CITY OF NEW YORK

BIKE

DEPARTMENT OF CITYWIDE ADMINISTRATIVE SERVICES

REQUEST FOR EXPRESSIONS OF INTEREST

INTRODUCTION

The New York City Department of Citywide Administrative Services ("DCAS") is releasing this Request for Expressions of Interest ("RFEI") to engage and solicit information and feedback from interested parties regarding commercially and technologically viable solutions for the provision of bicycle-related goods and services on property owned by the City of New York (the "City"). This RFEI is intended to inform one or more future Requests for Proposals ("RFPs") or other solicitations for the creation and operation on City property of such facilities and businesses.

For several years, bicycle use has been on the rise in New York City. The Covid-19 pandemic has accelerated the increase in bicycle mode share, and has led many people to envision themselves getting on a bike to commute to work or school, get together with friends or family, or go grocery shopping.

There are a number of hurdles which make it less likely that someone who thinks of riding a bike for a particular trip will actually do it. Whether for a first-ever ride or a daily occurrence, this RFEI contains opportunities for respondents to inform DCAS on viable goods and services—and associated real estate—that will help make that bike trip a reality for residents, workers, and visitors throughout the five boroughs. These opportunities include sales and service, bulk supply of bicycles, rental of cargo bikes and others, secure bike parking, and the development and operation of amusements and other facilities where children can improve their bicycle skills and have fun in the process.

It is intended that any project involving the subject matter of this RFEI provide the highest possible functionality from the lowest possible level of expenditure.

DCAS is interested in assessing the extent to which respondents' solutions will be expandable within a given location, scalable to multiple locations, and adaptable to indoor and outdoor publicly-owned property reflective of New York City's:

- Market demographics, including areas with population densities ranging from moderate to very high, with differing levels of foot traffic and vehicle-per-day counts, and of pedestrian, transit, and vehicular access; locations with complete, limited, and no public access; and differences in suitable product mix resulting from local demand drivers and day-part activity.
- Topography, geography, and other land characteristics, including steep slopes and waterfront locations, and areas with varying levels of pavement coverage and utility connections.
- Weather and seasons, including locations with year-round outdoor use.

DCAS is interested in determining the viability of activity contemplated in this RFEI on lots with a wide range of characteristics, including on small lots and those with irregular dimensions. In that regard, DCAS is particularly—but by no means exclusively—interested in responses involving semi-permanent and temporary structures to be constructed on such property, and vending machines and locker boxes to be installed on such property. For more information on such structures and facilities please see RFEI 14 (Enduring Buildings and Structures), RFEI 6 (Vending), and RFEI 7 (Locker Centers).

DCAS also seeks to assess the suitability for wider adoption of technology standards included in responses.


BAR Rock Planet
Omelet • Pancake • Grill
royalqueenseeds.com

RFEI CONTENTS AND RESPONSE GUIDELINES

This RFEI consists of several distinct **parts**:
Part A: Bike Retail and Rental (p.4)
Part B: Bike Supply, Recovery, and Repair (p.9)
Part C: Small-Scale Bike Repair (p.15)
Part D: Cargo Bike Rental (p.20)
Part E: Secure Bike Parking (p.24)
Part F: Last-Mile Bike Rental (p.29)
Part G: Traffic Gardens and Amusements (p.33)
Part H: Last-Mile Cargo Bike Container Relay Facilities (p.37)

Respondents are welcome to submit responses to any or all parts of the RFEI. Furthermore, respondents are welcome to combine responses to multiple parts of the RFEI, for example to facilitate the provision of an income-producing product or service in one part with a non-income-producing product or service in another part, pointing the way to a future proposal with overall financial viability.

Each part contains two **components**: "Overview" and "Response".

For the RFEI overall, responses should contain the following, in this order:

- Contact information, including the legal name of respondent, business address, name of contact, telephone, and email. (Maximum one page.)
- Respondent overview that describes the organization, addresses its qualifications related to the response to this RFEI, and indicates the part(s) of the RFEI to which the organization is responding. (Maximum two pages.)
- Overall context for the response (optional).

For each part of the RFEI, respondents are welcome to provide further or differing details for contact information and respondent overview (as indicated in the relevant place in each part).

In each part of the RFEI, the "Response" component is broken out into 7 **sections**:
(1) Overall (conceptual overview and summary);
(2) Markets and coverage area;
(3) Physical plant and technology;
(4) Larger context; and
(5) Viability and financing; as well as
(6) Photographs, illustrations, and renderings (if not included elsewhere); and
(7) Supporting documentation (optional).
Most of these sections contain various **items,** in an outline format.

Responses may follow the outline format or use another format of the respondent's choosing. Respondents are encouraged to address all items, and are free to address each item directly or to use the items as guideposts. If a precise answer is not possible with regard to any item, or if the solution(s) diverges from the premise of an item such that the item is either unsuited to the solution(s) or is inapplicable, the respondent may wish to include a more general or qualitative answer or indicate the divergence or inapplicability.

In the “Larger context” section in each part of the RFEI, there is an item involving aspects of the solution(s) which diverge from the concept of the RFEI. Furthermore, if a respondent has in mind a solution(s) it believes to be in keeping with the overall theme of the RFEI but which does not fit any part, the respondent is nevertheless welcome to submit a response; the sections and the detailed breakout of the sections in each part can be used as described above.

(For additional guidelines and submission information, please see “Administrative and Procedural Matters” at the end of this RFEI.)

NYC DCAS BIKE RFEI PART A

BIKE RETAIL AND RENTAL

PART A:
BIKE RETAIL AND RENTAL

Part A Overview:

Retail:

Along with the increase in bicycle mode share in New York City comes a commensurate increase in the need for bicycle retailers to serve both individual and commercial customers. DCAS is offering the opportunity for one or more concessionaires to help fill this need by creating and operating bike retail facilities on City property.

DCAS is especially interested in responses which contribute to the widespread availability of

- Bicycles which are:
  - Inexpensive;
  - Durable;
  - Long-lasting;
  - Suitable for everyday use on city streets, not only for the average ride of a couple miles but also for significantly longer rides;
  - Easily repaired, even by a non-expert;
- Parts and service;
- Accessories.

However, DCAS welcomes responses from all interested parties, including those:

- From all segments of the bike retail universe, including those focused on:
  - Traditional bicycles, e-bikes, and cargo bikes;[i]
  - Children, young adults, adults, and seniors;
  - Personal, commercial/organizational, and fleet;
  - Daily transportation, off-road, and racing.
- With a singular focus on bike retail (sales, accessories, and/or repairs), as well as responses which incorporate other activities or partnerships, particularly bike-related ones;
- From existing operators in and around New York looking to expand to new locations, to existing operators from further afield looking to enter the New York market, to new operators looking to enter the business.

Other parties interested in submitting responses might include:

- Customers of and suppliers to bike retailers, and organizations in adjacent industries.
- Organizations with expertise in bike usage and infrastructure.
- Organizations with expertise in urban transportation and mobility.
- Scholars, nonprofits, and associations.

Rental:

As is the case with bike retail, the increase in bike mode share is likely to correlate with an increase in demand for the renting of bikes. It is likely that such an increase in demand would exist across segments

similar to those of the bike retail universe (see above). Whether a day- or week-long visit to the city, a month with the grandchildren, or a semester at college, there are various demand drivers for bike use which can sometimes leave consumers uncertain as to whether bike share, rental, or purchase makes the most sense. DCAS welcomes responses which will facilitate the broad availability of bike rentals at reasonable cost and—especially when considered in conjunction with retail—for a range of locations and durations suitable to cover as wide a swath of demand as possible.

(Please see also Part D: Cargo Bike Rental.)


PROMOTIONS
VERO MODA
STRACCIATELLA
APPEL'S
ESPRIT
SWITCH
TWICE AS NICE
LATE NIGHT SHOPPING
15 MEI 2015
"een verrassende ontdekking"


7 ELEVEN
APARTMENT
IN COPENHAGEN
.COM

Part A Response:

i. Contact information (see "RFEI Contents and Response Guidelines," above)
ii. Respondent overview (see "RFEI Contents and Response Guidelines," above)
iii. Intended solution(s) (note: respondents are encouraged to address all items; see "RFEI Contents and Response Guidelines," above):
    1. Overall:
        a. Concise conceptual overview of the respondent's bike retail and/or rental solution(s).
        b. Summary of:
            i. Location and site selection; multi-site scalability.
            ii. Layout, including diagram(s); same-site extensibility.
            iii. Physical structures, if any, and intended function for each.
            iv. Machines and other equipment, and intended function of each.
            v. Technology standards and applications intended to be used (both underlying and user-facing).
        c. Brief description of the qualitative aspects of the solution(s).
        d. Key historical or other precedents or inspiration (if any).
        e. Applicability of the concept of good value for money.
    2. Markets and coverage area:
        a. More detailed overview (if necessary).
        b. Products and services intended to be offered, and target markets.
            i. More detailed overview (if necessary).
            ii. Extent and method of segmentation, such as by
                1. Demographic (e.g., adults, youth);
                2. Price (e.g., value, mid-range, high-end);
                3. Product age (e.g., new, used);
                4. Product type (e.g., standard, e-bike, cargo bike);
                5. Rider purpose (e.g., appliance for everyday transportation, sporting goods for racing);
                6. Customer type (e.g., personal, small commercial, fleet).
            iii. Extent to which the solution(s) is or would be co-located with, embedded within, or otherwise associated with:
                1. Direct or traditional bike activity such as sales, accessories, and repairs.
                2. Bike rental and associated activity.
                3. Other activity such as event hosting, and sublets or other agreements (and whether such agreements would be best suited to complementary or non-complementary uses).
        c. Location and site selection; multi-site scalability; anticipated catchment area of a given site; demographics (in general and in terms of existing and anticipated bicycle use); suitability in different levels of population density and day part activity

(including a discussion of business hours); seasonality; pricing; discussion of number and size of intended sites needed for coverage of a given broader area (such as a neighborhood or borough or within a radius) or the city overall.

d. Supporting facilities required to supply a site or multiple sites, and general discussion of intended or existing locations of such supporting facilities (see also (4)(d), below, regarding interaction with the wider transportation system).
e. Volume of vehicular, pedestrian, cyclist, or other trips for drop-off, pick-up, servicing, and other purposes; parking; anticipated types of conveyances and mode share.
f. Zoning: extent to which suitability in New York City's range of zoning districts has been considered (please visit https://www1.nyc.gov/site/planning/zoning/districts-tools.page for more information about zoning districts).

3. Physical plant and technology:
    a. More detailed overview (if necessary).
    b. More detailed discussion (if necessary) of:
        i. Layout, including diagram(s); same-site extensibility.
        ii. Physical structures, if any, and intended function for each.
        iii. Machines and other equipment, and intended function of each.
        iv. Technology standards and applications intended to be used (both underlying and user-facing).
    c. Discussion of minimum and maximum site footprint; dimensions (including suitability on lots with non-standard shapes and sizes).
    d. Discussion of suitability of your solution(s) in various building and lot conditions, including host structure types (permanent buildings, semi-permanent structures, temporary structures, vacant land), grade, dryness, pavement, and utilities; extent of required supporting infrastructure; required street widths, sidewalks, vehicle turning radii, and size and number of points of ingress and egress. Discussion of the extent to which the greatest possible functionality will be derived from each unit of expenditure.
    e. Lighting; security (if not addressed elsewhere).
    f. Dust, noise, illumination, and other emanations: description or other details of type or extent; day parts or hours; radius; intensity (and means of measurement if any); mitigation methods to be used.
    g. Discussion of suitability of the solution(s) in various weather and environmental conditions; anticipated capacity to maintain structural integrity and remain operational during and after adverse events.
    h. Extent to which the New York City Building Code and related regulations have been considered; extent to which the New York

City Department of Buildings has been or is intended to be engaged.

4. Larger context:
    a. More detailed overview (if necessary).
    b. Discussion of ancillary or complementary goods and services which would be anticipated to be provided to bike retail and/or rental customers, and the manner in which such goods and services would be offered.
    c. Discussion of complementary uses, including but not limited to ideal or suitable other uses at a given site or nearby.
    d. Interaction of the solution(s) with the larger transportation system, and with the industries and areas served from a given site or group of sites.
    e. Aspects of the solution(s) which are not covered elsewhere in this RFEI but which the respondent would like to emphasize (please note that the respondent is free to submit a solution(s) which diverges from the concept of the RFEI as the respondent understands it).
    f. Pilot project(s) (existing or suggested).
5. Viability and financing:
    a. Overview of the general approach to financing, including order-of-magnitude estimates of project cost (initial and expansion), anticipated revenue, length of agreement, future capital improvements, maintenance, and useful life; discussion of factors affecting viability of intended financial approach.
    b. Discussion of factors affecting viability of the intended solution(s), including but not limited to stage of development, extent of existing installed base, known or anticipated issues of stability and security, legal and regulatory matters, and risks to buildout and operation.
6. Photographs, illustrations, and renderings (if not included elsewhere).
7. Supporting documentation (optional):
    a. Provide any supporting documentation, including details about precedent projects, as an appendix to this part of the RFEI.

[i] "The Dutch have wielrenners, or "wheel runners" — the sporty cyclists — and they have a fietser, which is just "someone on a bike."" – Melissa Bruntlett, quoted in https://www.vox.com/science-and-health/2018/8/28/17789510/bike-cycling-netherlands-dutch-infrastructure. In places with high bicycle mode share, more bikes tend to be used for everyday transportation than for racing. Regarding practicality and durability in such places, see https://www.quora.com/Why-do-people-in-The-Netherlands-ride-with-old-bikes. However, many people in places with high bicycle mode share have more than one bicycle (for example, in the Netherlands there are 17 million people and 23 million bicycles (https://english.kimnet.nl/publications/publications/2018/04/06/cycling-facts, first link, p.4)), and in such places there tends to be robust demand across market segments, including at the high end.

NYC DCAS
Citywide Administrative Services

NYC DCAS
BIKE RFEI
PART B

BIKE SUPPLY, RECOVERY, AND REPAIR

PART B:
BIKE SUPPLY, RECOVERY, AND REPAIR

Part B Overview:

The rate of bicycle ownership in New York City is significantly lower than it is in many other cities.[ii] Across the city, country, and world, every year a large number of bicycles are abandoned or scrapped,[iii] despite the fact that they continue to be roadworthy or could be after undergoing repairs. Among existing bicycle owners, many have bicycles which have not been ridden or maintained for an extended period but have potential to be made roadworthy once again. At the same time, the cost of manufacturing a bicycle durable enough for bike-share or other sustained urban use has declined precipitously in recent years—in some cases less than $50.[iv]

DCAS seeks responses regarding solutions whose result would be the provision of bicycles—whether new or recovered/certified—to most or all city residents, and the creation and operation of facilities for remanufacturing, repairing, and maintaining large numbers of bicycles. (Please see "Bike Retail and Rental", above, for the ideal characteristics of bicycles provided by a concessionaire.) DCAS is also interested in the potential for the supply, recovery, and repair of e-bikes and cargo bikes.

While this part of the RFEI is intended to facilitate a response involving an integrated solution encompassing the provision of bicycles, the restoration or remanufacturing of bicycles (if they are not supplied new), and the provision of ongoing repair services to bike recipients and other bike owners, respondents are welcome to provide responses geared toward a subset of these elements (or, as noted in the introduction to this RFEI, to submit a response relevant to both this and other parts of the RFEI). Taken together, Parts A, B, and C cover the full range of bike repair services and facilities. With regard to site selection criteria and other aspects of responses to this section (and those other parts of the RFEI), responses should reflect the differences resulting from the varied aspects of this part of the RFEI—for example the scale necessary to achieve viable cost, and number of locations needed to provide geographic coverage, for remanufacturing large numbers of bicycles versus that necessary for viability of moderately complex local repair services.

It is likely that standardization will be important for any successful concessionaire. While successful bike remanufacturing facilities currently in existence tend to focus on a small number of models—sometimes just one—in order to increase efficiency and generate economies of scale, DCAS is also open to responses that are broader in the bike models they are able to incorporate efficiently.

DCAS welcomes responses from all interested parties, including but not limited to:

- Existing participants in bicycle manufacturing, sourcing, recovery, restoration, and repair.
- Customers and suppliers to any of the above; organizations in adjacent industries.
- Organizations with expertise in urban transportation and mobility.
- Scholars, nonprofits, and associations.


えびす
鼓童

Part B Response:

iv. Contact information (see "RFEI Contents and Response Guidelines," above)
v. Respondent overview (see "RFEI Contents and Response Guidelines," above)
vi. Intended solution(s) (note: respondents are encouraged to address all items; see "RFEI Contents and Response Guidelines," above) (note: respondents may wish to provide separate treatment for different aspects of this Part—i.e., supply, recovery, repair—within each item as needed)
    1. Overall:
        a. Concise conceptual overview of the respondent's bike supply, recovery, and repair solution(s).
        b. Summary of:
            i. Location and site selection; multi-site scalability.
            ii. Layout, including diagram(s); same-site extensibility.
            iii. Machines and other equipment, and intended function of each.
            iv. Physical structures, if any, and intended function for each.
            v. Technology standards and applications intended to be used (both underlying and user-facing).
        c. Concise overview of the financial arrangements by which bikes would be supplied to consumers and would serve as in-kind compensation to the City (if any).
        d. Brief description of the qualitative aspects of the solution(s).
        e. Key historical or other precedents or inspiration (if any).
        f. Applicability of the concept of good value for money.
    2. Markets and coverage area:
        a. More detailed overview (if necessary).
        b. Products and services intended to be offered, and target markets.
            i. More detailed overview (if necessary).
            ii. Extent and method of segmentation, such as by demographic (e.g., adults, youth), rider purpose (e.g., appliance for everyday transportation, sporting goods for racing), customer type (e.g., personal, small commercial, fleet), and product type (e.g., standard, e-bike, cargo bike).
            iii. Discussion of bicycle and component types, brands, and tooling; standardization and economies of scale; characteristics of bicycle design and materials which facilitate the provision of a large number of bicycles of high quality at low cost and with minimal maintenance requirements over a long useful life; where bikes envisioned in the solution(s) are currently in existence; discussion of the decision path regarding whether a given bike should be recovered/repaired, and if not, the decision path regarding further use of remaining parts and materials.

iv. Discussion of locks and antitheft elements; insurance (if not discussed in (2)(b)(vi), below).
v. Extent to which accessories can or will be attached or built in (for example related to consumer- or commercial-focused cargo capability and compatibility—see also Part H (Last-Mile Cargo Bike Container Relay Facilities)).
vi. Extent to which the solution(s) is or would be co-located with, embedded within, or otherwise associated with:
    1. Direct or traditional bike activity such as sales, accessories, and repairs; and
    2. Other activity such as event hosting, and sublets or other agreements (and whether such agreements would be best suited to complementary or non-complementary uses).
vii. Cost and pricing:
    1. In general.
    2. For supply of bikes:
        a. To the consumer: From the beginning through the provision of the bike to the recipient, and from that point through the anticipated ongoing customer relationship; basic structure of the contractual relationship and its stages (including discussion of warranties and other duration-related factors) (please note that a bicycle registration system is not contemplated in this RFEI).
        b. Vis-à-vis the City: Extent to which the Concessionaire's supplying of bikes (to the consumer or to the City) would serve as an in-kind contribution to the City; terms on which such contribution would be credited (e.g., Concessionaire receiving credit at the wholesale price of the bikes it provides to consumers, in lieu of what would otherwise be a minimum annual guaranteed cash payment to the City as part of a concession contract the Concessionaire has with the City). How such terms would be established initially and maintained over the life of an agreement.

c. Location and site selection; multi-site scalability; anticipated catchment area of a given site; demographics (in general and in terms of existing and anticipated bicycle use); suitability in different levels of population density and day part activity

(including a discussion of business hours); seasonality; discussion of number and size of intended sites needed for coverage of a given broader area (such as a neighborhood or borough or within a radius) or the city overall, including discussion of retail-focused locations and non-customer-facing repair locations.

d. Supporting facilities required to supply a site or multiple sites, and general discussion of intended or existing locations of such supporting facilities (see also (4)(d), below, regarding interaction with the wider transportation system).
e. Volume of vehicular, pedestrian, cyclist, or other trips for drop-off, pick-up, servicing, and other purposes; parking; anticipated types of conveyances and mode share.
f. Zoning: extent to which suitability in New York City's range of zoning districts has been considered (please visit https://www1.nyc.gov/site/planning/zoning/districts-tools.page for more information about zoning districts).

3. Physical plant (for customer-facing and non-customer-facing locations) and technology:
    a. More detailed overview (if necessary).
    b. More detailed discussion (if necessary) of:
        i. Layout, including diagram(s); same-site extensibility.
        ii. Machines and other equipment, and intended function of each.
        iii. Physical structures, if any, and intended function for each.
        iv. Technology standards and applications intended to be used (both underlying and user-facing).
    c. Discussion of minimum and maximum site footprint; dimensions (including suitability on lots with non-standard shapes and sizes).
    d. Discussion of suitability of the solution(s) in various building and lot conditions, including host structure types (permanent buildings, temporary structures, vacant land), grade, dryness, pavement, and utilities; extent of required supporting infrastructure; required street widths, sidewalks, vehicle turning radii, and size and number of points of ingress and egress. Discussion of the extent to which the greatest possible functionality will be derived from each unit of expenditure.
    e. Lighting; security (if not addressed elsewhere).
    f. Dust, noise, illumination, and other emanations: description or other details of type or extent; day parts or hours; radius; intensity (and means of measurement if any); mitigation methods to be used.
    g. Discussion of suitability of the solution(s) in various weather and environmental conditions; anticipated capacity to maintain structural integrity and remain operational during and after adverse events.
    h. Extent to which the New York City Building Code and related regulations have been considered; extent to which the New York

City Department of Buildings has been or is intended to be engaged.

4. Larger context:
    a. More detailed overview (if necessary).
    b. Discussion of ancillary or complementary goods and services which would be anticipated to be provided to customers, and the manner in which such goods and services would be offered.
    c. Discussion of complementary uses, including but not limited to ideal or suitable other uses at a given site or nearby.
    d. Interaction of the solution(s) with the larger transportation system, and with the industries and areas served from a given site or group of sites.
    e. Aspects of the solution(s) which are not covered elsewhere in this RFEI but which the respondent would like to emphasize (please note that the respondent is free to submit a solution(s) which diverges from the concept of the RFEI as the respondent understands it).
    f. Pilot project(s) (existing or suggested).
5. Viability and financing:
    a. Overview of the general approach to financing, including order-of-magnitude estimates of project cost (initial and expansion), anticipated revenue, length of agreement, future capital improvements, maintenance, and useful life; discussion of factors affecting viability of intended financial approach.
    b. Discussion of factors affecting viability of the intended solution(s), including but not limited to stage of development, extent of existing installed base, known or anticipated issues of stability and security, legal and regulatory matters, and risks to buildout and operation.
6. Photographs, illustrations, and renderings (if not included elsewhere).
7. Supporting documentation (optional):
    a. Provide any supporting documentation, including details about precedent projects, as an appendix to this part of the RFEI.

[ii] Compare https://www.transalt.org/issues/bike/bikefaq ("In any given month, more than 500,000 adult New Yorkers use their bicycles more than twice for exercise or transportation") with https://bicycledutch.wordpress.com/2018/01/02/dutch-cycling-figures/ ("bicycles are owned by 84% of the Dutch").

[iii] See, e.g., https://slate.com/technology/2019/07/ofo-spin-lime-bike-share-recycle.html; https://www.scmp.com/news/asia/southeast-asia/article/3015424/myanmar-schoolchildren-breathe-new-life-disused-bicycles ("[W]hen Mike heard that bike-sharing companies oBike, Ofo and Mobike had pulled out from Singapore and Malaysia, leaving thousands of bicycles in "graveyards", he grabbed his chance"; "Each cycle cost him just US$35, including shipping and distribution, and he footed half the bill, with the other half coming from sponsors."); https://www.theatlantic.com/photo/2018/03/bike-share-oversupply-in-china-huge-piles-of-abandoned-and-broken-bicycles/556268/; https://www.thatsmags.com/shanghai/post/17905/aerial-photos-capture-shanghai-s-bike-share-graveyard.

[iv] See https://www.weforum.org/agenda/2017/03/this-bike-sharing-app-is-revolutionizing-travel-in-china ("Ofo, meanwhile, is dedicated not just to producing its own bikes, which have slim yellow bodies and cost about 250 yuan ($36)…")

NYC DCAS
Citywide Administrative Services

NYC DCAS
BIKE RFEI
PART C

SMALL-SCALE BIKE REPAIR

PART C:
SMALL-SCALE BIKE REPAIR

Part C Overview:

In various localities around the country and world, there are self-service machines or areas where someone can wash a bike, fill the tires with air, and do small repairs. For example, at some gas stations in Copenhagen one can find a several-foot-wide "Cykelpleje" (bicycle care) installation fixed on an outdoor wall,[v] and in many countries and throughout the United States there are "bicycle repair stations" consisting of one or two stand-alone cylinders built into the ground.[vi]

In many places there are roadside bike repair stands where an individual does repairs for riders on the go. Also there are mobile bike repair businesses where the operator (sometimes using a cargo bike) either goes to the customer or can be found at one or more locations.[vii] In Spain and numerous Latin American countries it is not uncommon to find a "taller móvil de bicicletas."[viii]

In the bike repair ecosystem, small-scale bike repair facilities tend to serve as a complement to larger-scale facilities where it is more likely that a full range of services will be offered, although the offerings of some small facilities are quite substantial. Self-service facilities tend to be offered as an amenity to residents, workers, and visitors in a given location, or as a complement to a business's existing offerings to increase foot traffic.

DCAS seeks responses regarding solutions whose result would be the creation and operation of self-serve and full-serve small-scale bike repair facilities on City property. Among the factors of interest to DCAS is the viability of such facilities on lots which are small, oddly shaped, sloping, and/or which have little or no utility access. For the physical infrastructure associated with these facilities, durability is a key factor, as is ensuring that the tools and other equipment are well matched to the bikes on which they will be used.

DCAS welcomes responses from all interested parties, including but not limited to:

- Providers of small-scale bicycle repair services and equipment, and providers of bicycle repair services and equipment more generally.
- Manufacturers or outfitters of cargo bikes or other conveyances suited for use in mobile bike repair services.
- Customers and suppliers to any of the above; organizations in adjacent industries.
- Organizations with expertise in urban transportation and mobility.
- Organizations which consider small-scale bicycle repair to be a complementary offering.
- Scholars, nonprofits, and associations.


Centrum


RIDE
LARRYVSHARRY.COM


POWERED BY
SRAM
PROFESSIONAL MOBILE BICYCLE REPAIR
General Repairs
Annual Maintenance

Part C Response:

vii. Contact information (see "RFEI Contents and Response Guidelines," above)
viii. Respondent overview (see "RFEI Contents and Response Guidelines," above)
ix. Intended solution(s) (note: respondents are encouraged to address all items; see "RFEI Contents and Response Guidelines," above):
    1. Overall:
        a. Concise conceptual overview of the respondent's small-scale bike repair solution(s).
        b. Summary of:
            i. Location and site selection; multi-site scalability.
            ii. Layout, including diagram(s); same-site extensibility.
            iii. Machines and other equipment, and intended function of each.
            iv. Physical structures, if any, and intended function of each.
            v. Technology standards and applications intended to be used (both underlying and user-facing).
        c. Brief description of the qualitative aspects of the solution(s).
        d. Key historical or other precedents or inspiration (if any).
        e. Applicability of the concept of good value for money.
    2. Markets and coverage area:
        a. More detailed overview (if necessary).
        b. Products and services intended to be offered, and target markets.
            i. More detailed overview (if necessary).
            ii. Extent and method of segmentation, such as by demographic (e.g., adults, youth), rider purpose (e.g., appliance for everyday transportation, sporting goods for racing), customer type (e.g., personal, small commercial, fleet), and product type (e.g., standard, e-bike, cargo bike).
            iii. Discussion of bicycle and component types, brands, and tooling; standardization and economies of scale.
            iv. Extent to which the solution(s) is or would be co-located with, embedded within, or otherwise associated with:
                1. Direct or traditional bike activity such as sales, accessories, and repairs; and
                2. Other activity such as event hosting, and sublets or other agreements (and whether such agreements would be best suited to complementary or non-complementary uses).

                (See also (4)(b)-(c), below, regarding ancillary and complementary goods, services, and uses.)
            v. Cost and pricing:
                1. Cost of buildout and maintenance of site.
                2. Pricing or other means of monetization of service.

3. Ideal uses or businesses with which the solution(s) would share premises (to drive traffic to the solution(s) and vice versa; this section can be applicable to all respondents but is especially relevant to respondents whose solutions are not intended to generate revenue in and of themselves) (see also (4)(b)-(c), below, regarding ancillary and complementary goods, services, and uses).

c. Location and site selection; multi-site scalability; anticipated catchment area of a given site; demographics (in general and in terms of existing and anticipated bicycle use); suitability in different levels of population density and day part activity (including a discussion of business hours); seasonality; discussion of number and size of intended sites needed for coverage of a given broader area (such as a neighborhood or borough or within a radius) or the city overall.

d. Supporting facilities required to supply a site or multiple sites, and general discussion of intended or existing locations of such supporting facilities (see also (4)(d), below, regarding interaction with the wider transportation system).

e. Volume of vehicular, pedestrian, cyclist, or other trips for drop-off, pick-up, servicing, and other purposes; parking; anticipated types of conveyances and mode share.

f. Zoning: extent to which suitability in New York City's range of zoning districts has been considered (please visit https://www1.nyc.gov/site/planning/zoning/districts-tools.page for more information about zoning districts).

3. Physical plant and technology:

a. More detailed overview (if necessary).

b. More detailed discussion (if necessary) of:

i. Layout, including diagram(s); same-site extensibility.

ii. Machines and other equipment, and intended function of each.

iii. Physical structures, and intended function of each.

iv. Technology standards and applications intended to be used (both underlying and user-facing).

c. Discussion of minimum and maximum site footprint; dimensions (including suitability on lots with non-standard shapes and sizes).

d. Discussion of suitability of the solution(s) in various building and lot conditions, including host structure types (permanent buildings, temporary structures, vacant land, poles, party walls), grade, dryness, pavement, and utilities; extent of required supporting infrastructure; required street widths, sidewalks, vehicle turning radii, and size and number of points of ingress and egress. Discussion of the extent to which the greatest possible functionality will be derived from each unit of expenditure.

e. Lighting; security (if not addressed elsewhere)

f. Dust, noise, illumination, and other emanations: description or other details of type or extent; day parts or hours; radius; intensity (and means of measurement if any); mitigation methods to be used.
g. Discussion of suitability of the solution(s) in various weather and environmental conditions; anticipated capacity to maintain structural integrity and remain operational during and after adverse events.
h. Extent to which the New York City Building Code and related regulations have been considered; extent to which the New York City Department of Buildings has been or is intended to be engaged.

4. Larger context:
    a. More detailed overview (if necessary).
    b. Discussion of ancillary or complementary goods and services which would be anticipated to be provided to customers, and the manner in which such goods and services would be offered.
    c. Discussion of complementary uses, including but not limited to ideal or suitable other uses at a given site or nearby.
    d. Interaction of the solution(s) with the larger transportation system, and with the industries and areas served from a given site or group of sites.
    e. Aspects of the solution(s) which are not covered elsewhere in this RFEI but which the respondent would like to emphasize (please note that the respondent is free to submit a solution(s) which diverges from the concept of the RFEI as the respondent understands it).
    f. Pilot project(s) (existing or suggested).
5. Viability and financing:
    a. Overview of the general approach to financing, including order-of-magnitude estimates of project cost (initial and expansion), anticipated revenue, length of agreement, future capital improvements, maintenance, and useful life; discussion of factors affecting viability of intended financial approach.
    b. Discussion of factors affecting viability of the intended solution(s), including but not limited to stage of development, extent of existing installed base, known or anticipated issues of stability and security, legal and regulatory matters, and risks to buildout and operation.
6. Photographs, illustrations, and renderings (if not included elsewhere).
7. Supporting documentation (optional):
    a. Provide any supporting documentation, including details about precedent projects, as an appendix to this part of the RFEI.

[v] https://www.springwise.com/in-copenhagen-gas-stations-equipped-bicycle-care/

[vi] See, e.g., https://transportation.uiowa.edu/alternative-transportation/bikewalk/bicycle-repair-stations; https://ipo.rutgers.edu/dots/bike-repair.
[vii] See, e.g., https://www.oldspokeshome.com/mobile-repair-unit; https://www.wheelyconvenient.com/.
[viii] See, e.g., https://comunidad.socialab.com/challenges/emprendedoresqueimpactanchile/idea/134501.

NYC DCAS
BIKE RFEI
PART D

CARGO BIKE RENTAL

PART D:
CARGO BIKE RENTAL

Part D Overview:

DCAS seeks responses regarding solutions whose result would be the implementation and operation of facilities on City property at which customers will be able to rent cargo bikes.

In most places in the United States, including New York, when someone is moving, or purchasing a sizable item (perhaps electronics, furniture, or a household appliance), or when a business has to transport goods on a one-off basis, often the first thing that comes to mind is to rent a van or a small truck. To do so, it is often necessary for the customer to travel a fair distance in order to pick up the vehicle and also to return it when done. In addition, renting a motor vehicle can involve hurdles such as licensure and insurance, as well as cost. Some customers end up renting a van or truck even if they consider it excessive for the purpose, others attempt to carry goods by hand or with the help of small rolling devices, and still others find a way to avoid the underlying task altogether.

Cargo bikes can eliminate many of the pain points in these decisions. In some countries, especially Denmark and the Netherlands, people are more likely to think of whether a cargo bike would be appropriate in a given situation. Among the places whose constituents or visitors might be likely to find a cargo bike useful are universities, heavy-goods retailers, shopping centers, farmers' markets, transit hubs (airports, train stations, intercity bus stops, and busy subway/bus stations), industrial areas, and areas where residents or businesses move frequently.[ix]

DCAS is also interested in the extent to which containers mounted to cargo bikes can be made available for rent. (See Part H of this RFEI, "Last-Mile Cargo Bike Container Relay Facilities.")

DCAS welcomes responses from all interested parties, including but not limited to:

- Existing participants in the cargo bike rental industry.
- Customers of the cargo bike rental industry, businesses and others which view themselves (or their own customers or participants) as potential customers, and groups or associations whose members or constituents have needs which could be met by short-term use of cargo bikes (see above for examples).
- Organizations with expertise in the positioning and secure short-term storage of items which are several feet in length, width, or height, or which weigh up to several hundred pounds. (In addition to cargo bikes, such items could include, for example, parcels and bulks, motorcycles, all-terrain vehicles, snowmobiles, snowblowers, and lawnmowers.)
- Organizations in adjacent industries, such as van and truck rental.
- Organizations with expertise in urban freight transportation and mobility.
- Scholars, nonprofits, and associations.
- Shippers and recipients, including retailers and suppliers to retailers.

(Please see also Part A: Bike Retail and Rental.)


TOKE


SINDS 1842
HAMPE
PROVELO
RENTALS
ABUS
WERKPLAATS

Part D Response:

x. Contact information (see "RFEI Contents and Response Guidelines," above)
xi. Respondent overview (see "RFEI Contents and Response Guidelines," above)
xii. Intended solution(s) (note: respondents are encouraged to address all items; see "RFEI Contents and Response Guidelines," above):
    1. Overall:
        a. Concise conceptual overview of the respondent's cargo bike rental solution(s).
        b. Summary of:
            i. Location and site selection; multi-site scalability.
            ii. Layout, including diagram(s); same-site extensibility.
            iii. Machines and other equipment, and intended function of each.
            iv. Physical structures, if any, and intended function for each.
            v. Technology standards and applications intended to be used (both underlying and user-facing).
            vi. Characteristics of the cargo bikes intended to be used.
        c. Brief description of the qualitative aspects of the solution(s).
        d. Key historical or other precedents or inspiration (if any).
        e. Applicability of the concept of good value for money.
    2. Markets and coverage area:
        a. More detailed overview (if necessary).
        b. More detailed discussion of the characteristics of the cargo bikes, and other types of bikes or conveyances (if any) intended to be used.
            i. Discussion of the extent to which cargo bike containers, for mounting on cargo bikes, are intended to be used, and the extent to which these are intended to be offered separately from the cargo bikes themselves; characteristics of such containers.
        c. Suitability of the solution(s) with regard to:
            i. Types of businesses, institutions, and areas (including demographic characteristics) served; intended physical proximity to these; anticipated relationship to these (contractual or otherwise), if any.
            ii. Cargo volume, capacity, dimensions and weights.
            iii. Temperature control, perishables, and consumables.
            iv. Delicate, sensitive, restricted, secure, hazardous, and dangerous goods.
            v. Time windows and periods; reservations and walk-ups; memberships or other multi-use or multi-period programs.
        d. Location and site selection; multi-site scalability; anticipated catchment area of a given site; suitability in different levels of population density and day part activity (including a discussion of business hours); seasonality; pricing; discussion of number and

size of intended sites needed for coverage of a given broader area (such as a neighborhood or borough or within a radius) or the city overall.

e. Supporting facilities required to supply a site or multiple sites, and general discussion of intended or existing locations of such supporting facilities (see also (4)(d), below, regarding interaction with the wider transportation system).
f. Volume of vehicular, pedestrian, cyclist, or other trips for drop-off, pick-up, servicing, rebalancing, and other purposes; parking; anticipated types of conveyances and mode share.
g. Zoning: extent to which suitability in New York City's range of zoning districts has been considered (please visit https://www1.nyc.gov/site/planning/zoning/districts-tools.page for more information about zoning districts).

3. Physical plant and technology:
    a. More detailed overview (if necessary).
    b. More detailed discussion (if necessary) of:
        i. Layout, including diagram(s); same-site extensibility.
        ii. Machines and other equipment, and intended function of each.
        iii. Physical structures, if any, and intended function for each.
        iv. Technology standards and applications intended to be used (both underlying and user-facing).
    c. Discussion of minimum and maximum number of cargo bikes, size(s) of cargo bikes, height, and footprint.
    d. Discussion of suitability of the solution(s) in various building and lot conditions, including host structure types (permanent buildings, temporary structures, vacant land), grade, dryness, pavement, and utilities; extent of required supporting infrastructure; required street widths, sidewalks, vehicle turning radii, and size and number of points of ingress and egress.
    e. Lighting; security (if not addressed elsewhere).
    f. Dust, noise, illumination, and other emanations: description or other details of type or extent; day parts or hours; radius; intensity (and means of measurement if any); mitigation methods to be used.
    g. Discussion of suitability of the solution(s) in various weather and environmental conditions; anticipated capacity to maintain structural integrity and remain operational during and after adverse events.
    h. Extent to which the New York City Building Code and related regulations have been considered; extent to which the New York City Department of Buildings has been or is intended to be engaged.
4. Larger context:
    a. More detailed overview (if necessary).

b. Discussion of ancillary or complementary goods and services which would be anticipated to be provided to customers (for example, provision of helmets, moving supplies, weather protection, insurance), and the manner in which such goods and services would be offered.
c. Discussion of complementary uses, including but not limited to ideal or suitable other uses at a given site or nearby.
d. Interaction of the solution(s) with the larger transportation system, and with the industries and areas served from a given site or group of sites.
e. Aspects of the solution(s) which are not covered elsewhere in this RFEI but which the respondent would like to emphasize (please note that the respondent is free to submit a solution(s) which diverges from the concept of the RFEI as the respondent understands it).
f. Pilot project(s) (existing or suggested).

5. Viability and financing:
    a. Overview of the general approach to financing, including order-of-magnitude estimates of project cost (initial and expansion), anticipated revenue, length of agreement, future capital improvements, maintenance, and useful life (of physical installation and cargo bikes); discussion of factors affecting viability of intended financial approach.
    b. Discussion of factors affecting viability of the intended solution(s), including but not limited to stage of development, extent of existing installed base, interoperability with other systems and technologies, known or anticipated issues of stability and security, legal and regulatory matters, and risks to buildout and operation.

xiii. Photographs, illustrations, and renderings (if not included elsewhere).
xiv. Supporting documentation (optional):
    1. Provide any supporting documentation, including details about precedent projects, as an appendix to this part of the RFEI.

[ix] Regarding the range of potential uses of cargo bikes, see, e.g., Colville-Andersen, Mikael. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism.* Second edition, Island Press, 2018 at pp.232-35.


NYC DCAS
Citywide Administrative Services
FOD PÅ FØDDER

NYC DCAS
BIKE RFEI
PART E

SECURE BIKE PARKING

PART E:
SECURE BIKE PARKING

Part E Overview:

From standard-sized bicycles owned by individuals to large cargo bikes that are part of fleets, just about every bike in New York has led its rider to think about the best place to park it—both during its hours of active operation and off-hours storage.

DCAS seeks responses regarding solutions whose result would be the creation and operation of commercially and technologically viable facilities at which customers will be able to securely park bikes, e-bikes, cargo bikes and other bicycle-based freight vehicles, and other such conveyances (all of which, for purposes of this part of the RFEI, are referred to as "bikes" or "bicycles" unless otherwise noted). DCAS is interested in responses geared toward a single size or type of bicycle (for example, to standard-sized bicycles only, or for cargo tricycles), as well as those suitable for multiple sizes or types.

The following are among the key criteria for secure bike parking:

- Secure: provides security for individual bicycles via a locking system operated by the rider (respondents should note that solutions that do not provide security for individual bicycles are not encouraged—except for solutions geared to fleet operators which are responsible for the security of multiple bicycles)
- Easy to use
- Inexpensive to construct and install, to operate and maintain, and to use:
  - Incorporates tried-and-true existing materials and technology, including for power supply, locking, and payments, as well as for the unit itself
  - Consists of components that are readily available from multiple sources at a reasonable price, and require minimal or no specialized skills to install or replace
  - Priced low enough that a user is comfortable paying to use it:
    - Per month, at one location selected by the user; and
    - Per use, multiple times per day when traveling throughout the city, even if the user is not also a monthly customer.
- Long-lasting: has an anticipated useful life of at least 15 years
- Provides protection from the elements (although solutions without such protection are welcome, especially if they provide a high degree of security at a low price)
- Provides visibility to the interior of a unit sufficient for a passerby to see that a given unit is occupied (this is in addition to an indicator on or near the lock indicating whether or not the unit is available).

DCAS welcomes responses from all interested parties, including but not limited to:

- Existing participants in the secure bike parking industry, including suppliers of equipment and technology, as well as other organizations whose products or services could be used or adapted for use in secure bike parking. Larger items with respect to which expertise in positioning and secure storage might translate to this context include parcels and bulks, motorcycles, all-terrain vehicles, snowmobiles, snowblowers, and lawnmowers.
- Customers of the secure bike parking industry, businesses and others which view themselves (or their own customers or participants) as potential customers, and groups or associations whose

members or constituents have needs which could be met by the availability of secure bike parking, whether on a short- or long-term basis.

- Organizations in adjacent industries, such as motor vehicle parking.
- Organizations with expertise in urban transportation and mobility.
- Scholars, nonprofits, and associations.
- Shippers and recipients, including retailers and suppliers to retailers.


Fahrradbox
P


DRAPER TERMINAL
INTERLOCKING
UTA RIDESHARE


Dieser Raum wird
videoüberwacht

Part E Response:

xv. Contact information (see "RFEI Contents and Response Guidelines," above)
xvi. Respondent overview (see "RFEI Contents and Response Guidelines," above)
xvii. Intended solution(s) (note: respondents are encouraged to address all items; see "RFEI Contents and Response Guidelines," above):
    1. Overall:
        a. Concise conceptual overview of the respondent's secure bike parking solution(s).
        b. Summary of:
            i. Location and site selection; multi-site scalability.
            ii. Layout, including diagram(s); same-site extensibility.
            iii. Machines and other equipment, and intended function of each.
            iv. Physical structures, if any, and intended function for each.
            v. Technology standards and applications intended to be used (both underlying and user-facing).
        c. Characteristics of the bikes and other conveyances suitable for the solution(s).
        d. Brief description of the qualitative aspects of the solution(s).
        e. Key historical or other precedents or inspiration (if any).
        f. Applicability of the concept of good value for money.
    2. Markets and coverage area:
        a. More detailed overview (if necessary).
        b. Suitability of the solution(s) with regard to:
            i. Types of businesses, institutions, and areas (including demographic characteristics) served; intended physical proximity to these; anticipated relationship to these (contractual or otherwise), if any.
            ii. Cargo volume, dimensions, and weights of bikes and other conveyances anticipated to use the solution(s).
            iii. Temperature control, perishables, and consumables.
            iv. Delicate, sensitive, restricted, secure, hazardous, and dangerous goods.
            v. Time windows and periods; reservations and walk-ups; memberships or other multi-use or multi-period programs.
        c. Payment methods; integration or coordination with other products or services. (See also "pricing," below.)
        d. Additional products or services intended to be offered along with or as part of the solution(s); amenities intended to be offered or provided; whether these products, services, and amenities would be free or paid.
        e. Additional markets potentially or intended to be served by the solution(s) (if not discussed elsewhere); differences and potential conflicts between secure bike parking and these.

f. Location and site selection; multi-site scalability; anticipated catchment area of a given site; suitability in different levels of population density and day part activity (including a discussion of business hours); seasonality; pricing; discussion of number and size of intended sites needed for coverage of a given broader area (such as a neighborhood or borough or within a radius) or the city overall.
g. Supporting facilities required to supply a site or multiple sites, and general discussion of intended or existing locations of such supporting facilities (see also (4)(d), below, regarding interaction with the wider transportation system).
h. Volume of vehicular, pedestrian, cyclist, or other trips for drop-off, pick-up, servicing, and other purposes; parking; anticipated types of conveyances and mode share.
i. Zoning: extent to which suitability in New York City's range of zoning districts has been considered (please visit https://www1.nyc.gov/site/planning/zoning/districts-tools.page for more information about zoning districts).

3. Physical plant:
    a. More detailed overview (if necessary).
    b. More detailed discussion (if necessary) of:
        i. Layout, including diagram(s); same-site extensibility.
        ii. Machines and other equipment, and intended function of each; how bikes/conveyances are moved in, placed, stored, and moved out.
        iii. Physical structures, if any, and intended function for each.
        iv. Technology standards and applications intended to be used (both underlying and user-facing).
    c. Discussion of minimum and maximum capacity in terms of bikes/conveyances per structure and per site, and of a network of sites; height and footprint.
    d. Securing bikes/conveyances:
        i. Physical, personal, and other means of providing security; lock hardware and software, and how operated (see also (3)(b)(iv), above, regarding technology standards and applications); staffing and monitoring.
        ii. Distinction, if any, between security for a facility, for all bikes/conveyances in the facility, and for each bike/conveyance individually; means of customer access to the facility (if applicable) (for example, key, key fob, card).
        iii. Insurance or guarantee, and means of providing.
        iv. Theft and security statistics or track record of existing installations (if any).
    e. Discussion of suitability of the solution(s) in various building and lot conditions, including host structure types (permanent buildings, temporary structures, vacant land), grade, dryness,

pavement, and utilities; extent of required supporting infrastructure; required street widths, sidewalks, vehicle turning radii, and size and number of points of ingress and egress.

f. Dust, noise, illumination, and other emanations: description or other details of type or extent; day parts or hours; radius; intensity (and means of measurement if any); mitigation methods to be used.

g. Discussion of suitability of the solution(s) in various weather and environmental conditions; anticipated capacity to maintain structural integrity and remain operational during and after adverse events.

h. Extent to which the New York City Building Code and related regulations have been considered; extent to which the New York City Department of Buildings has been or is intended to be engaged.

4. Larger context:
    a. More detailed overview (if necessary).
    b. Discussion of ancillary or complementary goods and services which would be anticipated to be provided to secure bike parking customers, and the manner in which such goods and services would be offered.
    c. Discussion of complementary uses, including but not limited to ideal or suitable other uses at a given site or nearby.
    d. Interaction of the solution(s) with the larger transportation system, and with the industries and areas served from a given site or group of sites.
    e. Aspects of the solution(s) which are not covered elsewhere in this RFEI but which the respondent would like to emphasize (please note that the respondent is free to submit a solution(s) which diverges from the concept of the RFEI as the respondent understands it).
    f. Pilot project(s) (existing or suggested).
5. Viability and financing:
    a. Overview of the general approach to financing, including order-of-magnitude estimates of project cost (initial and expansion), anticipated revenue, length of agreement, future capital improvements, maintenance, and useful life; discussion of factors affecting viability of intended financial approach.
    b. Discussion of factors affecting viability of the intended solution(s), including but not limited to stage of development, extent of existing installed base, interoperability with other systems and technologies, known or anticipated issues of stability and security, legal and regulatory matters, and risks to buildout and operation.
6. Photographs, illustrations, and renderings (if not included elsewhere).
7. Supporting documentation (optional):
    a. Provide any supporting documentation, including details about precedent projects, as an appendix to this part of the RFEI.


BIKE PARKING
BIKE
Only pennies per hour!
What you get:
Secure bike parking where and when you need it. Keep your bike and helmet dry.
Pay only for time used; no monthly or annual fee. Card never expires.
BikeLink™ card works at over 160 BikeLink™ locations.
24-hour user support.
Park for a few hours, overnight, or for several days.
Press button on locker for more details.
How it works:
Get a BikeLink™ card
Insert card, start rental
Park your bike
End rental

NYC DCAS
Citywide Administrative Services

LAST-MILE BIKE RENTAL

NYC DCAS
BIKE RFEI
PART F

PART F:
LAST-MILE BIKE RENTAL

Part F Overview:

Many people's transit journeys within New York City have a destination and/or point of origin which is not in close proximity to fast, reliable, and affordable public transportation. This is especially the case for people traveling to, from, or between outlying areas of the city, and for reverse commuters. In several foreign countries, and in some US cities as well, systems by which a public transit traveler can rent a bike for the "last mile" from the station to destination and back are in various stages of implementation. In some parts of the world these are known as "BiTiBi" (bike-train-bike) services if a train is the mode of public transit used by the customer. Well-developed examples include OV-Fiets in the Netherlands and Blue-Bike in Belgium.

DCAS seeks responses regarding solutions whose result would be the creation and operation on City property of commercially and technologically viable last-mile commuter bike rental facilities—either individually or as a network or system—where a user can rent a bike (or possibly an e-bike) for a round trip between (a) a public transit stop and (b) a destination (or origin point) up to a few miles away.[x] A given public transit stop in New York could include train, bus, or van service, or some combination thereof.

DCAS welcomes responses from all interested parties, including but not limited to:

- Existing operators of, and service providers to, last-mile commuter bike rental facilities, or other facilities or infrastructure with similar characteristics.
- People and organizations which view themselves (or their own customers or participants) as potential customers, and groups or associations whose members or constituents have needs which could be met by last-mile commuter bike rental facilities.
- Businesses that thrive in locations in close proximity to last-mile commuter bike rental facilities.
- Organizations with expertise in mobility to and from locations just beyond the generally accepted range of transit commutes.
- Scholars, nonprofits, and associations.

Part F Response:

xviii. Contact information (see "RFEI Contents and Response Guidelines," above)
xix. Respondent overview (see "RFEI Contents and Response Guidelines," above)
xx. Intended solution(s) (note: respondents are encouraged to address all items; see "RFEI Contents and Response Guidelines," above):
    1. Overall:
        a. Concise conceptual overview of the respondent's last-mile bike rental solution(s).
        b. Summary of:
            i. Location and site selection (including discussion of likely riding radius of users); multi-site scalability.
            ii. Layout, including diagram(s); same-site extensibility.
            iii. Machines and other equipment, and intended function of each.
            iv. Physical structures, if any, and intended function for each.
            v. Technology standards and applications intended to be used (both underlying and user-facing).
        c. Characteristics of the bikes intended to be used, including discussion of the imperatives of low cost and high durability.
        d. Brief description of the qualitative aspects of the solution(s).
        e. Key historical or other precedents or inspiration (if any).
        f. Applicability of the concept of good value for money.
    2. Markets and coverage area:
        a. More detailed overview (if necessary).
        b. Suitability of the solution(s) with regard to
            i. Types of businesses, institutions, and areas served (including demographic characteristics); intended physical proximity to these; anticipated relationship to these (contractual or otherwise), if any.
            ii. Time windows and periods; reservations and walk-ups; memberships or other multi-use or multi-period programs; fees and charges.
        c. Location and site selection (including discussion of likely riding radius of users); multi-site scalability; anticipated catchment area of a given site; suitability in different levels of population density and day part activity; seasonality; discussion of number and size of intended sites needed for coverage of a given broader area (such as a neighborhood or borough or within a radius) or the city overall; discussion of how viability of a site is affected by mode of transit (e.g., subway, bus), frequency of service, and other transit quality and reliability factors.
        d. Supporting facilities required to supply a site or multiple sites, and general discussion of intended or existing locations of such supporting facilities (see also (4)(d), below, regarding interaction with the wider transportation system).

e. Volume of vehicular, pedestrian, cyclist, or other trips for drop-off, pick-up, servicing, and other purposes; parking; anticipated types of conveyances and mode share.
f. Zoning: extent to which suitability in New York City's range of zoning districts has been considered (please visit https://www1.nyc.gov/site/planning/zoning/districts-tools.page for more information about zoning districts).

3. Physical plant and technology:
   a. More detailed overview (if necessary).
   b. More detailed discussion (if necessary) of:
      i. Layout, including diagram(s); same-site extensibility.
      ii. Machines and other equipment, and intended function of each.
      iii. Physical structures, if any, and intended function for each, including discussion of the extent to which the greatest possible functionality will be derived from each unit of expenditure.
      iv. Technology standards and applications intended to be used (both underlying and user-facing), including discussion of payments and of security.
   c. Discussion of minimum and maximum number of bikes, size(s) of bikes; storage mechanisms, including horizontal and vertical.
   d. Discussion of customers' and personnel's physical access to bikes and facilities.
   e. Discussion of suitability of the solution(s) in various building and lot conditions, including host structure types (permanent buildings, temporary structures, vacant land), grade, dryness, pavement, and utilities; extent of required supporting infrastructure; required street widths, sidewalks, vehicle turning radii, and size and number of points of ingress and egress.
   f. Lighting; security (if not addressed elsewhere).
   g. Dust, noise, illumination, and other emanations: description or other details of type or extent; day parts or hours; radius; intensity (and means of measurement if any); mitigation methods to be used.
   h. Discussion of suitability of the solution(s) in various weather and environmental conditions; anticipated capacity to maintain structural integrity and remain operational during and after adverse events.
   i. Extent to which the New York City Building Code and related regulations have been considered; extent to which the New York City Department of Buildings has been or is intended to be engaged.

4. Larger context:
   a. More detailed overview (if necessary).
   b. Discussion of ancillary or complementary goods and services which would be anticipated to be provided to last-mile bike

rental customers, and the manner in which such goods and services would be offered.

c. Discussion of complementary uses, including but not limited to ideal or suitable other uses at a given site or nearby.
d. Interaction of the solution(s) with the larger transportation system, and with the industries and areas served from a given site or group of sites.
e. Aspects of the solution(s) which are not covered elsewhere in this RFEI but which the respondent would like to emphasize (please note that the respondent is free to submit a solution(s) which diverges from the concept of the RFEI as the respondent understands it).
f. Pilot project(s) (existing or suggested).

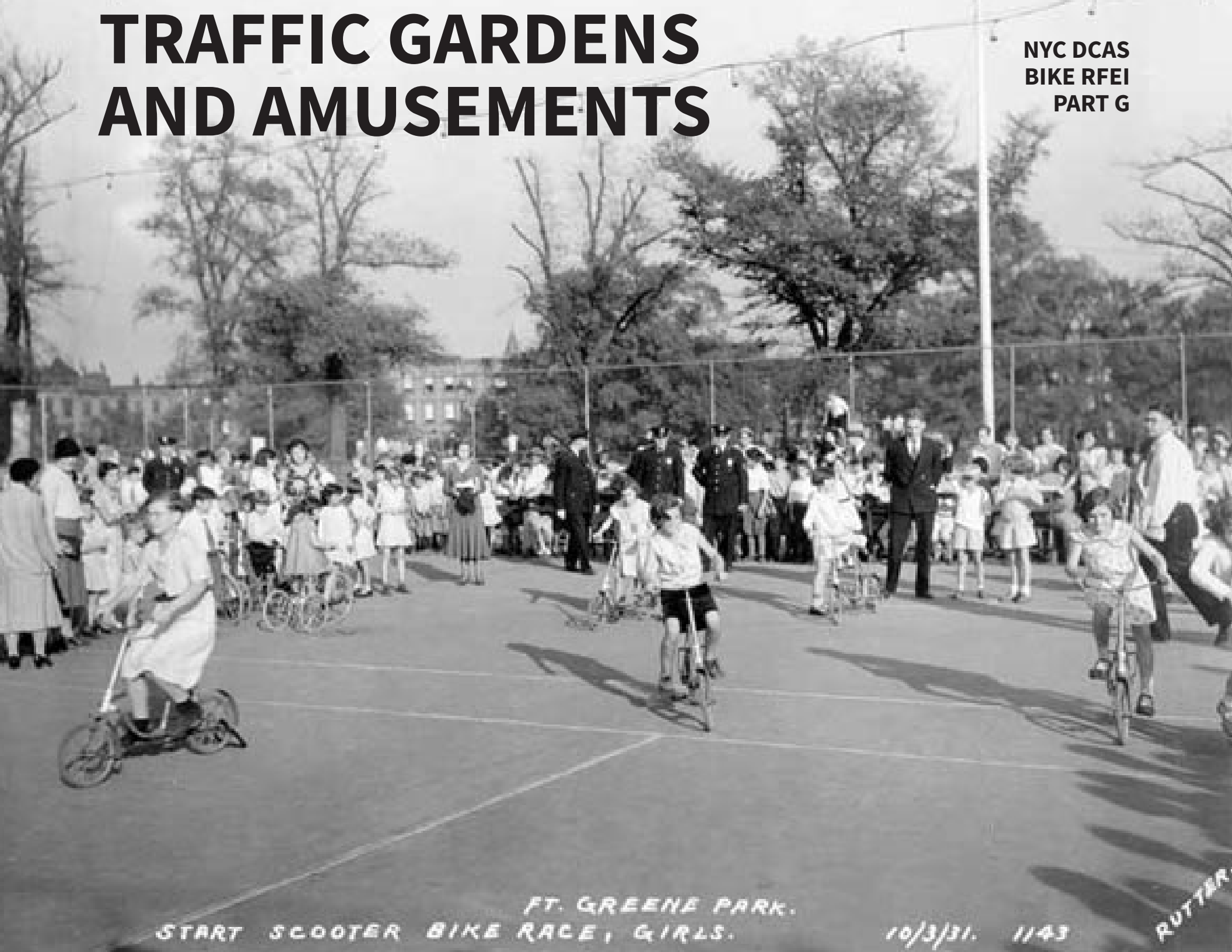
5. Viability and financing:
    a. Overview of the general approach to financing, including order-of-magnitude estimates of project cost (initial and expansion), anticipated revenue (direct and ancillary), length of agreement, future capital improvements, maintenance, and useful life (of physical installation and bikes); discussion of factors affecting viability of intended financial approach.
    b. Discussion of factors affecting viability of the intended solution(s), including but not limited to stage of development, extent of existing installed base, interoperability with other systems and technologies, known or anticipated issues of stability and security, legal and regulatory matters, and risks to buildout and operation.
6. Photographs, illustrations, and renderings (if not included elsewhere).
7. Supporting documentation (optional):
    a. Provide any supporting documentation, including details about precedent projects, as an appendix to this part of the RFEI.

[x] Per Dutch cycling expert Sjors van Duren, a trip of 3 miles on a bike or 6 miles on an e-bike is within the capability of a novice cyclist in a place where bike infrastructure is very good. (Bruntlett, Melissa, and Chris Bruntlett. *Building the Cycling City: The Dutch Blueprint for Urban Vitality.* Island Press, 2018 at pp.86-87.)


NYC DCAS
Citywide Administrative Services

TRAFFIC GARDENS AND AMUSEMENTS

NYC DCAS
BIKE RFEI
PART G



PART G:
TRAFFIC GARDENS AND AMUSEMENTS

Part G Overview:

A traffic garden (also known as a "traffic playground," "safety town," or "trike town") is a car-free place where children up to around early middle-school age can become accustomed to navigating streets by riding or driving child-friendly vehicles, often including bikes.[xi] Designs vary—from painted asphalt on repurposed tennis courts to elaborate attractions at amusement parks—as do definitions, but any traffic garden is likely to contain paths which mimic the layout of streets, including street signs, lights, crosswalks, and other features which a rider is bound to encounter riding a bike on a public way. Some traffic gardens also have other smaller-scale facsimiles of components of the built environment, such as buildings and water—and in some cases are able to incorporate preexisting land or water features, therefore serving as a highly viable use for such property. In many jurisdictions, traffic gardens are used as venues for field trips on which students take bicycle safety tests.[xii] Also in some instances, at times of day when it is not in formal educational use, parents can bring their children independently.

DCAS seeks responses regarding solutions whose result would be the creation and operation of traffic gardens on City property. It is anticipated that a licensee will build a traffic garden and the retail associated with it. The associated retail could include food and beverage (potentially from food trucks or cargo bikes, or semi-permanent or permanent structures); bicycle sales, service, and accessories (especially geared toward the youth market); or other goods and services suited to the scale and concept envisioned by the respondent. Proposals are welcome regardless of where they may fall on the spectrum between pavement and theme park. It is intended that any project resulting from such a solicitation provide the highest possible functionality per unit of expenditure.

DCAS welcomes responses from all interested parties, including but not limited to:

- Those with prior experience designing, building, or operating traffic gardens or similar venues.
- Organizations with expertise in landscape architecture, in particular on projects with youth-oriented and commercial components.
- Organizations with expertise in theme parks, museums, and other attractions for whom children 12 and under are a target demographic.
- Organizations interested in providing goods or services to visitors to traffic gardens.
- Organizations with expertise in bicycle skills education.
- Scholars, nonprofits, and associations.


STATOIL

Part G Response:

xxi. Contact information (see "RFEI Contents and Response Guidelines," above)
xxii. Respondent overview (see "RFEI Contents and Response Guidelines," above)
xxiii. Intended solution(s) (note: respondents are encouraged to address all items; see "RFEI Contents and Response Guidelines," above):

1. Overall:
    a. Concise conceptual overview of the respondent's traffic garden/amusement solution(s).
    b. Summary of:
        i. Location and site selection; multi-site scalability.
        ii. Layout, including diagram(s); same-site extensibility.
        iii. Machines and other equipment, and intended function of each.
        iv. Physical structures, if any, and intended function for each.
        v. Uses and activities.
        vi. Technology standards and applications intended to be used (both underlying and user-facing).
    c. Brief description of the qualitative aspects of the solution(s).
    d. Key historical or other precedents or inspiration (if any).
    e. Applicability of the concept of good value for money.
2. Markets and coverage area:
    a. More detailed overview (if necessary).
    b. General discussion of revenue model, and intended extent of association or integration of revenue-generating sources with the overall project, from both a concept perspective and a revenue perspective (see also (4)(b), below, regarding ancillary or complementary goods and services).
    c. Location and site selection; multi-site scalability; anticipated catchment area of a given site; suitability in different levels of population density and day part activity (including a discussion of opening hours); seasonality; discussion of number and size of intended sites needed for coverage of a given broader area (such as a neighborhood or borough or within a radius) or the city overall.
    d. Supporting or service facilities required to supply a site or multiple sites, and general discussion of intended or existing locations of such facilities.
    e. Volume of vehicular, pedestrian, cyclist, or other trips for drop-off, pick-up, servicing, rebalancing, and other purposes; parking; anticipated types of conveyances and mode share.
    f. Zoning: extent to which suitability in New York City's range of zoning districts has been considered (please visit https://www1.nyc.gov/site/planning/zoning/districts-tools.page for more information about zoning districts).
3. Physical plant and technology:
    a. More detailed overview (if necessary).

b. More detailed discussion (if necessary) of:
    i. Layout, including diagram(s); same-site extensibility.
    ii. Machines and other equipment, and intended function of each.
    iii. Physical structures, if any, and intended function for each. (It is possible for the "buildings" imitating real-life ones to also serve functional purposes.)
    iv. Uses and activities.
    v. Technology standards and applications intended to be used (both underlying and user-facing).
c. Discussion of minimum and maximum lot size and dimensions, for the traffic garden itself and for associated commercial and other activity.
d. Discussion of suitability of the solution(s) in various building and lot conditions, including host structure types (permanent buildings, temporary structures, vacant land), grade, dryness, pavement, and utilities; extent of required supporting infrastructure; required street widths, sidewalks, vehicle turning radii, and size and number of points of ingress and egress (with regard to accessing a site, not activity of patrons of the traffic garden while onsite). Discussion of the extent to which the greatest possible functionality will be derived from each unit of expenditure.
e. Lighting; security (if not addressed elsewhere).
f. Dust, noise, illumination, and other emanations: description or other details of type or extent; day parts or hours; radius; intensity (and means of measurement if any); mitigation methods to be used.
g. Discussion of suitability of the solution(s) in various weather and environmental conditions; anticipated capacity to maintain structural integrity and remain operational during and after adverse events.
h. Extent to which the New York City Building Code and related regulations have been considered; extent to which the New York City Department of Buildings has been or is intended to be engaged.

4. Larger context:
    a. More detailed overview (if necessary).
    b. Discussion of ancillary or complementary goods and services which would be anticipated to be provided to traffic garden visitors, and the manner in which such goods and services would be offered.
    c. Discussion of complementary uses, including but not limited to ideal or suitable other uses at a given site or nearby.
    d. Interaction of the solution(s) with the larger educational system (public, private, and non-school bicycle education or advocacy), and with the areas served from a given site or group of sites.

e. Aspects of the solution(s) which are not covered elsewhere in this RFEI but which the respondent would like to emphasize (please note that the respondent is free to submit a solution(s) which diverges from the concept of the RFEI as the respondent understands it).
f. Pilot project(s) (existing or suggested).

5. Viability and financing:
   a. Overview of the general approach to financing, including order-of-magnitude estimates of project cost (initial and expansion), anticipated revenue, length of agreement, future capital improvements, maintenance, and useful life; discussion of factors affecting viability of intended financial approach.
   b. Discussion of factors affecting viability of the intended solution(s), including but not limited to stage of development, extent of existing installed base, known or anticipated issues of stability and security, legal and regulatory matters, and risks to buildout and operation.

xxiv. Photographs, illustrations, and renderings (if not included elsewhere).

xxv. Supporting documentation (optional):
   1. Provide any supporting documentation, including details about precedent projects, as an appendix to this part of the RFEI.

[xi] See generally *Building the Cycling City: The Dutch Blueprint for Urban Vitality* at pp.200-04.

[xii] New York City currently has several locations where bike education or safety guidance more generally is provided (see, e.g., https://www.ny1.com/nyc/brooklyn/news/2019/08/08/program-teaching-bike-safety-to-city-students-will-expand; https://www1.nyc.gov/html/dot/html/about/safety-education.shtml).

NYC DCAS

Citywide Administrative Services

LAST-MILE CARGO BIKE CONTAINER RELAY FACILITIES

NYC DCAS BIKE RFEI PART H

PART H:
LAST-MILE CARGO BIKE CONTAINER RELAY FACILITIES

Part H Overview:

At present, most goods are transported into and within New York City by truck or by light commercial vehicle. Some goods are transported by bicycle, and there have been efforts by the City and couriers regarding the potential for an increase in deliveries by cargo bike.

In the past 10 to 20 years especially, businesses, scholars,[xiii] [xiv] [xv] governmental entities[xvi] (including with a focus on New York City[xvii]), and non-governmental organizations around the world have studied and made strides toward implementing scalable and cost-effective methods for non-motor-vehicle-based deliveries in urban areas.

Since its introduction in the 1950s, containerization has reduced shipping costs and made it more feasible to ship large volumes of goods long distances. One key element in the success of containerized shipping was the widespread adoption of standard-sized containers, which made it possible for a container to travel one way on one ship, be loaded onto a truck which delivers the goods to their destination still in the container, and make a return trip (or go somewhere else entirely) on another ship. In recent years advances have been made toward making shipping by cargo bike more efficient by incorporating principles of containerization.

In New York City and elsewhere, over the past several years the number of locker boxes where a recipient can pick up a parcel has increased.

DCAS seeks to engage and solicit information and feedback from interested parties regarding solutions whose result would be the identification of standards, design elements, and other factors to be incorporated into a system or network of facilities involving containers suitable for transport via cargo bike. In such a system or network, a given container would be received and relayed, its contents would be distributed to recipients, and it would subsequently be reloaded for outbound shipments. The information and feedback provided in responses to this part of the RFEI is intended to inform a future Request for Proposals ("RFP") or other solicitation for the creation and operation on City property of relay facilities where standard-sized cargo bike shipping containers will be dropped off and picked up, as well as supporting infrastructure. Such facilities would enable cost-effective deliveries by cargo bike to (or direct pickup at a relay facility within walking distance of) a very high percentage—ideally 100%—of the city's population and land area. It is intended that any project resulting from such a solicitation provide the highest possible functionality from the lowest possible level of expenditure.

DCAS welcomes responses from all interested parties, including but not limited to:

- Couriers, including those with established capability to pick up and deliver parcels of many types, sizes, and levels of urgency, to and from a wide range of locations, as well as those with specialized expertise in a particular geographic area or market segment, and those which provide courier service as a non-core offering (such as bus lines and airlines).
- Organizations with expertise in containerized shipping.
- Organizations with expertise in logistics, supply chain management, and freight forwarding.
- Organizations with expertise in urban freight transportation and mobility.

- Organizations with expertise in the positioning and secure short-term storage of items which are several feet in length, width, or height, or which weigh up to several hundred pounds. (In addition to parcels and bulks, such items could include, for example, bicycles, motorcycles, all-terrain vehicles, snowmobiles, snowblowers, and lawnmowers.)
- Shippers and recipients, including retailers and suppliers.
- Scholars, nonprofits, and associations.


TRITON
BRAID
logn.
SÜD
L2


MATERIAL
HANDLING
DRINK BEER OUTSIDE

Part H Response:

xxvi. Contact information (see "RFEI Contents and Response Guidelines," above)
xxvii. Respondent overview (see "RFEI Contents and Response Guidelines," above)
xxviii. Intended solution(s) (note: respondents are encouraged to address all items; see "RFEI Contents and Response Guidelines," above):
    1. Overall:
        a. Concise conceptual overview of the respondent's cargo bike container relay facility solution(s).
        b. Summary of:
            i. Location and site selection; multi-site scalability.
            ii. Layout, including diagram(s); same-site extensibility.
            iii. Machines and other equipment, and intended function of each.
            iv. Physical structures, if any, and intended function for each.
            v. Technology standards and applications intended to be used (both underlying and user-facing).
        c. Brief description of the qualitative aspects of the solution(s).
        d. Key historical or other precedents or inspiration (if any).
        e. Applicability of the concept of good value for money.
    2. Markets and coverage area:
        a. More detailed overview (if necessary).
        b. Products and services intended to be offered, and target markets.
            i. Extent and method of segmentation, including, for example:
                1. Suitability of the solution(s) with regard to:
                    a. Shipment volume, capacity, and package dimensions and weights.
                    b. Temperature control, perishables, and consumables.
                    c. Delicate, sensitive, restricted, secure, hazardous, and dangerous goods.
                    d. Types of goods, including but not limited to liquids and dry bulks.
                    e. Time sensitivity:
                        i. Urgency of shipment (extremely urgent to not time sensitive).
                        ii. Time windows (shortest viable time window; maximum time for goods to remain in a container relay location).
            ii. End-to-end flow of goods:
                1. List or diagram (see Appendix I for example).
                2. Commercial relationships between the participants (if not detailed in list or diagram, above).

iii. Discussion of a standard-sized bike cargo container ("SBC") as part of the solution(s):
    1. Overview.
    2. Dimensions and capacity.
    3. Materials
        a. Standard materials for base case SBC.
        b. Alternatives; use cases for these; impact on standardization and other issues. (See also "Adaptability", below.)
        c. Discussion of useful life, durability, repairs and maintenance (methods and facilities), and repurposing.
    4. Standardization (aspects not discussed elsewhere).
    5. Compatibility with existing or intended infrastructure, including:
        a. Standard shipping containers and trailers used for shipments by truck and for shipments by rail (e.g., 20', 40', 48', 53') (note: while deliveries using 53' trailers are illegal in New York City, compatibility with these trailers is nevertheless encouraged, and should be indicated).
        b. Pallets, intermediate bulk containers, and the like.
        c. Material handling equipment, for transport, positioning, unit load formation, and storage.
        d. Container lift systems.
        e. Buildings, including how the SBC or its contents can enter a building and move through it; methods of access to the building (if not discussed elsewhere) (for example, trolley, forklift, external hook); elevator vs. non-elevator buildings; safety and security; commercial/industrial and residential; limiting factors.
        f. Cargo bikes, including discussion of the range of cargo bikes on which the SBC can be carried; extent of as-built or purpose-built compatible cargo bikes; extent of use of chassis or other assembly separable from bikes; materials and tools necessary for adapting non-purpose-built cargo bikes to be able to carry the SBC; methods of

securing/harnessing (and comparison to method used inside the shipping container or trailer), and associated maximum speeds and capacities.

6. Adaptability, including with regard to different angles and methods of loading and unloading goods in the SBC; default angle (for example, top, side, or rear) and method; sub-containerization.
7. Extensibility, including the ability of a single cargo bike to carry more than one SBC.
8. Security and loss prevention.
    a. General discussion.
    b. SBC itself.
    c. Contents.
9. Storage, inspection, repair (see also (d), below, regarding supporting facilities).
10. Supporting infrastructure, including discussion of roads, lanes (bike lanes—including minimum width—and general travel lanes), and traffic conditions suitable for a cargo bike carrying the SBC (in general and with respect to day parts).

iv. Discussion of the container relay facility ("CRF") as part of the solution(s) (this section is for the structure itself; for the lot on which the structure would be located, please see "Physical plant", below):

1. Overview.
2. Dimensions and capacity.
3. Materials:
    a. Standard materials for base case CRF.
    b. Alternatives; use cases for these; impact on standardization and other issues. (See also "Adaptability", below.)
    c. Discussion of useful life, durability, repairs and maintenance.
4. Standardization (aspects not discussed elsewhere).
5. Adaptability, including with regard to different angles and methods of loading and unloading goods in the CRF; mechanics of loading and unloading SBC into and out of CRF, including discussion of equipment involved; mechanics of loading and unloading goods into and out of SBC without moving SBC from CRF; default angle and method.
6. Extensibility, including the ability to add capacity for more SBCs in a given CRF (or to shrink or remove SBCs).

7. Security and loss prevention:
    a. General discussion.
    b. CRF itself.
    c. Contents.
8. Storage (of parts etc.), inspection, repair (see also (d), below, regarding supporting facilities).
9. Supporting infrastructure (to the extent not discussed in "Physical plant", below).
10. Aesthetic considerations.
11. Noise (and mitigation techniques, if any).
12. Permanence and movability.
13. Potential for reuse or alternative uses.

v. More detailed discussion of technology:
    1. Standards and applications intended to be used (both underlying and user-facing).
    2. Interoperability with other technologies.
    3. Tracking and tracing.

vi. Cost and pricing (see also "viability and financing", below):
    1. Development/manufacture, operation, and maintenance of SBC, CRF, and host site.
    2. Use of SBC; use of CRF; general discussion of contractual arrangements, and allocation of costs between users.
    3. Economies of scope and scale.
    4. Insurance.

c. Location and site selection; multi-site scalability; anticipated catchment area of a given site; demographics; suitability in different levels of population density and day part activity (including a discussion of business hours/hours of operation); seasonality; discussion of number and size of intended sites needed for coverage of a given broader area (such as a neighborhood or borough or within a radius) or the city overall.
d. Supporting facilities required to supply a site or multiple sites, and general discussion of intended or existing locations of such supporting facilities (see also (4)(d), below, regarding interaction with the wider transportation system).
e. Discussion of interaction with, and proximity to, waterways/sea-based shipping infrastructure, airports/air-based shipping infrastructure (including, for example, compatibility with unit load devices (ULDs)) and, to the extent not covered elsewhere in the response, rail-based and truck-based shipping infrastructure (see also (4)(d), below, regarding interaction with the wider transportation system).
f. Volume of vehicular, pedestrian, cyclist, or other trips for drop-off, pick-up, servicing, and other purposes; parking; anticipated types of conveyances and mode share.

g. Zoning: extent to which suitability in New York City's range of zoning districts has been considered (please visit https://www1.nyc.gov/site/planning/zoning/districts-tools.page for more information about zoning districts).

3. Physical plant (for each type of facility included in the solution(s)):
    a. More detailed overview (if necessary).
    b. More detailed discussion (if necessary) of:
        i. Layout, including diagram(s); same-site extensibility.
        ii. Machines and other equipment, and intended function of each.
        iii. Physical structures, if any, and intended function for each.
    c. Discussion of minimum and maximum site footprint; dimensions (including suitability on lots with non-standard shapes and sizes).
    d. Discussion of suitability of the solution(s) in various building and lot conditions, including host structure types (permanent buildings, temporary structures, vacant land), grade, dryness, pavement, and utilities; extent of required supporting infrastructure; required street widths, sidewalks, vehicle turning radii, and size and number of points of ingress and egress. Discussion of the extent to which the greatest possible functionality will be derived from each unit of expenditure.
    e. Dust, noise, illumination, and other emanations: description or other details of type or extent; day parts or hours; radius; intensity (and means of measurement if any); mitigation methods to be used.
    f. Discussion of suitability of the solution(s) in various weather and environmental conditions; anticipated capacity to maintain structural integrity and remain operational during and after adverse events.
    g. Anticipated duration of use of a given location/facility (see also "Permanence and movability", above).
    h. Extent to which the New York City Building Code and related regulations have been considered; extent to which the New York City Department of Buildings has been or is intended to be engaged.
4. Larger context:
    a. More detailed overview (if necessary).
    b. Discussion of ancillary or complementary goods and services which would be anticipated to be provided to customers, and the manner in which such goods and services would be offered.
    c. Discussion of complementary uses, including but not limited to ideal or suitable other uses at a given site or nearby.
    d. Interaction of the solution(s) with the larger transportation system, and with the industries and areas served from a given site or group of sites.
    e. Aspects of the solution(s) which are not covered elsewhere in this RFEI but which the respondent would like to emphasize (please

note that the respondent is free to submit a solution(s) which diverges from the concept of the RFEI as the respondent understands it).

f. Pilot project(s) (existing or suggested).

5. Viability and financing:
    a. Overview of the general approach to financing, including order-of-magnitude estimates of project cost (initial and expansion), anticipated revenue, length of agreement, future capital improvements, maintenance, and useful life; discussion of factors affecting viability of intended financial approach.
    b. Discussion of factors affecting viability of the intended solution(s), including but not limited to stage of development, extent of existing installed base, known or anticipated issues of stability and security, legal and regulatory matters (including applicable conventions and standards), and risks to buildout and operation.
6. Photographs, illustrations, and renderings (if not included elsewhere).
7. Supporting documentation (optional):
    a. Provide any supporting documentation, including details about precedent projects, as an appendix to this part of the RFEI.

Part H
Appendix I
Example of flow of goods (using fictional details)

a. Early AM:
   i. 4 packages (Packages 1, 2, 3, and 4) arrive by truck at a large Global Express Corporation sorting facility in Carteret, New Jersey.
   ii. The 4 packages are loaded into a standard-sized bike cargo container ("SBC1"), pre-sorted (along with probably 50 more packages).
   iii. An SBC ("SBC2") arrives at the sorting facility, fully loaded with a cargo intended for a single customer, Joe's Restaurant in Greenpoint, Brooklyn.
   iv. A truck is loaded with 20 SBCs, including SBC1 and SBC2, to be delivered to relay facilities in Brooklyn.
   v. SBC1 and SBC2 are delivered by truck to a relay facility on Flushing Avenue in Brooklyn. (Each SBC is lifted from the truck and rolled on rails horizontally into a specified open space in the relay facility, each one sized to fit an SBC.)

b. SBC1:
   i. A cargo bike driver (Cargo Bike Driver 1) loads SBC1 onto his cargo bike.
   ii. Cargo Bike Driver 1 delivers Package 1 to a locker box at this same property.
   iii. Cargo Bike Driver 1 bikes to the destination of Package 2, a residential address in an apartment building, and delivers the package successfully.
   iv. Cargo Bike Driver 1 bikes to the destination of Packages 3 and 4 but is unable to deliver either package.
   v. Cargo Bike Driver 1 returns to the facility on Flushing Avenue, and checks Packages 3 and 4 with his mobile device to determine next steps for each.
   vi. Cargo Bike Driver 1 delivers Package 3 to a locker box at this same property.
   vii. Cargo Bike Driver 1 places Package 4 in an SBC ("SBC3") for outbound and returned parcels in the relay facility.
   viii. Cargo Bike Driver 1 loads SBC1 into a specified open space in the relay facility.
   ix. Late PM: A truck driver picks up SBC1 from the relay facility and brings it to the Global Express Corporation sorting facility in Carteret.

c. SBC2:
   i. A cargo bike driver (Cargo Bike Driver 2) loads SBC2 onto his cargo bike.
   ii. Cargo Bike Driver 2 delivers SBC2 to Joe's Restaurant (in a space at Joe's Restaurant suitable for receiving a delivery of this size but not necessarily purpose built).
   iii. Early PM: A cargo bike driver (Cargo Bike Driver 3) loads the emptied SBC2 onto his cargo bike.
   iv. Cargo Bike Driver 3 follows a specified route to pick up several outbound and returned parcels and load them into SBC2.
   v. Cargo Bike Driver 3 and brings SBC2 to a relay facility in Long Island City, Queens.
   vi. Late PM: A truck driver picks up SBC2 from the relay facility and brings it to a Global Express Corporation sorting facility in Stamford, Connecticut.

[xiii] See, e.g., Maes, Jochen. *The potential of cargo bicycle transport as a sustainable solution for urban logistics.* 2016. U of Antwerp, PhD dissertation. https://doc.anet.be/docman/docman.phtml?file=.irua.dffe74.12869.pdf. ("[I]t is concluded that the long-term economic sustainability of cargo bicycles for replacing LCVs [light commercial vehicles] in the CEP [Courier, Express, Parcel services] market is a challenge [note that the author points out elsewhere in the document that a higher volume of packages per cargo bike per day could make a given route viable vis-à-vis LCV]. Labour is the most important cost factor, increasing cargo bicycle's delivery costs considerably. Scenarios showed that the vehicle cost is relatively less important. The fuel consumption is less relevant than expected, so is the diesel price. The 'Post & CEP' market has the biggest possible market volume for cargo bicycles, and the boom in e-commerce shows a lot of potential growth. But niche markets exist too, e.g. own account transport, heavy load cargo bike transport and A-B trajectories in the courier market. They are however smaller than the CEP market, and were therefore not analysed into detail in this research. In the specific markets of less stops a day per company, delivery costs are high for both modes. E.g. own-account transport will benefit of deploying cargo bikes as an alternative to their own LCV." "The policy makers willing to increase cargo bicycle use can in addition show the good example and shift city vehicles to cargo bikes (internal mail, repairs, greenery, etc.)").

[xiv] See, e.g., Sheth, Manali, et. al. "Measuring delivery route cost trade-offs between electric-assist cargo bicycles and delivery trucks in dense urban areas." *European Transport Research Review* 11, Article number: 11, 2019, https://www.researchgate.net/publication/331077167_Measuring_delivery_route_cost_trade-offs_between_electric-assist_cargo_bicycles_and_delivery_trucks_in_dense_urban_areas. (Abstract: "Introduction[:] Completing urban freight deliveries is increasingly a challenge in congested urban areas, particularly when delivery trucks are required to meet time windows. Depending on the route characteristics, Electric Assist (EA) cargo bicycles may serve as an economically viable alternative to delivery trucks. The purpose of this paper is to compare the delivery route cost trade-offs between box delivery trucks and EA cargo bicycles that have the same route and delivery characteristics, and to explore the question, under what conditions do EA cargo bikes perform at a lower cost than typical delivery trucks? Methods The independent variables, constant variables, and assumptions used for the cost function comparison model were gathered through data collection and a literature review. A delivery route in Seattle was observed and used as the base case; the same route was then modelled using EA cargo bicycles. Four separate delivery scenarios were modeled to evaluate how the following independent route characteristics would impact delivery route cost - distance between a distribution center (DC) and a neighborhood, number of stops, distance between each stop, and number of parcels per stop. Results[:] The analysis shows that three of the four modeled route characteristics affect the cost trade-offs between delivery trucks and EA cargo bikes. EA cargo bikes are more cost effective than delivery trucks for deliveries in close proximity to the DC (less than 2 miles for the observed delivery route with 50 parcels per stop and less than 6 miles for the hypothetical delivery route with 10 parcels per stop) and at which there is a high density of residential units and low delivery volumes per stop. Conclusion[:] Delivery trucks are more cost effective for greater distances from the DC and for large volume deliveries to one stop.").

[xv] There is also academic literature on topics with indirect applicability to the subject matter of this Part of the RFEI. See, e.g., Laporte, Gilbert and Marta M.B. Pascoal. "Minimum cost path problems with relays." *Computers & Operations Research*, vol. 138, no.1, 2011, pp.165-73, https://www.sciencedirect.com/science/article/abs/pii/S0305054810000948.

[xvi] See, e.g., http://cyclelogistics.eu/about.

[xvii] See, e.g., See Conway, Alison, and Camille Kamga. "Freight Tricycle Operations in New York City: Final Report." *NYSERDA Report 14-33,* 2014, https://www.dot.ny.gov/divisions/engineering/technical-services/trans-r-and-d-repository/C-11-11%20Final%20Report_Oct%202014.pdf. (Prepared for NYSERDA and NYS DOT by CUNY and the Region 2 University Transportation Research Center.) (Abstract: "As cities become more congested and increasingly focused on sustainability, cargo cycles offer a potential alternative to motorized vehicles for local and last-mile goods delivery. However, few studies have examined this mode in the North American context. This project seeks to address this existing gap in research on cargo cycles/freight tricycles in North America and in New York City (NYC). The goals of this project are: (1) to understand the potential commodities moved and sectors

served by cargo cycles; (2) to identify the expected benefits, challenges, and barriers to operation for cargo cycles operating in NYC; (3) to understand freight tricycle traffic performance in NYC conditions; and (4) to understand the capability of cargo cycles for use in cold chains – such as food and pharmaceutical delivery – that require temperature control.")


1
5
9
13
17
2
6
10
14
18
3
7
11
15
19
4
8
12
6
NYC DCAS
Citywide Administrative Services

ADMINISTRATIVE AND PROCEDURAL MATTERS

NYC DCAS
BIKE RFEI

ADMINISTRATIVE AND PROCEDURAL MATTERS

- Additional Information:
  i. This RFEI is not intended as a formal offering for the award of a contract and participation by a respondent is not a requirement for participation in any future solicitation that DCAS may undertake. A failure to respond to this RFEI will not be detrimental to the consideration of a response to any such future solicitation. This RFEI is preliminary in nature. DCAS does not intend to grant or issue any agreements on the basis of this RFEI.
  ii. DCAS, the City, and their officials, officers, agents, and employees make no representation or warranty and assume no responsibility for the accuracy of the information set forth in this RFEI.
  iii. Neither DCAS nor the City shall be liable for any costs incurred by any respondent in connection with the preparation, submittal, presentation, clarification, or revision of its submission.
  iv. All responses and other materials submitted to DCAS in response to this RFEI may be disclosed in accordance with the standards specified in the Freedom of Information Law, Article 6 of the Public Officers Law ("FOIL"). The entity submitting a response may provide in writing, at the time of submission a detailed description of the specific information contained in its submission, which it has determined is a trade secret and which, if disclosed, would substantially harm such entity's competitive position. This characterization shall not be determinative, but will be considered by DCAS when evaluating the applicability of any exemptions in response to a FOIL request.
  v. DCAS at its sole discretion reserves, without limitation, the right to:
    1. Withdraw the RFEI at any time;
    2. Not issue an RFP or other solicitation;
    3. Discuss various approaches with one or more respondents (including parties not responding to the RFEI);
    4. Use the ideas and/or submissions in any manner deemed to be in the best interests of DCAS and the City, including but not limited to soliciting competitive submissions relating to such ideas or proposals and/or undertake the prescribed work in a manner other than that which is set forth herein; and
    5. Change any terms of the RFEI.
- Submission Process:
  i. DCAS requires that responses be submitted via email, to concessions@dcas.nyc.gov, with the subject line "Bike RFEI - 21 - Submission". DCAS can accept a variety of electronic formats including MS Word, MS Excel, MS PowerPoint, Portable Document Format (.pdf) files, or other industry standard file types. Emails, including attachments, must be below 20 megabytes; if an email would exceed that size, the respondent should instead send the response on a flash drive or other industry standard removable media to:

     Jon Kraft
     Senior Portfolio Manager, Asset Planning, Real Estate Services
     New York City Department of Citywide Administrative Services
     One Centre Street, 20th Floor
     New York, NY 10007

     In addition it is requested (but not required) that all respondents send a hard copy to this address.
  ii. If a respondent submits more than one response before the due date, only the latest of these will be considered.

- Respondent Questions:
  i. Any inquiries related to this RFEI should be directed by email, with the subject line "Bike RFEI - 21 - Q&A", to concessions@dcas.nyc.gov. The deadline for submission of written requests for clarification is 10/7/2022 at 2:00 PM (ET). DCAS will endeavor to respond to questions no later than 10/14/2022.
- Due date:
  i. The due date for final responses to the RFEI is 10/21/2022 at 2:00 PM (ET).
- Timeline:
  i. DCAS anticipates releasing one or more solicitations involving the subject matter of this RFEI in early 2023.
- Updates, addenda, and answers to questions:
  i. Before submitting a response to this RFEI, respondents should check for updates, addenda, and DCAS' answers to questions potentially of interest to all respondents at https://www1.nyc.gov/site/dcas/business/real-estate-rfps-rfbs-rfeis.page#rfeis.

Photo credits

- Front cover: Jon Kraft
- After front cover: Mikael Colville-Andersen (https://commons.wikimedia.org/wiki/File:Bikecultureincopenhagen.jpg)
- After introduction:
    - First page:
        - Top: M. O. Hammond (https://commons.wikimedia.org/wiki/File:1927_-_Japanese-Canadian_area_of_Vancouver,_British_Columbia.jpg)
        - Bottom: 1681551 (https://pixabay.com/photos/amsterdam-bikes-people-netherlands-1203305/)
    - Second page:
        - Top: Jules Beau (https://en.wikipedia.org/wiki/Major_Taylor#/media/File:Btv1b84333426-p073-2.jpg)
        - Bottom: Unknown (https://www.pxfuel.com/en/free-photo-xxttc)
- Part A cover: Unknown (https://www.piqsels.com/en/public-domain-photo-jdfda)
- After Part A overview:
    - First page:
        - Top: Unknown (https://www.pxfuel.com/en/free-photo-ekbro)
        - Bottom: Ben_Kerckx (https://www.needpix.com/photo/373730/woman-tricycle-means-of-transport-getting-there-and-getting-around-bicycle-transport)
    - Second page:
        - Top: Enzo Abramo (https://www.publicdomainpictures.net/en/view-image.php?image=264334&picture=cyclist-in-the-storm)
        - Bottom: Michael W Andersen (https://www.flickr.com/photos/92562506@N00/27521891561/)
- Part A back cover: Unknown (https://www.pxfuel.com/en/free-photo-ogsvq)
- Part B front cover: Unknown (https://www.piqsels.com/en/public-domain-photo-sgfcq)
- After Part B overview:
    - First page: Unknown (https://www.piqsels.com/en/public-domain-photo-jdgus)
    - Second page: Unknown (https://www.piqsels.com/en/public-domain-photo-oghkr)
- Part B back cover: Unknown (https://www.piqsels.com/en/public-domain-photo-znhei)
- Part C front cover: National Park Service (https://www.nps.gov/paal/learn/news/repair-station.htm)
- After Part C overview:
    - First page:
        - Top: Mikael Colville-Andersen (https://creativecommons.org/licenses/by-nc/2.0/) (https://www.flickr.com/photos/16nine/4677773129/)
        - Bottom: Stien (https://creativecommons.org/licenses/by-nc-sa/2.0/) (https://www.flickr.com/photos/meisjesmama/8441300767/)
    - Second page:
        - Top: I'm nonpartisan (Creative Commons Attribution-Share Alike 3.0 Unported) (https://commons.wikimedia.org/wiki/File:Bike_Van_Chicago.JPG)
        - Bottom: Chris Hill (https://creativecommons.org/licenses/by-nc-nd/2.0/) (https://www.flickr.com/photos/chdot/2735590096/in/photostream/)

- Part C back cover: Unknown (https://www.parismuseescollections.paris.fr/fr/musee-carnavalet/oeuvres/deux-hommes-reparant-un-velo-devant-la-devanture-d-une-magasin-de#infos-principales)
- Part D front cover: Unknown (https://www.pikrepo.com/fhqxd/white-cardboard-boxes-on-black-bicycle)
- After Part D overview:
    - First page: Mads Madsen (Creative Commons Attribution-Share Alike 4.0 International) (https://commons.wikimedia.org/wiki/File:Cykelbud.jpg)
    - Second page: Unknown (https://www.piqsels.com/en/public-domain-photo-ohjlr)
- Part D back cover: Unknown (https://www.piqsels.com/en/public-domain-photo-oxnxb)
- Part E front cover: U.S. Air Force (https://www.scott.af.mil/News/Photos/igphoto/2000840630/)
- Part E after front cover: Gmbo 2013 (https://commons.wikimedia.org/wiki/File:Fahrradbox_Bochum_BF_Ehrenfeld_dein-Radschloss.jpg)
- Part E between overview and response:
    - First page:
        - Top: Daniela Kloth / kloth-grafikdesign.de (https://commons.wikimedia.org/wiki/File:2018_04_Fahrradboxen_IMG_0830.jpg)
        - Bottom: An Errant Knight (Attribution-Share Alike 4.0 International) (https://commons.wikimedia.org/wiki/File:Bicycle_lockers_at_Draper_Town_Center_station,_Jan_15.jpg)
    - Second page:
        - Top: Benreis (Attribution-Share Alike 4.0 International) (https://commons.wikimedia.org/wiki/File:Kulmbach_Fahrradgarage_(3).JPG)
        - Bottom: Pedelecs (Attribution-Share Alike 3.0 Unported) (https://commons.wikimedia.org/wiki/File:Weilburg_Fahrradbox_002-zh.jpg)
- Part E before back cover: An Errant Knight (Attribution-Share Alike 4.0 International) (https://commons.wikimedia.org/wiki/File:Short_term_bicycle_lockers_Salt_Lake_City_Intermodal_Hub.JPG)
- Part E back cover: Sphalerit (Attribution-Share Alike 4.0 International) (https://commons.wikimedia.org/wiki/File:DDorf_Fahrradhaus.jpg)
- Part F front cover: Unknown (https://www.peakpx.com/624684/bicycle-holiday-netherlands-grass-transportation)
- After Part F overview:
    - First page: Unknown (https://www.piqsels.com/en/public-domain-photo-osvsg)
    - Second page: User:Willem_90 (https://commons.wikimedia.org/wiki/File:Stalling_OV-Fiets.jpg)
- Part F back cover: Unknown (https://www.pikist.com/free-photo-solba)
- Part G front cover: Rutter; Courtesy of Parks Photo Archive (https://www.nycgovparks.org/about/history/bicycling)
- After Part G overview:
    - First page:
        - Top: ŠJů (https://commons.wikimedia.org/wiki/File:Dopravn%C3%AD_h%C5%99i%C5%A1t%C4%9B_Zahradn%C3%AD_M%C4%9Bsto_2.jpg)
        - Bottom: Dmitry G (https://commons.wikimedia.org/wiki/File:Traffic_playground_in_V%C3%A4ike-%C3%95ism%C3%A4e.JPG)

    - Second page:
        - Top: Helt (https://commons.wikimedia.org/wiki/File:StatoilTrafikskole.jpg)
        - Bottom: Estormiz (https://commons.wikimedia.org/wiki/File:Traffic_Park_Oulu_2006_06_13.JPG)
- Part G back cover: Unknown (https://commons.wikimedia.org/wiki/File:Helsinki-traffic-park-1958.jpg)
- Part H front cover: Jon Kraft
- After Part H overview:
    - First page: Frans Van Heerden (https://www.pexels.com/photo/cargo-containers-trailer-lot-1624695/)
    - Second page: ELEVATE (https://www.pexels.com/photo/person-using-forklift-1267338/)
- After Part H response: Jon Kraft
- Part H back cover: Unknown (https://www.piqsels.com/en/public-domain-photo-jwlrc)
- Administrative and Procedural Matters cover: Unknown (https://www.pxfuel.com/en/free-photo-xwggx)
- Back cover: mamunurpics (https://www.pexels.com/photo/unrecognizable-people-riding-bicycle-against-sunset-4526333/

NYC DCAS
Citywide Administrative Services