

**BEW<sup>⚡</sup>EGEN**

[www.bewegen.com](http://www.bewegen.com)



## VISION

Bewegen wants to **INJECT SUSTAINABILITY INTO THE URBAN TRANSPORTATION MIX**, by offering the ultimate shared-transportation solution.

With its next-generation electric-assisted bicycles, Bewegen is the **MISSING LINK IN URBAN MOBILITY**: a clean-energy, multiuser system of vehicles that provides the most efficient personal transportation experience.

# Bewegen Team

Bewegen and its partners are industry leaders in innovative bicycle design and bike-sharing systems. We have joined forces to design the ultimate urban transportation solution that **ALLOWS ITS USERS TO MOVE AROUND FREELY IN THE MOST SUSTAINABLE WAY** possible.

We created cutting-edge electric-assist vehicles that provide power when needed and the **WORLD'S MOST ADVANCED IT SOLUTION**, making the user experience seamless.

**WITH OUR PARTNERS, WE CAN COUNT ON OVER 200 DEDICATED AND EXPERIENCED PEOPLE TO FULFILL ANY DEMAND.**



PROCYCLE

eVox



Miele

MICHEL **DALLAIRE** DESIGN INDUSTRIEL INC.

bike  
emotion®



universidade  
de aveiro



Micro I/O  
serviços de electrónica, lda.

PONTO • C  
powered by trust

ubiwhere  
SUITING THE FUTURE



# Bewegen Team



**Alain Ayotte**  
*CEO*

**ALAIN AYOTTE IS A VISIONARY INDUSTRY LEADER IN BIKE-SHARING SYSTEMS AND A DEVOTED SUPPORTER OF ACTIVE TRANSPORTATION**

who believes the inclusion of such systems is a necessary and important part of integrated plans for the urban environment.

He is the innovator of the successful Montreal bike-sharing system, of which he led the development and sales of over 35 000 bikes.



**Michel Dallaire**  
*Industrial Designer*

Michel Dallaire's passion for design runs from everyday objects to industrial and institutional products, urban furniture and transportation.

Most recently, Dallaire worked as Senior Advisor on the design of all cabin products for several fleets at Air Canada.

**HE IS ESPECIALLY PROUD OF DESIGNING THE AWARD-WINNING MONTREAL BIKE-SHARING SYSTEM WHICH IS NOW USED ALL AROUND THE WORLD.**



BikeEmotion® is a Portuguese Company responsible for the development of Bewegen's GPS based IT Solution. BikeEmotion is a Portuguese consortium that formed in 2011 around one central idea: to develop a way that bike-sharing users could enjoy the flexibility of leaving their bikes anywhere they like.

Their solution? After many years of joint R&D work, the consortium created a bike-sharing management system that included a GPS location-based locking device attached to each bicycle.

Since 2014, BikeEmotion has been the exclusive technological partner of Bewegen Technologies. The companies have joined forces to create the world's most cutting-edge vehicle-sharing GPS tracking IT solution to be used in every Bewegen system implementation.



**Benefit From  
BIKEEMOTION'S AWARD WINNING IT SOLUTION**



# Bewegen Team



Founded in 1977, the Procycle Group believes that cycling is a way of life.

**THE FAMILY-OWNED BUSINESS HAS OVER 35 YEARS OF EXPERIENCE IN MANUFACTURING, DESIGNING AND DEVELOPING SOME OF THE WORLD'S MOST ADVANCED BICYCLES.**

As Canada's top manufacturer of high-performance bikes, it has made significant investments in industry-leading technologies and holds numerous patents in Canada and the United States.

Procycle currently markets and sells Rocky Mountain, Miele and eVox bicycles in over 30 countries globally. At its peak, Procycle manufactured over 500 000 bikes a year. Procycle has 90 full-time employees.





Since its foundation in 1981, Rocky Mountain Bicycles has been designing, developing and perfecting internationally acclaimed mountain bikes in and around the North Shore of Vancouver, British Columbia. This diverse playground has offered them the ideal proving grounds for all types of riding.

Whether the rider is looking for the ultimate race machine, an all-mountain bike, or a trusty all-rounder for weekend thrills, **THEY BUILD EXCEPTIONAL BICYCLES TO FIT ANY RIDING STYLE.**

The Miele logo, consisting of the word "Miele" in a bold, blue, italicized sans-serif font.

**Miele**

Inspired by pure Italian cycling tradition, **MIELE'S PRIMARY VALUES ARE FAMILY AND PASSION.**

From the first wobbly pedal strokes to fearless teenage tricks and relaxing rides, Miele is the perfect way to enjoy biking.

Today, the Miele tradition carries on. The Miele bike collection is designed by committed experts, and is sold exclusively by independent bike dealers.

The eVox logo, featuring the word "eVox" in a bold, grey, sans-serif font, with the "e" in a stylized orange color.

**eVox**

Created by Miele, the eVox is an electric bike that combines autonomy, power, comfort and safety. Its modern look and seamlessly integrated battery allow you to take long bike rides with less fatigue.

With eight speeds, a one-hour charging time, a 15-degree climbing ability and its DynaMe Propulsion system, **EVOX IS THE MOST EFFECTIVE MEANS OF PERSONAL URBAN TRANSPORT ON THE MARKET.**

# System

## THE BIKE

### THE ULTIMATE URBAN VEHICLE

- ⚡ **Aluminium frame designed specifically for urban vehicle-sharing**
- ⚡ **Standard 8 speed with optional automatic transmission**
- ⚡ **High-capacity brakes**
  - ⚡ Highest capacity on the market
  - ⚡ Increased safety and durability
- ⚡ **Low center of gravity for all bike components**
  - ⚡ Cargo space (basket attached to frame for greater manoeuvrability and stability)
  - ⚡ Small front wheel allowing lower center of gravity on cargo space
- ⚡ **Large front and rear advertizing space which increases revenue**
- ⚡ **Relaxed ergonomics**
  - ⚡ Semi flat foot (safer since you can put your feet on the ground when seated)
  - ⚡ Does not require a lot of leg power to restart since it is an electric-assist bike
- ⚡ **Check-out directly on bike**
- ⚡ **Automated locking system**
- ⚡ **Active front and back lighting**
- ⚡ **Live GPS for route tracking (marketing, planning etc.)**
- ⚡ **Secondary lock which is used with main locking mechanism**
- ⚡ **Bike can be locked without power**
- ⚡ **Customizable**
  - ⚡ Paint
  - ⚡ Logo
  - ⚡ Electronic horn
  - ⚡ Etc.
- ⚡ **Modular pieces**
  - ⚡ Basket
  - ⚡ Regular pedal bike available



# MOTOR & BATTERY

## MOTOR FROM EVOX ELECTRIC BIKE

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### ⚡ **Lithium-Ion battery**

- ⚡ 100 km of autonomy or full day of bike-sharing use
- ⚡ Size changed to geographical specifications of location

### ⚡ **Motor (DynaMe Propulsion)**

- ⚡ Pedal-assist (electric-assistance)
- ⚡ 250 watts, nominal spec (peak power 700-800 watts)
- ⚡ 48 volts
- ⚡ 900 RPM
- ⚡ Combination of cadence (RPM) & torque monitoring for more efficient assistance
- ⚡ Max speed cut-off to cycle path specifications

**DYNA<sup>Me</sup>**™  
PROPULSION



# System

## STATION

SMART RAIL TECHNOLOGY MAKES THE DOCKS AND STATIONS' INSTALLATION FASTER, CHEAPER AND EFFICIENT

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### ⚡ Renewable energy

- ⚡ Solar and windmill

### ⚡ Fully modular

- ⚡ Individual components
- ⚡ No heavy machinery needed to anchor
- ⚡ Made out of steel/aluminium/plastic
- ⚡ Manufactured locally
- ⚡ Fully automatic e-bike recharge system

### ⚡ Multiple configurations

- ⚡ Face to face, side by side, polygonal, etc.
- ⚡ Cable link if extreme obstacle is in the way



# IT Solution

Benefit From  
BIKEEMOTION'S AWARD WINNING IT SOLUTION

## BACK OFFICE

FULLY DEVELOPED AND FIELD-TESTED OVER 4 YEARS

### ⚡ User management

- ⚡ Back office access, membership management, user profile and history

### ⚡ Asset and sub-asset management

- ⚡ Live characteristics and details on stations, bikes, system and components

### ⚡ System settings

- ⚡ Definition of all system details such as area of operation, language, registration types, etc.

### ⚡ System usage information

- ⚡ Dashboard and live map indicating real-time usage information and real time alerts about what's going on at that moment

### ⚡ System reports

- ⚡ Full reporting about any system historical information, filterable by desired information

### ⚡ Billing

- ⚡ Payment platform management

### ⚡ System events

- ⚡ Searchable real-time events within the system that are not included in the dashboard

### ⚡ Content management system

- ⚡ Front office content modification platform

### ⚡ Street operations management

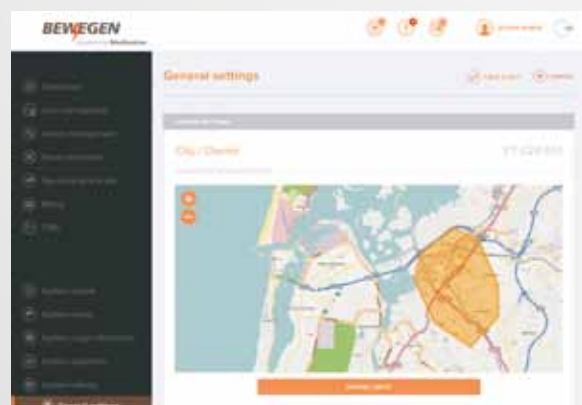
- ⚡ Ticket emission for maintenance, redistribution and other on street operations

### ⚡ Sponsorship and AD management

- ⚡ Stations sponsors, station and bike advertising management, etc.

### ⚡ System diagnostic

- ⚡ Problem identification on all system components such as bike, stations and kioks



# FRONT OFFICE

## FULLY CUSTOMIZABLE USER WEBSITE

### ⚡ User portal

### ⚡ Login and registration

### ⚡ Map with bikes & stations

### ⚡ User account

### ⚡ User profile

- ⚡ History
- ⚡ Personal KPIs

### ⚡ Institutional (Bewegen, city, sponsors and advertisers) information

### ⚡ System KPIs

### ⚡ User profile

- ⚡ Personal information
- ⚡ Trips
- ⚡ Card management
- ⚡ Favorites

### ⚡ Billing information

### ⚡ Help section

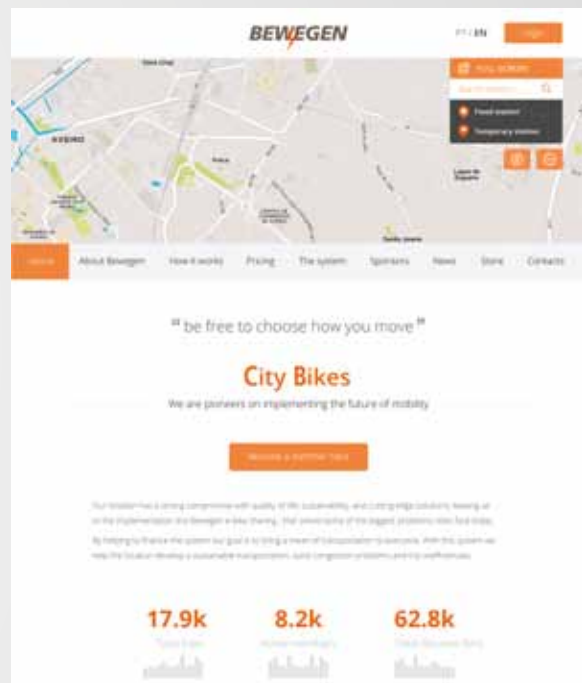
### ⚡ Points of interest

### ⚡ Newsletter

### ⚡ Social networks integration

### ⚡ Personal messages

- ⚡ From operators to users and users to operators



## MOBILE APP

CONVENIENCE AT YOUR FINGERTIPS

### ⚡ Registration and login

### ⚡ Map with stations

- ⚡ Bikes & free spaces
- ⚡ Photo
- ⚡ Address
- ⚡ Description
- ⚡ Sponsorship

### ⚡ Account

### ⚡ Bike unlocking

### ⚡ Institutional information

### ⚡ Map with:

- ⚡ Points of interest:
  - ⚡ Events
- ⚡ Physical interest points:
  - ⚡ Transport
  - ⚡ Services
  - ⚡ Monuments
  - ⚡ Etc.
- ⚡ Advertisement, sponsors, discounts

### ⚡ Profile

### ⚡ History/trips

### ⚡ Billing information

### ⚡ Messages

### ⚡ Human data

### ⚡ Favorites

### ⚡ Help section

### ⚡ Social networks integration

### ⚡ Rental information

### ⚡ Weather information



# TECHNICIAN MOBILE APP

## SERVICE YOU DESERVE

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⚡ **App ready for tablet and PCs**

⚡ **Developed with operations needs in mind**

⚡ **Allows back office access and ticketing functionality**

⚡ **Individual login per staff member**

⚡ **Content**

- ⚡ Asset status
- ⚡ Issue/operation management
- ⚡ Account
- ⚡ Alerts

⚡ **Advantages**

- ⚡ Individual staff member tracking and history
- ⚡ Maintenance and status of each asset
- ⚡ Alerts on assets in need of maintenance
- ⚡ Onsite diagnosis of problems





# Contacts

**DO NOT HESITATE TO CONTACT  
US** for questions about our  
system or to learn how Bewegen  
can improve your's community's  
transportation mix.

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