



**Active  
Transportation**



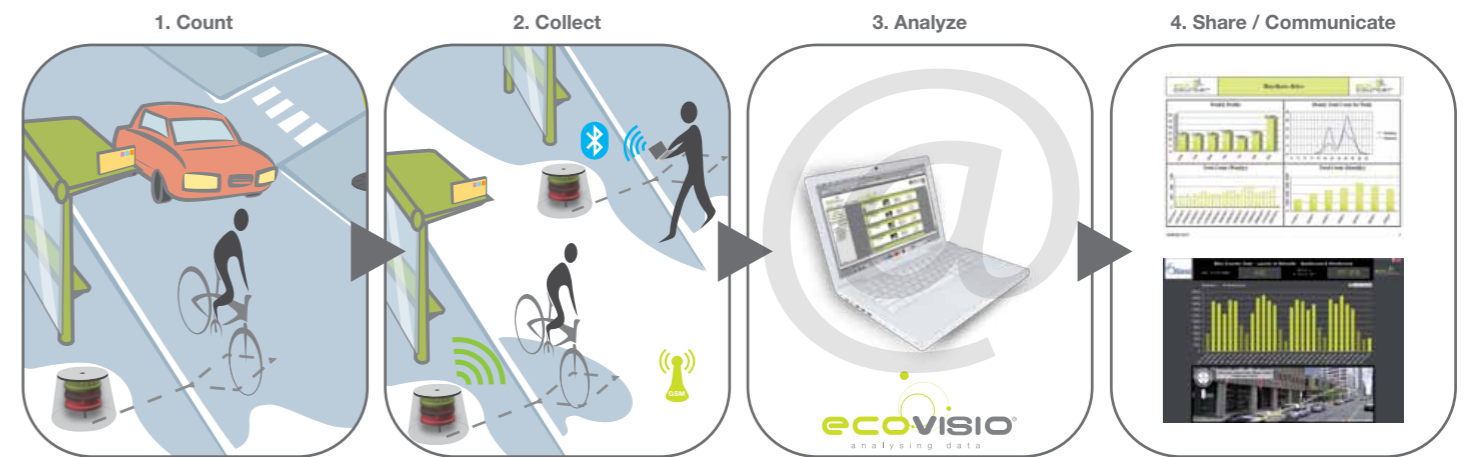
*Would you like to measure active  
transportation in your city?*

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 12 years
- ⊖ More than 5,000 counters installed in over 35 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, to produce graphs, charts, reports...



## Why count?



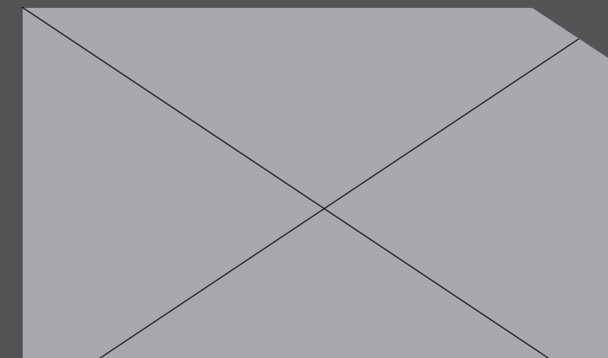
### Plan

- ⊖ 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 on an LED Eco-Totem, directly on the street, the number of cyclists on the main cycling infrastructures.
- ⊖ Display cyclist frequency statistics on your website to communicate visitation at specific sites.

## Index

- ⊖ **Bicycle Monitoring**..... p. 4 - 7  
ZELT Inductive Loops  
Pneumatic TUBES
- ⊖ **Bicycle & Pedestrian Monitoring**..... p. 8 - 9  
Pyroelectric Sensors
- ⊖ **Real-Time Communication** .....p. 10 - 11  
Eco-Totem
- ⊖ **Multi-Users Monitoring** .....p. 12 - 13  
Eco-Multi
- ⊖ **Use Cases** .....p. 14 - 15  
Monitoring, Tourism & Safety
- ⊖ **Eco-Visio Software** .....p. 16 - 17
- ⊖ **Expertise & References**.....p. 18 - 19



# ZELT inductive loops

• Reliable  
• Invisible  
• Waterproof  
• Battery Powered

04

05

## How It Works

Eco-Counter's **ZELT** Inductive Loop is a unique and patented technology. It 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...).

## 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 of soil
- 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, 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. Such a system is installed in front of the Louvre, in Paris.



### Contra-flow

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



Permanent or semi-permanent  
> 6 months



## 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



### 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 (bridges...)
- Easy and quick installation (30 min per loop)
- No engineering work
- Safe and non-intrusive sensor
- Sensor does not exceed ground level

## Did you know?

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



Temporary  
< 6 months

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



# Pneumatic TUBES

• Accuracy +/- 5%  
• Waterproof  
• Battery Powered

## How It Works

Two Pneumatic **TUBES** sensors are laid over the road or the bicycle lane, perpendicular to traffic flow. The system automatically monitors the speed and distance between the two bicycle wheels. Thanks to this information, the Pneumatic **TUBES** sensors are able to extract directional data, discriminating bicycles from motorized vehicles in mixed traffic, accurately counting 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, 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.

## Groups of Cyclists: TUBES Greenways

- Specifically designed to monitor bicycles on dedicated bicycle lanes and greenways
- Combination of mini-tubes to maximize cyclists' 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 which links East Portland to the city center.



### Research

The McGill University of Montreal, Canada, uses **TUBES** sensors to monitor the cycling network of Montreal and Quebec.

Mobile or semi-permanent  
< 3 months





# 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 discriminative 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-Users Paths

The **PYRO-Box**, as a multi-purpose counting system, is perfect for counting pedestrians and cyclists on multiuser 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 15m / 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'



### Urban Post

- All-inclusive, non-discriminative pedestrian and bicycle counter
- Specifically designed to blend into the urban environment
- Very resistant and discreet
- Its robustness protects it from any vandalism
- Mounting system requires minimum 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 15m/50'.

## Permanent or semi-permanent



**Dimensions:** h: 100 cm (3.3'), Ø 14 cm/5.5in  
**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 m/50'



# Eco-Totem

Real-time  
Backlit

## 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, whereas 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, date...)



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



## Eco-Totem

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



### ▶ Seattle, USA

Seattle's **Eco-Totem** has been installed in September 2012 on the Fremont Bridge, the most frequently bicycled bridge in Washington.

The **ZELT** sensor will count bicycles passing on the bridge, regardless of the direction, and the **Eco-Totem**'s display number will increase in real-time, promoting and supporting the use of bicycles in the city.



### ▶ Portland, USA

The city of Portland has decided to install 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.



*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 the bicycle-friendly urban space.*

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



## Specifications

- Size: 230 x 46 x 16 cm (90.5 x 18.1 x 6.3 inches)
- Displays real-time counts through a green LED display of 80mm height (5 digits)
- Displays the cumulative year-to-date counts through a barometer made of LED lights
- Displays information on both sides (optional)
- Graffiti-proof & rust-proof powder coated aluminium frame (standard colors available)
- Shock resistant polycarbonate wall - Backlit
- Graphic design can be customized to suit your needs
- Personalized information (maps, pictures, texts, etc.) can be displayed on the backside (optional)
- Date-Time-Temperature display available (optional)
- On site installation using a specific anchoring for concrete foundations
- Delivery in 10 to 12 weeks after validation of the design



# Eco-MULTI

Count & Classify Pedestrians & Cyclists

## How It Works

**Eco-MULTI** is an innovative and versatile counter which is able to differentiate cyclists, pedestrians and motorized vehicles. The complete system aggregates different technologies of sensors, each sensor being dedicated to a single user type. The different signals are analyzed by an intelligent system, the **SMART CONNECT**, which is able to prioritize choices in order to classify the different user types.

## Features & Benefits

- Reliable trends over time
- Pedestrians and fast bicycles discrimination
- Bidirectional detection
- Non-intrusive technology
- No maintenance



- Range up to 6 m/20'
- Battery powered (2 years)
- 2 year data storage
- Waterproof
- Hourly or 15 min recording intervals

## Eco-Combo : The Intelligent Counting Logger

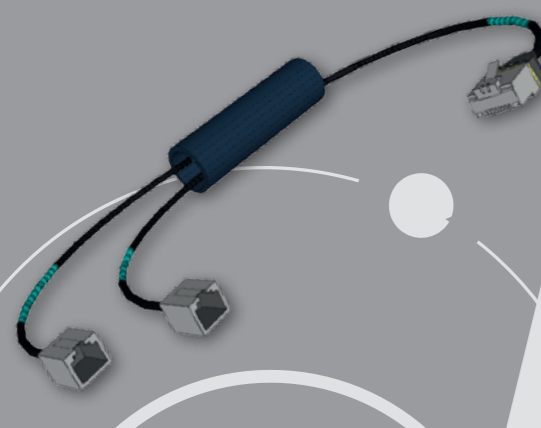
Eco-Combo is the achievement of several years of Research & Development and is compatible with the whole Eco-Counter range. This intelligent logger **collects, stores and transmits the data** - via a Bluetooth or GSM connection - directly to the online data management platform Eco-Visio.



The logger can be **simultaneously connected to several different sensors**, and is able to manage and individually store the data coming from each channel (in/out), of each sensor.

## SMART CONNECT

The **SMART CONNECT** is an intelligent interface between the sensor and the Eco-Combo when several sensors are aggregated. This interface is able to sort the data coming from the different sensors. The **SMART CONNECT** combines them, checks their integrity and consistency, and is able to give an interpretation of the result, in order to classify the different user types.



- Ultra strong
- Invisible
- 2 years
- in / out
- memory 2 ans
- waterproof IP 66
- 15 min
- no maintenance
- eco-visio

## Urban Post + ZELT

- Urban Post ZELT Inductive Loop
- Differentiates pedestrians and cyclists in shared areas
- Counts pedestrians on a sidewalk while counting bicycles on the nearby bike lane
- Permanent or temporary if used with an Easy ZELT



### Multi-Users Discrimination

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

### Directional Data

In Arlington, Virginia, USA, 15 **Eco-MULTI 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).

Permanent or temporary



# 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 **ZELT** and 10 **PYRO-Boxes**).



## Tourism

Counters are precious tools for tourism. They allow the classification of sites according to their activity and popularity, to observe the seasonal or weather effects and to measure the impact of an event.



### Eurovélo 6

Bike Trail Atlantic-Black Sea, 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** increases the safety by signaling to drivers the arrival of a cyclist. This is especially true in long tunnels or bridges where the **Eco-Signal** showed a significant reduction of the drivers' 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 by 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 to prove the effectiveness of the lane conversion.





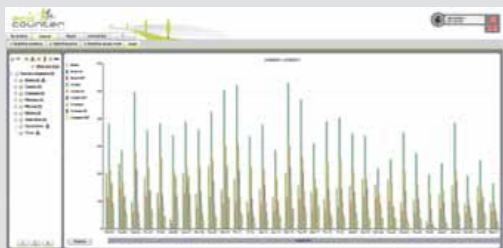


• Online Software  
• User-friendly  
• Automatic Reports

Eco-Visio is Eco-Counter's software specifically designed for compiling and analyzing pedestrians and cyclists data.

## A Personal or Global Platform

- Online software solution (Cloud Computing), available over the web
- Collecting, analyzing and sharing data between several users on local, regional and national scales
- Organizing and managing counting sites
- Editing professional reports in a few seconds



Optimize the organisation of your counting sites

## Managing Data

- Centralization:** 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
- Communication:** edit regular reports to build up your internal and external communication over the counting data

## 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.

## Top Ten

Compare several counting sites over time or during a specific event.

## Customized Reports

Create your own customized working space and edit professional reports (5 templates available) 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 2,000 counters distributed between 122 local authorities for UK's National Database.



## Widget Counter

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



Analyze the counting data

Edit instant or customized reports

Manage access rights and import/export data

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

# 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 to formulate 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)	○*	○	○*			○	○
Users 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-Users Path	○		○		○	○	○
Shared Bicycle/Bus Lane		○		○			
Sidewalk						○	○
Bridge	○	○	○	○	○	○	○

(\* With Easy-ZELT)

## Our Expertise at your Service !

Eco-Counter mobilizes its solid experience and knowhow to assist you with every step of your project.

### 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 or 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 insures that we produce quality, reliable, and advanced counting technology
- A client focused team builds a strong relationship between you and Eco-Counter's technology
- Solution-oriented approach and ability to adapt to site-specific needs



## They already monitor Active Transportation with Eco-Counter:



CONNECT TO

[www.eco-counter.com](http://www.eco-counter.com)

Since 1998, the dedicated Eco-Counter team has been providing solutions for monitoring active transportation : we have always specialized in counting pedestrians, cyclists and horse riders. Greenways, downtown management, active transportation, tourist monitoring and natural areas : today we are able to offer solutions for monitoring this traffic in any type of site configuration. This is why we are worldwide market leaders.

Greenways  
National and regional parks  
Monuments  
Urban walkways  
Natural reserves  
Forestry paths  
Pedestrian areas in city  
Cycling paths

Andorra  
Australia  
Austria  
Belgium  
Canada  
Chile  
Croatia  
Czech Republic  
Denmark  
Estonia  
Finland  
France  
Germany  
Iceland  
India  
Ireland  
Israel  
Italy  
Japan  
Lithuania  
Luxembourg  
New Zealand  
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