 100 cm (3'3"), Ø 14 cm / 5.5 in
Weight: < 20 kg (<44 lb)
Operating Temperature: -40 °C - +50 °C (-40 °F to 120 °F)
Waterproof: IP 66
Material: Galvanized steel and PVC
Color: Grey (others may be available on request)
Range: up to 15/50'

Eco-MULTI

Count & Classify Pedestrians & Cyclists

Communication Modules

Features & Benefits

- A single logger that differentiates between various users
- Detects direction of movement
- Battery-powered (1 year min.)

Collecting data is important, but sharing this data with the public is a great way to share the success of your cycling policy.
Users can browse dedicated Webpages, and discover the trends and key figures of your counting points.

Permanent or Temporary

Differentiating the users

- **PYRO Post** combined with a **ZELT Inductive Loop**
- **Differentiates pedestrians and cyclists in shared areas**
- Counts pedestrians on a sidewalk while counting bicycles on the nearby bike lane
- Compiles movements detected by each sensor
- Analyzes results using a special algorithm
- Separately logs each passing user

Multi-User Distinction

In Lahti, Finland, an **Eco-MULTI** with **Urban Post + ZELT Selective** enables simultaneous counting - with direction - of pedestrians on the sidewalk and bicycles on the nearby bike lane.

Directional Data

In Arlington, Virginia, USA, 15 **Eco-MULTIs** with **PYRO** and **ZELT** have been installed on greenways and sidewalks of major active transportation infrastructures. They simultaneously count pedestrians and bicycles in both directions. It is interesting to differentiate bicycles from pedestrians, as their usage patterns are not similar (commuting for bikes, leisure for pedestrians).

ultra strong | invisible | 2-year | in / out | 2-year memory | waterproof IP 68 | 15 min | maintenance free | eco-visio

Public Web Page

The **Public Web Page** is an easy way to share your data with the public and other stakeholders. The counting data can be published on a dedicated web page for easy access by your website users.

Public Web Page +

Public Web Page + allows you to compare and display the data of several counting points on the same webpage.

Widget Counter

A small **Widget Counter** can be integrated into your website or PC to communicate the number of pedestrians or cyclists using your network. The widget is updated once a day.

ecoVISIO®

analysing data

· Online Software
· User-Friendly
· Automatic Reports

Eco-Visio is specifically designed by Eco-Counter for compiling and analyzing pedestrian and cyclist data.

A Personal or Global Platform

- Online software solution (Cloud Computing), available over the web
- **Manage**: all your counting sites available at a glance
- **Centralize**: all the counting data is properly archived and classified
- **Analyze**: data is immediately available for any kind of report analysis
- **Share**: rights management allows partners to exchange data
- **Communicate**: edit regular reports to build up your internal and external communication over the counting data

Analyze the counting data and create instant or customized reports

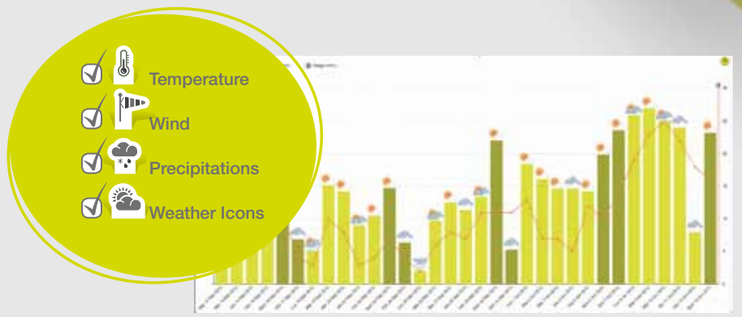
Sort your counters by name, set up date, last data, etc.

Optimize the organisation of your counting sites

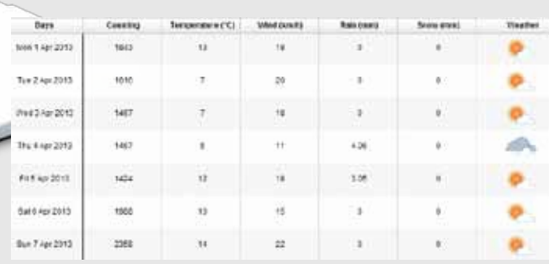
Display comprehensive information about counting sites: description, pictures, and maps

Eco-Visio Weather

As a general rule, most assume bad weather will have a negative impact on a site's traffic and sunny days will encourage the use of active transportation. The weather module makes it possible to reliably confirm or reject these scenarios and to analyze further.



- **Integration and automatic update of local weather data**
- **Instantly generated charts and graphs**



- **Clear visualization of the impact of weather on site traffic**

Customized Reports

Create your own customized working space and edit professional reports in just a few clicks.

Custom-tailored templates, specifically designed for your needs, are available on request.

National Database

Eco-Visio has been designed with the ability to create and handle a national database by collecting, validating and analyzing data from any counter.

Eco-Visio compiles the data from more than 3,000 counters distributed among 145 local authorities for UK's National Database.

Weather module based on reliable local data

- **Weather Underground provider: 8,000 automatic stations all around the world**
- **Forecast provider: GFS - numerical weather prediction system (reliable forecast)**
- **Weather data provider of your choice (FTP transfer)**
- **Your personal weather data manually imported in Excel table**

Case Studies

Monitoring

Several great cities have built a complete network of counters, which allow them to monitor hour by hour the global trends of active transportation in their cities. By combining pedestrian and bicycle counters, temporary and permanent solutions, they are able to build an accurate observatory, which helps them manage and plan pedestrian and cyclist infrastructures.

San Francisco

USA, 800,000 inhabitants

San Francisco analyzes the long-term trends for Active Transportation, and evaluates the impact of new infrastructure through before and after studies. 29 **ZELT Selective** counters are installed on bicycle paths and 6 **PYRO-Boxes** on sidewalks.

Vancouver

Canada, 600,000 inhabitants

Over the last 4 years, the City of Vancouver has set up an extensive monitoring program to measure the impact of new cycling infrastructure on active transportation. (35 **TUBEs**, 25 **ZELTs** and 10 **PYRO-Boxes**).

Tourism

Counters are precious tools for tourism. They make it possible to classify sites according to their activity and popularity, to observe the seasonal or weather-related effects and to measure the impact of an event.

Eurovélo 6

Atlantic-Black Sea Bike Trail, 6,000 km, 9 countries

25 counters with **GSM** data transmission allow data from different countries to be compared and to produce a yearly report for all the concerned parties (hotels, tourist offices, local administrations, etc.).

Two regions are now sharing their data and building economic indicators based on the gathered data.

Safety: Eco-SIGNAL

The ZELT Loop can be combined with a flashing warning sign, located at dangerous spots for cyclists. Drivers are therefore aware of the presence of cyclists before arriving at this dangerous spot, and can thus adapt their driving.

Increase Safety at Dangerous Crossings

Tamaki Drive Crossing in Auckland (New-Zealand) used to be the scene of several serious cyclists injuries. No incident has been recorded since the installation of the **Eco-SIGNAL** two years ago.

Increase Safety in Dangerous Tunnels and Bridges

Eco-SIGNAL improves the safety by signaling the arrival of a cyclist to drivers. This is especially true in long tunnels or bridges where the **Eco-SIGNAL** showed a significant reduction in driver speed.

Communication Campaigns

Bicycle and pedestrian counting systems can provide the basis for public outreach on non-motorized transportation issues and can help justify new infrastructure investments.

Vancouver, Canada

In Vancouver, on Burrard Bridge, removing a lane for motorists and replacing it with a bike lane was a real challenge. By installing our ZELT loops, the City was able to collect reliable cyclist counts and use this to create a campaign proving the effectiveness of the lane conversion.

Expertise & References

· Unmatched Experience
· Innovative Team

Our Sales Team are experts in Active Transportation issues and will be able to give you the best advice on formulating a monitoring strategy.

	MULTI	ZELT		TUBE		PYRO	
		Selective	Green-ways	Selective	Green-ways	PYRO-Box	Urban Post
Mobile (< 1 month)				●	●	●	
Semi-Permanent (< 6 months)	● *		● *	●	●	●	●
Permanent (> 6 months)	●	●	●			●	●
User Classification	●						
All Users without Classification						●	●

	MULTI	ZELT		TUBE		PYRO	
		Selective	Green-ways	Selective	Green-ways	PYRO-Box	Urban Post
Bicycle Lane		●		●			
Bicycle Track			●		●	●	●
Greenways	●		●		●	●	●
Shared Roads		●		●			
Multi-User Path	●		●		●	●	●
Shared Bicycle/Bus Lane		●		●			
Sidewalk						●	●
Bridge	●	●	●	●	●	●	●

(* With Easy-ZELT)

A few of the organizations monitoring Active Transportation with Eco-Counter:

Our Expertise at your Service !

At Eco-Counter, we call upon our solid experience and knowhow to assist you with every step of the way.

PRELIMINARY STUDY

- Help identify the needs and objectives of your counting project
- Select the most appropriate counting technology and sites
- Help validate counts to ensure accurate data collection

INSTALLATION

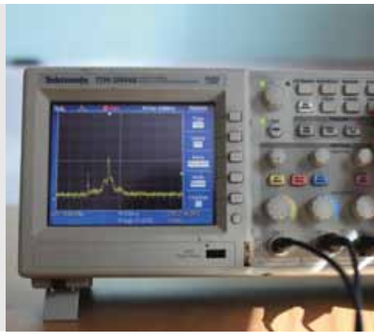
- Assistance with installation
- Technology training for your employees through webinars and on-site visits

CUSTOMER SERVICE

- A dedicated support desk to help you with any of your counting questions
- Ability to answer questions related to installation, data collection, software use, troubleshooting, etc.

R&D Service

- A highly innovative team ensures that we produce quality, reliable, and advanced counting technology.
- A client-focused team brings you and Eco-Counter technology together.
- Solution-oriented approach and ability to adapt to site-specific needs.



CONNECT TO

www.eco-counter.com

Since 1998, the dedicated Eco-Counter team has been providing solutions for monitoring pedestrians and cyclists in natural and urban environments. Today, we are able to offer solutions for monitoring this traffic in any type of site configuration. This expertise has defined us as worldwide market leaders.

Bike Lanes
Bicycle Boulevards
Urban Walkways
Greenways
National and regional parks
Forest trails
Natural Areas
Monuments

Andorra
Australia
Austria
Belgium
Canada
Chile
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Iceland
India
Ireland
Israel
Italy
Japan
Korea
Lithuania
Luxembourg
New Zealand
Norway
Poland
Portugal
Serbia
Singapore
Slovakia
Spain
Sweden
Switzerland
Taiwan
The Netherlands
United Kingdom
United States

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