

CITY SOLUTION BIKE SHARING | In the global push toward urban modernization, one low-tech concept is riding high: sharing bicycles. Young programs in London, Boston, and Washington, D.C., are expanding; New York City and Chicago plan large-scale launches this year, joining 200-plus bike-share systems worldwide. It's all part of a decades-long evolution from free—and theft-prone—borrowing schemes to automated systems that track payment, parking, and bike distribution.

Why the pedaling renaissance? Bikes are cheap (as little as one pound—about \$1.50—for a half hour in London), green, and good exercise, says University College London's Oliver O'Brien, who studies usage data. And as cities have found since Lyon and Paris inspired the latest wave (Lyon launched in 2005, Paris in 2007), they're a boon to urban living—and don't require reinventing the wheel. —Luna Shyr

Smart by Design

Safety, durability, and theft protection are key considerations for shared bikes, like this one from Washington, D.C.

Fenders, chain guard
Wheel covers stave off rain splashes; an aluminum casing protects clothing from chain grease.

Automatic lights
Front and rear LED lights flash when the bike is in motion.

Frame features
Seat posts adjust to accommodate riders from five to more than six feet tall. Special bolts secure the seat, wheels, and lights to help prevent theft.

Wide tires
The extra width helps provide stability, as does a heavy frame.

Docking insert
Bikes fit into slots at automated stands.

Shared bikes are making the world's great cities even greater.

London

Launched in July 2010, this urban bike-share system features some 6,000 bicycles across central London. An additional 2,000 were due this spring, with the expansion focused on areas in East London. Bikes can be picked up and returned at any of the docking stations shown here.

DOCKING STATIONS

The percentage of slots filled at each station varies by time. Circle sizes reflect the difference at 11 a.m. and 8 p.m.

● Mostly full in the day ● Mostly full in the evening

★ Seven stations are equally full in the day and in the evening

By 2010, this urban area features some cross central London with an additional 2,000 docking stations. The map shows areas in London where bikes can be picked up or dropped off at any of the 2,000 stations shown here.

Insert into slots at red stands.

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Usage Patterns

Weekday bike flow in London (right) shows a commuter pattern in and out of the city center. In various cities peak usage periods (below) can reflect local culture.



Weekday usage
| 12 a.m. | 6 a.m. | 11 a.m. | Noon | 6 p.m. | 8 p.m.

Empty docking points %



A Day of Small Journeys

London bikes typically are used by two to four riders a day; the average trip lasts 14 minutes. Here's where one bike went on a spring day.

Growing Popularity

