



## Environmental Work in the Transportation Sector

# CAREER PROFILE

**NAME:** Emma Chapman

**TITLE:** Bike Train Operator

**DEGREE:** History of Art and Political Science, Architectural History & Urban Studies

**COMPANY:** Divvy Bicycle Share, Motivate International, Inc.

*"Divvy is Chicagoland's bike share system, with 6,000 bikes available at 570+ stations across Chicago and Evanston. Divvy provides residents and visitors with a convenient, fun and affordable transportation option for getting around and exploring Chicago."*

*Divvy, like other bike share systems, consists of a fleet of specially designed, sturdy and durable bikes that are locked into a network of docking stations throughout the region. The bikes can be unlocked from one station and returned to any other station in the system. People use bike share to explore Chicago, commute to work or school, run errands, get to appointments or social engagements, and more.*

*Divvy is available for use 24 hours/day, 7 days/week, 365 days/year, and riders have access to all bikes and stations across the system."*

Source: [www.divvybikes.com/about](http://www.divvybikes.com/about)

**Q.**What is your current role at the organization?

**A.**I work for Chicago's public bike share system, Divvy, which is actually the "newest" advancement in

public transportation—a mature established industry. Bike share actually showed up in the 1960s but didn't take off; operational and management challenges prevented success, but in the last five years has made a comeback in many cities following urban trends with better management, maintenance, systems, equipment, and operations.

Divvy started in 2013, and I started working there in June 2018 as a "rebalancer". I actually moved to Chicago the week before Divvy started, so I witnessed Divvy's roll-out and have seen Divvy grow. Divvy, and bike share in general, personifies sustainability, getting people out of cars and giving them some exercise, all while getting where they need to go.

Divvy is run by Motivate, a private operator that operates other bike share companies, but Divvy is owned by the City of Chicago's Department of Transportation (CDOT). Lyft bought Motivate a couple of

months ago, and CDOT has retained their ownership rights.

Bike share rebalancing is a big part of operating a bike share system and usually occupies over half of an operating budget. Rebalancing is needed particularly during weekday rush hours, taking bikes from full stations and bringing them to empty stations. Nearly all bike share systems use vans to "rebalance" bikes, but I use a "Bike Train," operating a large tricycle that has a couple of trailers and load bikes on the back of trailers to haul. The tricycle is "pedal assist" with a motor and a small battery. The program started when I joined, and I am the first person in Chicago to do this. We're definitely figuring it out as we go, but as a start up, we have a lot of flexibility.

**Q.**How did you get to this point in your career? Any key points along that pathway?

**A.**From the beginning, I've been interested in learning how things work,

building, and putting things together, “Playing” with Lego’s led to working for a couple of architects throughout high school and college, where I also learned drafting skills and how to work with clients.

I liked the industry but wasn’t sure I wanted to “be” an architect because I was much more interested in larger systems, the bigger picture, and the overall context. I knew Yale had a good architecture program which I took some advantage of, but I ended up taking more classes in history of cities, civilizations, policy, politics, and urban politics and became fascinated with New Haven, the oldest planned city in North America. However, what really struck me was how the City’s train station was so far away from downtown as cities had developed through railroads.

Knowing I was intrigued by rail, history, and cities, I worked for Parsons Brinckerhoff’s management consulting division, PB Consult, the summer before my senior year which introduced me to transit and transportation as an industry and a business I could work in. Parsons Brinckerhoff is a big civil engineering giant now owned by WSP and originally founded by the creator of New York City’s Subway, William Barclay Parsons. PB/WSP does transportation work all over the world, and my client that summer was the

Washington Metropolitan Area Transit Authority (WMATA). I was tasked with delivering an Asset Management Plan for the Authority. I inventoried their entire system: quantities and types of rail cars, signals, switches, tracks, stations, and buses etc.; what needed to be fixed and when, etc., which actually made me want to work for them inside their agency to learn more.

Returning to Yale for my senior year and still perplexed by the city’s train station, I strove to uncover why in my senior thesis, which ended up connecting transportation, transit, urban history, architecture, preservation all under one roof and further clarified my passion and desire to get inside the industry, starting with WMATA.

Being offered a graduate research fellowship for the Eno Center for Transportation landed me in DC, sleeping on a couch after graduating, and I

witnessed WMATA have their largest accident in history: two trains collided because of failed signals, and I was on the train behind the one that crashed—nine or ten people died. It was a matter of making one train and not the other, so clearly it was a really big deal, especially because I had worked on that report and realize how moving around, transportation, is inherently dangerous; infrastructure must be maintained.

WMATA offered me a job about five months later in their division of Long Range Planning, but the only way they could bring me on was for a one-year position. Having witnessed what happens when neglecting good asset management, I took the gamble because I really wanted to help WMATA bounce back and serve their region.

WMATA was under enormous budget pressure and was unable to extend the position





into a second year, but Parsons Brinckerhoff's Planning Department in New York was looking for Junior Planners, and I also wanted to work on more than just transit, so I moved to New York to work on all sorts of projects, including transit. I worked in their New York Office for three and a half years, doing everything from subway extensions, commuter rail tunnels, bus rapid transit studies, public housing inspections, traffic analysis, and air traffic studies. It was fantastic. I was learning this stuff at twenty-two years old, and I didn't really know what was going on, but I did know that if I worked hard and focused, I would help our clients succeed. PB was passionate about developing young talent (I was actually featured in their company video which streamed in the lobby), and they strongly supported Young Professionals in Transportation (YPT), helping the organization take off.

Throughout the planning work, I became curious in how these initiatives could be paid for and started asking questions about transportation finance, but didn't get any clear answers. Furthermore, I was growing a bit tired of the east coast, and after visiting a friend in Chicago, I decided a few years later that I wanted to move here and transferred from the New York office to their Chicago office to work on the Tier II FEIS for the Illiana Greenfield Toll Road.

I continued trying to figure out how public infrastructure is paid for and out of the blue, applied to a job at Fitch Ratings to issue ratings for transportation bonds despite lacking finance experience. Fitch hired me because of my planning and engineering transportation work, and I joined their Global Infrastructure Group (GIG), where I stayed for about two and half years and rated over 300 revenue-backed

transportation bonds.

Working with so many municipal transportation issuers running airports, toll roads, and transit systems intrigued me to join the Chicago Transit Authority (CTA) to manage the entirety of their debt, about \$10 billion, which no one had done before. I was a "one-person department" which CTA is full of, and everyone works so hard. I loved the challenge and am proud of the work, but I was definitely in over my head and needed help through the non-stop chaos. However, once I got my head around all of CTA's obligations and set up a debt management system, it actually clarified that I needed to learn more about finance before I could move more things forward.

I started looking into MBA programs because they would teach me what I hadn't learned as well as help me make more sense of what I have already been exposed to. As I was applying to MBA programs, I also got word that Divvy was hiring bike train operators. I thought that this would be great because I love riding my bike and love transportation but had never worked in operations. I wanted to try driving a bus or a train at WMATA, so I thought that this would be a total change yet exactly what I was missing because I had yet to actually work in operations. Working for Divvy has been a good balance between being able to still help others and work in

transportation while being back in school.

**Q.** Were there any experiences that helped to best prepare you for the work that you do?

**A.** My dad has always been my champion throughout my career. He is my best professional advisor and continually offers guidance, helping me throughout each stage sticking to simple principles: “understand before being understood; ask, don’t tell; work together, asking how you can help, instead of shooting out commands.”

In the context of where I am now, I actually had to convince Divvy to hire me. They believed that I was both over and under qualified for the job, but I said “give me a shot.” I convinced them I’d be able to do the work because I know I can do anything I put my mind to. I also explained I wanted to be in the field, not stuck in an office. Out in the field, I am interfacing and interacting with mechanics and people I had never been around at CTA because I was in finance, and it was expected I’d only do finance even though I still wanted to learn as much about the entire agency as possible.

Soft skills are important and require patience to obtain. Working for Divvy has helped me practice every day interacting with so many different people, ensuring to respect everyone and make

each person feel important, valued, and appreciated which is vital to succeed in any field.

**Q.** What does a day in the life of your position look like?

**A.** I go to the warehouse and set up all of the equipment that I need to go out into the field. I perform safety checks, fixing things that needs to be fixed, and make sure everything is safe. I set up all of the lights and batteries, check tire pressure (there are 11 wheels!), assemble the rig and take it out. I go to a few stations to pick up bikes and drop them off where they are needed. That’s the work.

**Q.** What skills have you gained in the work? Are these unique or transferable to other disciplines?

**A.** My dad has a workshop which I “played” around in growing up, so I am comfortable using tools and getting dirty, but now I know how to re-wire electric and fix a flat tire in under ten minutes! While being interviewed, I explained my background and relative physical strengths as well as weaknesses, convincing them I could learn any new skills required. I also told them I’m pretty tough, even though I may not “look it” because I swam competitively for twenty years—and swimming is an insane sport where you have to go back and forth for hours. I know what pain feels like. I also know that the

body heals and that you can build strength up. Looking at me on paper, I’m this accomplished over achieving ivy league kid but I really care about making a difference and directly helping others.

**Q.** What do you enjoy most about your job?

**A.** I absolutely love constantly moving around, being outside, and interacting with as well as helping anyone I can (staff, the public, and other riders). I also love how each day is completely different; I never know what to expect upon arriving at the warehouse. Part of working for a “startup” is that things are constantly changing, from operations to admin.

Throughout my career, I’ve never accepted “no;” many have told me “no,” but I don’t take it. Saying yes is about making others feel valued in their work. The best part of everything that I’ve gotten to do is actually see my “sweat equity” help others. I’m also proud of myself, knowing I had enough confidence in myself to do this, actually move these 50 pound bikes, and show everyone else that I could do it. No one had done this before, and so I learned how to do it without a lot of help, especially once out in the field alone.

**Q.** What are some of the challenges you have faced in the work? How did you overcome them?

**A:** I say, “Let me try. If it doesn’t work, I’ll try a different way.” For example, when I was loading and unloading these bikes for the first time (six bikes go on a trailer and there are two trailers), it took me thirty minutes to load one trailer, which is insanely poor, slow, and inefficient. Not a good idea for any business. But, I’ve gotten it down to roughly six minutes per trailer because I figured out how to load more efficiently based on my own size and physical abilities. Receiving feedback needing to speed up, I used the chance to improve instead of getting discouraged.

**Q:** What are some of your own personal characteristics and values that make you a good fit for this type of work?

**A:** I have a lot of energy. I love moving around, being outside, and staying active. I also love biking, and getting people on bikes makes me happy because it makes them happy. There’s just something about riding a bike that makes a person happy, and helping

people to do that, for work, working for Divvy, is a huge reward.

I’ve been really fortunate to have had so many opportunities already, but hands down, I am most proud of the work that I do for Divvy because I left an “office” to do “manual labor,” (“womanual labor” actually) which has raised a lot of eyebrows. Combine that with getting an MBA, I’m definitely an outlier. For me, it’s not about how big the paycheck is. I want my work to help others. Money buys food and pays rent which matters, so if you’re not making as much, then don’t spend a lot. It’s not complicated.

Additionally, I’ve gotten used to being one of few women or the only woman around by now, whether it’s in a conference room or in a warehouse; I’m not scared of hard work and getting dirty to get the job done. I’ve earned respect because of my behavior and have demonstrated that I am no different; we are all individuals who deserve to be treated equally.

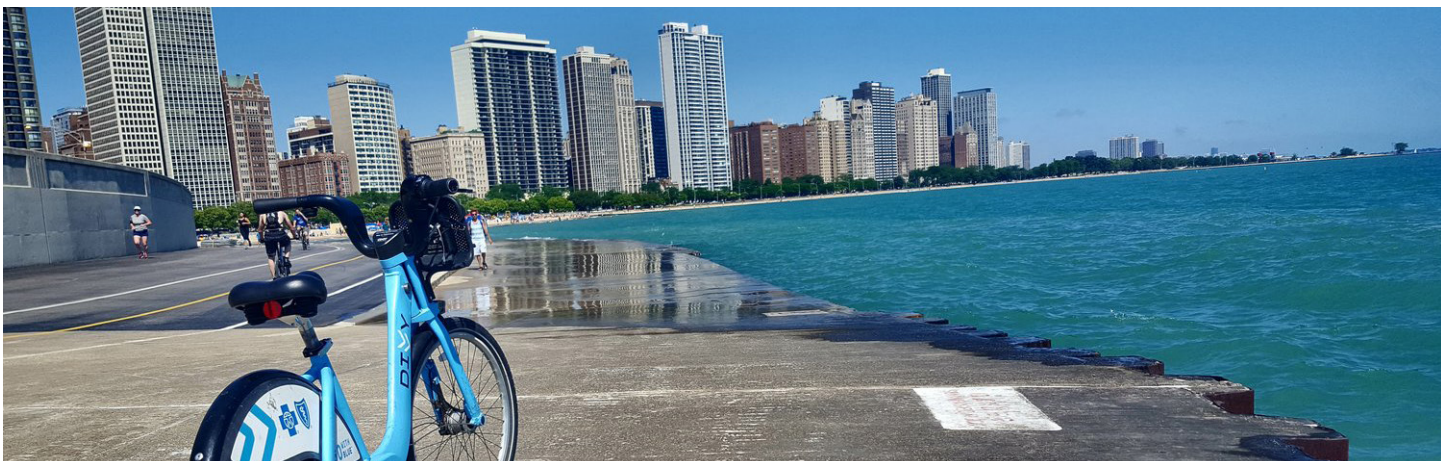
**Q:** What is something that you want people to know about the work that you do?

**A:** Number one, to all the women: learn how to be comfortable being the only one; just accept it and get used to it. Don’t ask nor tolerate being treated differently than anyone else. DO the work and deliver the job.

Number two: don’t stop asking yourself what you want to learn; figure out how to understand whatever it is you want to know, and don’t stop asking questions.

Number three: figure out what you don’t want first because that tells you what you do want—even when you don’t know what that is yet.

Number four: go out of your way and spend your own time to understand how something works; it makes the “job” you’ve been hired to do a whole lot “easier” because without an understanding of how something works, forget being able to fund let alone operate or improve it. You’ve got to understand how it works. ➔



## Overview of Position as it Relates to Transportation

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Rebalancers are an essential personnel within the bike share industry. They are required to follow safe work practices and help to create a safe working environment as much of this work occurs on public streets and roads, often in cities. Additionally, they assist drivers with safe vehicle operation and maintenance; address and report bike status, system events and rebalancing data as instructed. This all must happen to ensure that users can access bikes where and when they must. Rebalancers are also responsible for troubleshooting; assisting with bike and bike station deactivation and reactivation; communicating with dispatch and other duties as assigned.

## Transportation Program Manager

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Rebalancers are responsible for relocating bikes throughout the system. Rebalancers load and unload the vehicle with bikes as well as dock/undock bikes at every station stop.

Rebalancers typically work under the guidance and supervision of a Management team focused in delivering services to clients.

Emma is the Inaugural operator of the Divvy Bike Train to supplement system-wide bicycle rebalancing; assists in other operations and administrative functions as needed.

## Overview of General Skills and Requirements

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The general skills and requirements of a bike train operator/rebalance are (1) a high school diploma, equivalent, or exceeding (2) a valid driver's license or ability to operate a bike trailer (3) flexibility in

schedule and (4) dependability. Additional skills include that one is able to be a team player, follow instructions, and solicit feedback to improve performance. One should have a drive to learn about bikes so that they can effectively troubleshoot problems with bikes, be able to lift large amounts of weight, be active, have a good sense of judgment, and open to trying new ideas.

## About Divvy Bicycle Share

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Divvy is a program of the Chicago Department of Transportation (CDOT), which owns the city's bikes, stations and vehicles. Initial funding for the program came from federal grants for projects that promote economic recovery, reduce traffic congestion and improve air quality, as well as additional funds from the City's Tax Increment Financing program. In 2016, Divvy expanded to the neighboring suburb of Evanston with a grant from the State of Illinois.

Additionally, Divvy is operated by Motivate, a global leader in bike share.

A full-service bike share

operator and technology innovator, Motivate works to re-envision how people experience and move around cities.

Source: [www.divvybikes.com/about](http://www.divvybikes.com/about)

## Type of Planning Projects Carried Out at Divvy Bicycle Share

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### Bringing Divvy to Chicago

During this project Divvy established 580 bikeshare stations with 5,800 bikes across Chicagoland. Riders can buy a pass from a Divvy station kiosk or mobile app, or become an annual member.

### Bicycle & Pedestrian Initiatives

*"I'm thankful to be outside constantly moving, interacting with and helping the public, preserving the environment, as well as promoting Divvy and cycling in general. Within Divvy, I like sharing experiences from the field, addressing and making repairs, as well as interacting with and learning from each arm of Divvy's operations."*

— Emma Chapman, Women of Divvy

## Key Skills

- ▶ **Reading Comprehension** – Reading work-related information.
- ▶ **Complex Problem Solving** – Noticing a problem and figuring out the best way to solve it.
- ▶ **Critical Thinking** – Thinking about the pros and cons of different ways to solve a problem.
- ▶ **Active Listening** – Listening to others, not interrupting, and asking good questions.
- ▶ **Judgment and Decision Making** – Thinking about the pros and cons of different options and picking the best one.
- ▶ **Coordination** – Changing what is done based on other people's actions.
- ▶ **Active Learning** – Figuring out how to use new ideas or things.
- ▶ **Systems Evaluation** – Measuring how well a system is working and how to improve it.
- ▶ **Systems Analysis** – Figuring out how a system should work and how changes in the future will affect it.
- ▶ **Time Management** – Managing your time and the time of other people.
- ▶ **Monitoring** – Keeping track of how well people and/or groups are doing in order to make improvements.



## Abilities Needed for Success

- ▶ **Written Comprehension** – Reading and understanding what is written.
- ▶ **Oral Expression** – Effective spoken communication.
- ▶ **Written Expression** – Effective communication in written form.
- ▶ **Deductive Reasoning** – Using rules to solve problems.
- ▶ **Inductive Reasoning** – Making general rules or coming up with answers from lots of detailed information.
- ▶ **Oral Comprehension** – Listening and understanding what people say.
- ▶ **Problem Sensitivity** – Noticing when problems happen.
- ▶ **Fluency of Ideas** – Coming up with lots of ideas.
- ▶ **Near Vision** – Seeing details up close.
- ▶ **Originality** – Creating new and original ideas.
- ▶ **Information Ordering** – Ordering or arranging things.
- ▶ **Visualization** – Imagining how something will look after it is moved around or changed.



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