



2022 TOP 100 GOOD PRACTICE STORY

Title of the Story: Mobility Solutions in Mountain Communities

Destination Name: Vail, Eagle County, Colorado

Country: USA

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Submission category: *(Please check one of the boxes that indicates the focus of your story)*

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- Governance, Reset & Recovery
- Nature & Scenery
- Environment & Climate
- Culture & Tradition
- Thriving Communities
- Business & Marketing

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DESCRIBE YOUR GOOD PRACTICE STORY

Address each aspect of your good practice story in the different sections being specific including relevant quantitative and qualitative information.

Issues faced

What was the problem/issue solved with the good practice?

Vail, Colorado was founded as a ski area in 1962, incorporated as a town in 1966 and quickly became a winter tourist destination drawing vast numbers of visitors from around the world each year to ski the deep snow and incredible terrain of Vail Mountain. Today, Vail has grown into a year round destination for recreation, nature immersion and cultural activities in the heart of the Rocky Mountains and welcomes roughly 2.5 million visitors annually. Whether interested in skiing, biking, hiking, fishing, rafting or more, Vail offers outdoor pursuits for all ages and abilities. From exploring the local plants and animals on a guided nature walk at the Vail Nature Center to investigating the beautiful alpine flowers in Betty Ford Alpine Gardens or attending a classical symphony, dance or rock and roll performance Gerald R. Ford Amphitheater, Vail offers a myriad of incredible experiences off the trails and ski slopes. Vail is located in central Colorado, on a major interstate highway, 100 miles west of Denver and is easily accessed by driving or flying into Denver International Airport or the nearby Eagle County Regional Airport and then arriving to Vail by rental car or shuttle service.

The unique mountain ecosystem and weather patterns that Vail's tourism-based economy relies on make it challenging to facilitate efficient mobility and transportation options and are simultaneously threatened by climate change. Transportation is the second leading cause of greenhouse gas emissions in Vail, contributing to 30.7% of overall emissions. In the past several years, Vail has seen record heat, persistent drought, 30 fewer days per year of freezing temperatures which reduces snowpack and water resources in the watershed, catastrophic wildlife and flooding. The transportation related emissions are a combination of visitors traveling to Vail, employees driving to work in Vail, municipal and Vail Mountain operations, and purveyor trucks delivering goods to businesses. These purveyor trucks drive into the pedestrian villages, park and idle engines while making deliveries, creating congestion, air pollution, noise and a reduced guest experience. Many of the vehicles arriving to Vail are often single occupancy vehicles, which leads to overcrowding of the town's parking infrastructure. A large percentage of employees driving to Vail come from outlying communities due to housing challenges in Vail. While the free Town of Vail bus system is advanced, efficient and provides regular service the regional ECOBus system is challenged by cost, frequency of service, efficiency, connectivity and route limitations. Due to winter conditions and steep topography, Vail being dissected by a major interstate highway and its rural environment, becoming a car-free community, especially in the winter months, exacerbates first, last mile challenges making it difficult for residents and visitors to get from their residence to public transportation and other mobility options.

Methods, steps and tools applied

How was the good practice implemented?





Town of Vail has adopted the goals of the Climate Action Plan for Eagle County to reduce greenhouse gas emissions 25% by 2025, 50% by 2030 and 80% by 2050. In order to achieve these climate goals from a transportation and mobility lens, a holistic three pronged strategy was employed.

Electrification: 100% of Vail's electricity is from renewable solar energy through the Holy Cross Energy PuRE program, making electrification of transportation systems an effective means to reduce emissions. To support electrification the Town of Vail adopted a GoEV City resolution, a statewide initiative, in October 2021 committing to transitioning 30% of all vehicles in Vail to electric or zero emission by 2030 and 100% by 2050. The Town is developing an Electric Vehicle (EV) Readiness Plan to layout strategies to achieve these goals and also working to implement initiatives immediately. The Town of Vail bus system is transitioning from diesel and hybrid buses to fully battery-electric buses by 2032. Currently it has four battery-electric buses currently running routes and has six more on order to be delivered by 2023. EV infrastructure is also critical to support the transition to electric vehicles. In addition to a charging network specific to the bus system, currently Vail has 3 Level I EV charging ports and 24 Level II EV charging ports available to the public at no cost and 4 Level III fast EV chargers available at a low cost. There are 4 Level II EV chargers on order that will be installed to support workplace charging with 8 additional charging ports at town facilities in summer of 2022. Several businesses and hotels also have EV charging stations available to guests. To support additional EV infrastructure, Vail adopted building code changes in May 2022 that requires new residential and commercial buildings, including multi-family buildings to have 50% of parking spaces EV capable, including circuits and space in the electrical panel, and 5% of spaces EV installed. Finally, the town financially supports electric vehicle bulk buy events in partnership with other local municipalities at local dealerships to reduce costs and incentivize adoption of electric vehicles.

Micro-Mobility: Human powered commuting, including bikes and electric bikes (e-bikes) are an efficient mobility option to commute and reduce vehicle miles traveled and related emissions. Town of Vail implements the **Sole Power Green Commuting Challenge** each year from May – October to encourage behavior change and incentivize residents in Vail and Eagle County to get out of their cars and use human powered commuting to get to work, social events and while running errands. It is free to join and participants get outside, get fit, reduce their carbon footprint, save money and have fun. Participants log their miles and there is a friendly competition among different teams to stay on top of the leaderboard. The program is currently in its 12th year of operation. In 2021 Vail implemented the **E-bikes for Essentials** program in partnership with National Renewable Energy Laboratory and QuietKat, a local e-bike manufacturer, as an equity program to reduce greenhouse gas emissions from vehicle miles traveled and ease commuting for income qualified essential workers in Vail with distribution of free electric bikes. This program is designed to demonstrate that e-bikes are a safe, healthy and convenient way to take essential trips around town. Six program participants were selected to receive a QuietKat Villager e-bike and accessories including a helmet, pump, lock and pannier commuting bags at no cost in exchange for tracking trips via the CanBikeCO app. Applications for an additional six participants are being accepted now. Following a small electric bike share pilot program in Vail during 2020, Vail partnered with Town of Avon and EagleVail Metro District to launch a **regional electric bike share program, Shift Bike**. The system includes 90 electric bikes and 20 hub stations throughout the communities. The goal of the e-bike share is to get community members to shift their behavior, get out of their cars and shift their ride. Owning an e-bike is not accessible to everyone, so micro-mobility solutions help break down barriers to getting more people commuting by bike. The program incorporated input from local bikes shops to prevent competition, offers local resident membership options and an equity program for income qualified users.



To address the challenges with purveyor trucks loading and delivery operations in the Vail pedestrian Village, the **e-Vail Courier pilot program** was launched in November 2021. The program removes oversized delivery vehicles from Vail Village pedestrian areas and requires they unload in an underground loading dock. Deliveries are then placed on smaller electric delivery carts to make final deliveries by a third party operator. The purpose is to reduce vehicles idling and greenhouse gas emissions in the village center and return Vail Village to its original vision as a pedestrian village to improve guest experience and safety. This program requires partnership between Town of Vail, Vail Resorts, 106 West Logistics, the local company contracted to manage the program, and cooperation from the participating purveyor companies and businesses. Several public informational sessions were held to gather input from the local business community and general public prior to launching the pilot program. In addition, pre-pilot and post-pilot surveys were conducted to assess the program success.

Regional Public Transportation: In order to address regional challenges in transportation, mobility, housing and workforce that exist, especially as it relates to the regional ECOBus system challenges described above, Vail has entered an agreement to participate in a Regional Transit Authority (RTA) to consolidate and improve the regional transportation system. Several municipalities in Eagle County and the broader region are collaborating to create the RTA, collecting community input through stakeholder engagement sessions and surveys and which will likely be a ballot initiative to approve the RTA and a tax to serve as a dedicated funding mechanism in the upcoming November 2022 election.

Key success factors





What helped you tackle the issues?

Partnerships and collaboration – Vail’s success as a sustainable destination on the whole is dependent upon collaboration and strong partnerships, but particularly in the mobility and transportation sector. The partnerships between our neighboring communities, business community, non-profit organizations, transit authorities, school districts, and state and federal agencies allow for connectivity and mobility solutions to extend beyond our borders. Partnerships with the down-valley, regional communities in launching the Shift Bike program, creating the Regional Transit Authority, connecting and improving the ECOBus system all improve access and efficiency of our mobility solutions, solving first and last mile challenges and reducing congestion, and commute times. Partnerships with Holy Cross Energy, National Renewable Energy Lab, the Colorado Energy Office, and the Colorado Department of Transportation (CDOT) grant programs have allowed for a transition to electrification for infrastructure and vehicles. Partnerships with Walking Mountains Science Center, a local non-profit organization has created a regional Climate Action Collaborative, driving education and buy-in around the electrification of buildings and vehicles through reporting and resources that would be otherwise unavailable. Collaboration and buy-in from the business community in the e-Vail Courier program was critical to ensure smooth transition to a low-impact system.

Funding and Economics – In order to implement system-wide change in mobility solutions, funding and proper cost structures to incentivize behavior change are key to success. Major investment from the Town of Vail in fleet electrification, upwards of \$6,000,000 at the outset, supported by nearly \$2 million in grant funding allowed for facility and electric grid upgrades to support bus depot charging. The Town of Vail has also invested a total of \$175,000 to date to launch the ShiftBike program, and will continue to grow the program. To facilitate the use of public transportation and short trips on e-bikes, cost drivers include increased parking fees in town and a pricing structure that escalates the cost of riding an e-bike for recreation or long trips, thereby disincentivizing that behavior and allowing the local bikes shops to maintain their market. The e-Vail Courier program required an up-front investment of roughly \$1 million to launch, which was supported by the Town of Vail. Dedicated resources and long-term pricing strategies along with flexibility and the ability to respond to market shifts were helpful in implanting each of Vail’s mobility strategies.

Regional planning – Recognizing that the destination impacts and includes all of the Eagle County region and beyond, planning regionally for improved bus service and micro-mobility solutions that connect communities is essential for success. Vail has launched a Parking and Mobility Task Force which includes stakeholders from the County, the business community including Vail Resorts, local transportation providers, and other user groups to set pricing structures to affect demand of parking, develop creative strategies to incentivize carpooling such as use of Colorado’s rideshare APP Treadshare <https://treadshare.com/>, and has even supported an Air-B and B approach to private parking to reduce demands on the town’s infrastructure. The Regional Transit Authority in development will further improve regional planning and resources and as the Shift Bike program grows, Vail expects to see a culture-shift in bike commuting up and down the Valley.





Behavior Change Campaigns and Education – All of the infrastructure investments in electrification, e-bikes, micro-mobility solutions and public transportation are only successful if they are supported by the elected officials and the community. To that end, the town provides education through online and print media, dedicated websites, in-person workshops, public sessions, and through partnerships with Walking Mountain Science Center through the Climate Action Collaborative, who has spear-headed campaigns like the [One Less Car Campaign](#) and the [Trends with Benefits](#) to increase remote work and alternative commuting.

Lessons learned

While implementing the Good Practice what challenges were faced, and how were they overcome?

Looking back on program implementation for mobility solutions in a holistic manner, the Town of Vail recognizes that economies of scale are key to an effective micro-mobility system. Particularly with respect to an e-bike system, a critical mass of bikes with dedicated staff support is essential. Without them, user groups become frustrated that a bike is not available when they need it or a group is not able to travel in the same manner together. This creates frustration and doubt in the reliability of the system, and low usage. However, with enough infrastructure, station locations and support for rebalancing, it becomes an integral part of a user's daily life. In the same manner, with a courier program, without a properly sized loading dock, a ballard system and key partnerships, a delivery system of this size and type is a challenge. In implementing new building codes or an eBike system, buy-in from local builders, bike rental shops, architects and EV users through concerted outreach campaigns prevent resistance to change. In addition, solving regional transportation challenges is also difficult and requires strong collaboration, stakeholder engagement, creative solutions, persistence and time. While several strategies are currently being implemented, there is still a long way to go to achieve the adopted climate action goals. Vail will continue identifying new and innovative strategies to reduce transportation and mobility related emissions, overall vehicle miles traveled and number of vehicles coming into Vail. Providing a diverse range of sustainable mobility options for all seasons and educating the resident and visitor populations on the options and benefits will be the key achieving transformational change in how people get around Vail.

Results, achievements and recognitions





What were the qualitative and quantitative results of the good practice?

Sole Power- in 12 years of operation has had 2,090 participants who have logged nearly 400,000 miles, reducing greenhouse gas emissions by 372,047 pounds of CO₂e.

Shift-Bike e-Bike Share: In the first 20 days of the e-bike share system which launched June 7, 2022, there have been a total of **1,403 trips** taken on Shift Bikes distancing over **4,110 miles**. In terms of ridership, there have been:

- 641 Pay as You Go riders,
- 47 monthly memberships purchased
- 10 season pass memberships purchased
- 1 person participating in the equity program
- 75 employee/staff memberships activated (35 of these are actively being used)

Average distance of rides: 2.87 miles

Average duration of rides: 30.44 minutes

Trip Origin-Destination:

- 73% of all trips take place within Vail
- 22% of all trips take place within Avon and EagleVail
- 5% of all trips are inter-regional

E-Vail Courier: 20 of 44 purveyor trucks participated in the pilot program. During the first 18 weeks of the pilot phase, greenhouse gas emissions were reduced an estimated 8.8 metric tons of carbon dioxide equivalent (CO₂e) eliminated from trucks no longer idling in Vail Village. This also greatly reduced noise and air pollution. The expanded program has the potential to reduce an estimated 50.8 metric tons of CO₂e annually while improving air quality. Seventy percent of post-pilot survey respondents indicated that the program has improved the overall guest experience in Vail Village. In addition, respondents indicated the program either significantly or marginally improved noise, congestion, visual impacts, and safety in Vail Village. The success of the pilot program has led to approval for full implementation, including all purveyor trucks coming to Vail Village.

Town of Vail Electric Buses: The four buses in circulation have resulted in 62% fewer greenhouse gas emissions than the diesel buses they replaced.

Additional references





Provide links to further information. Pictures and videos should be available for download either from YouTube, Vimeo or other Cloud-based (Google/ One Drive) download URL (not WeTransfer).

GoEV City: [GoEV City Resolution](#); [Press Release](#)

Shift-Bike Electric Bike Share: [shift-bike.com](#); [Vail Daily Newspaper Article](#); [Press release](#)

Sole Power Challenge: [solepower.org](#); [Press Release](#)

E-Vail Courier: <https://www.engagevail.com/e-vail-courier>; [Vail Daily Newspaper Article](#)

E-Bikes for Essentials: Participants log their trips taken on provided e-bike in the CanBike Co app; date can be found on the dashboard; scroll to Vail for specific data: <https://dashboard.canbikeco.org/>; [Vail Daily Newspaper Article](#)

One Less Car Campaign: https://www.walkingmountains.org/wp-content/uploads/2019/11/Behavior-Change_One-Less-Car-Campaign_2.14.19.pdf

Trends with Benefits: <https://www.walkingmountains.org/climate-action-collaborative/trends-with-benefits/>

Regional Transportation Authority: <https://eaglecountyrta.org/>

