

A PROJECT OF THE
**DESIGN TRUST
FOR PUBLIC SPACE**

**DESIGN
ING THE
TAXI**

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**DESIGNING THE TAXI:
RETHINKING NEW YORK CITY'S
MOVEABLE PUBLIC SPACE
NEW YORK CITY
NOVEMBER 2005**

**DESIGN TRUST
FOR PUBLIC SPACE**

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Natural Resources Defense Council is a national non-profit environmental organization that works to provide for the conservation and wise management of land and natural resources.

PARTNERSHIP FOR NEW YORK CITY

The Partnership for New York City's mission is to enhance the economy of the five boroughs of New York City and maintain the city's position as the global center of commerce, culture, and innovation.

PENTAGRAM

Pentagram is an international multi-disciplinary design firm, creating print and screen graphics, products, environments, and buildings. Pentagram designers are guided by the principle that ideas make design distinctive, and that identity, function, aesthetics, and value make design work.

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Ronart Leasing Corporation operates one of the largest taxi fleets in New York City. Ronart owner Michael Levine also owns Yellow Cab of Chicago, a fleet of 1,500 vehicles, the largest in that city. He is currently president of the Committee for Taxi Safety and is a former executive board member of the International Taxicab and Livery Association.

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FORE WORDS

TO JUMP-START THE PROCESS OF CHANGE, WE INVITED FLEET OWNERS, DRIVERS, PLANNERS, DESIGNERS, MEDALLION HOLDERS, ARTISTS, AND REPRESENTATIVES OF NEW YORK CITY AGENCIES, INCLUDING THE TAXI AND LIMOUSINE COMMISSION, TO TWO HALF-DAY WORKSHOPS.

ABOUT DESIGNING THE TAXI by Deborah Marton Executive Director Design Trust for Public Space

New York the concept and New York the place meet in the taxi. Taxis transport a restless populace when something enticing beckons, and it so often does. Without question, hailing a cab—with its promise of freedom, power, and anonymity—is the quintessential New York act. So deeply rooted is this notion, that visitors count hailing a cab among top tourist attractions, like visiting the Empire State Building or Rockefeller Center. But like so many legends encountered in person, the reality can be disappointing. Although taxis still provide an essential New York experience, few would disagree that they should be more comfortable, more efficient, and more accessible to all.

As the hundredth anniversary of the first gasoline-powered taxi approaches in 2007, the Design Trust for Public Space is investigating how this iconic mode of transportation can be improved, with the ultimate goal of producing a new taxi design in time for the centennial. To jump-start the process of change, we invited fleet owners, drivers, landscape architects, urban planners, vehicle and industrial designers, graphic artists, medallion holders, representatives of New York City agencies, including the Taxi and Limousine Commission, and others to two half-day workshops, held in cooperation with Parsons The New School for Design. In total, over 50 designers and taxi stakeholders took part in a spirited discussion of all things taxi. At the first workshop, which took place at Parsons on May 24, 2005, participants discussed trends in taxi design, the taxi's role as a New York public space, and the ideal taxi and taxi system of the future, from the perspective of a taxi passenger.

On June 16, 2005, a group of participants presented preliminary designs and proposals sparked by the first workshop to the press and public. Moderator Kurt Andersen, of WNYC's *Studio 360*, led the conversation among presenters and members of the audience. The goal was to stimulate discussion of what the taxi should be and how, as a city, we can get there. With only three weeks for development, the concepts presented were intended to be preliminary. However, the breadth and quality of ideas was stunning. This book—and a related exhibition, held at Parsons from November 2, 2005, through January 15, 2006—is intended to provide broader exposure for these transformative visions of the New York City cab's future.

This program would not have been possible without the enthusiasm, support and ingenuity of its participants. The Designing the Taxi steering committee was instrumental in framing the inquiry, particularly First Deputy Commissioner Andrew Salkin of the New York City Taxi and Limousine Commission. We are also enormously grateful to Dean Paul Goldberger and his colleagues at Parsons The New School for Design for providing welcome conceptual ballast, as well as for their generosity as program hosts. The vision and true civic spirit of Paul Herzan, President of the Cooper-Hewitt National Design Museum, and the generous support of the Lily Auchincloss Foundation and Deborah Berke & Partners Architects enabled us to undertake this inquiry. Finally, we are indebted to all our workshop participants—from both private and public sectors—whose thoughts are quoted throughout this book. Their outpouring of interest and ideas was a testament to the passion New Yorkers feel for the yellow cab, and to the fact that the time is right for change.

A TAXI IS NOT A CAR. IT MAY HAVE FOUR WHEELS AND CARRY PASSENGERS, BUT THE CIRCUMSTANCES ARE COMPLETELY DIFFERENT.

A TAXI IS NOT A CAR

by Paul Goldberger

Dean

Parsons The New School for Design

What is troubling about the New York City taxi is not that it is ubiquitous, but that it is so ill-suited to its job. There is something brightening to the cityscape in the constant flow of deep yellow vehicles along the city streets—but then you get into one of them, and you are reminded that it is hard to enter, hard to leave, uncomfortable to sit in, and awkward to carry luggage in. It is as likely as not to be dirty, and it may or may not have a functioning air conditioner. It is hard to communicate with the driver. And, although you are unlikely to realize this is as a passenger, the New York City taxi is no friend to the environment.

Almost all of the taxis that swarm across Manhattan are Ford Crown Victorias, as conventional a sedan as there is. Its very ordinariness makes it a kind of Everyman Vehicle, a conveyance that would seem suited to normal, routine trips. But as Londoners have known for years, a taxi is not a car. It may have four wheels and carry passengers, but the circumstances are completely different. A family car sits around much of the time, and when it goes somewhere, driver and passenger enter and leave together. A taxi moves all day, and exchanges passengers constantly. It stops, it starts, people enter, people exit, luggage comes in, luggage goes out. Through it all, the driver remains at the wheel, like a worker tethered to his desk.

Why, for this difficult and demanding and constantly changing purpose, do we use the same vehicle that we use as a family car? Is it possible to design a better one, and if so, can that design be manufactured and sold in a way that makes sense within the economics of a difficult and not particularly profitable industry? Can taxi owners and drivers be encouraged to support and participate in a program to improve the design and functioning of taxis? These are the questions that the Design Trust for Public Space set out to answer with its ambitious initiative to rethink the New York City taxi.

At the basis of the Design Trust's effort was a recognition that New York City taxis, both collectively and singly, constitute a form of public space—public space that moves, but public space nonetheless. We at Parsons The New School for Design were honored that the Design Trust invited us to work as a partner in this effort. Parsons has always been concerned with the connections between design theory and real life, particularly real life in New York City, and we were delighted to join with Deborah Marton and her colleagues at the Design Trust in what has turned out to be an exciting and stimulating ongoing project.

The last significant effort within the design community to change the New York taxi was the Museum of Modern Art's ambitious exhibition in 1976, for which several prototypes of new taxis were created. They were exciting vehicles, and every one of them represented an improvement over the standard taxi. But the exhibition had little effect, largely because neither the taxi industry nor the major American automotive manufacturers played an active role. For the current initiative, the Design Trust sought to build a wide coalition of participants, and sought the active engagement of taxi drivers, representatives from the automotive industry, taxi regulators, and experts on the financing of the taxi industry. A premise from the outset was the recognition that this effort would not succeed if it consisted only of designers talking to other designers.

And so two important workshop sessions were held at Parsons, filled with a wide range of what might be called taxi stakeholders. No one—well, almost no one—defended the status quo, but at first there was little consensus about what viable alternatives there might be. As the project has moved forward, there has been, if not consensus, than at least a recognition of the complexity of the challenge, and of some broad parameters that will be necessary for real change. The Design Trust has convened an essential dialogue, and it will continue, with all parties recognizing that the design of a physical object is intimately connected to economics, politics, and culture. It's not just the shape of the car, in other words. But it does, in the end, all come down to design, and to figuring out a way not only to conceive of a better object, but to making it happen.

THE TLC CAN BE AN IMPORTANT BRIDGE BETWEEN PASSENGER DEMAND, TAXI INDUSTRY NEEDS, AND THE CAPABILITIES OF VEHICLE MANUFACTURERS. WE HAVE A TREMENDOUS OPPORTUNITY TO THINK BEYOND JUST IMPROVING UPON THE STATUS QUO.

TAXI REGULATORS EMBRACE CHANGE

by Andrew Salkin

First Deputy Commissioner

New York City Taxi and Limousine Commission

First off, I want to thank the Design Trust for Public Space for inviting us to take part in this exciting process. And I want to thank each of the participants of Designing the Taxi for the hard work and energy they have put into this project so far.

The New York City Taxi and Limousine Commission (TLC) is the city agency responsible for regulating and licensing all vehicles for hire in New York City, including the yellow medallion taxicab. When the Design Trust first approached us with their concept for Designing the Taxi, we sensed that the program would facilitate new ways to think about one of New York City's most important icons. The results have been well beyond our expectations.

Thanks to the hard work of the Design Trust, members of the Steering Committee, and participants in the workshops, we have been part of a vivid, challenging discussion about what a taxicab is and what it should be. The TLC is committed to having the safest, cleanest, most comfortable ride available to all potential riders. However, the methods of achieving these goals have typically focused on solutions generated by the cab industry. This exercise has introduced the TLC to the design community, which has tapped resources, enthusiasm, and expertise that has expanded not only our thinking about potential solutions to cab service, but may even change our goals.

Our participation in Designing the Taxi helped put in perspective some of the TLC's previous successes, such as getting six additional inches of legroom, or adding air conditioning for the rear passenger compartment. As a regulator, the TLC can be an important bridge between passenger demand, taxi industry needs, and the capabilities of vehicle manufacturers. We have a tremendous opportunity to think beyond just improving upon the status quo—we can be bolder and think about changing the status quo.

Today, we are already taking steps toward innovation and creativity in the taxi fleet. By the time you read this, the TLC will have approved the use of hybrid electric vehicles for use as taxicabs. We are engaged in a process to redesign the safety partition to make it a more appealing and functional part of the passenger riding experience. And we are on the verge of implementing a series of technology improvements that will make the NYC yellow medallion taxicab a truly 21st-century vehicle.

The TLC remains committed to providing the best service and the best vehicle possible for all New Yorkers, and our visitors. We believe that Designing the Taxi is an important way for us to meet that goal and we look forward to continuing to work with the Design Trust and the participants of Designing the Taxi.

THE IDEAL SYSTEM

TAXI

A fundamental premise of *Designing the Taxi* is that the cab fleet is not just 13,000 individual vehicles—it also forms a spatial, economic, environmental, and social system. Bruce Schaller, a nationally recognized consultant in the area of municipal taxicab regulation and a member of the *Designing the Taxi* steering committee, was asked to assess the current New York City taxi system and propose possible systemic changes to improve service.

THE TAXI VEHICLE IN THE IDEAL TAXI SYSTEM By Bruce Schaller

From the passenger perspective, the ideal taxi system would provide a fast, comfortable and safe ride with a minimum of hassle or worry.¹ In this ideal world, cabs are easy to hail from the street or find at a taxi stand. Drivers are courteous, helpful with bags, and knowledgeable about city geography. Seating is comfortable and spacious. The total passenger experience makes riders feel like valued customers.

How does reality measure up to these expectations? In many ways, New Yorkers are quite satisfied with cab service. Many passengers describe taking a cab as “simple” and “easy,” at least for trips in Midtown and other parts of the Manhattan grid.² Customer satisfaction ratings are higher for taxi service than for the bus or subway, although lower than ratings for car services and the personal auto.³ Steps ranging from vehicle age limits to the City’s 311 system for complaints have improved the taxi-user experience in recent years.

But taxi service also falls short of expectations in important ways. Hailing a cab during rush hour can be a time-consuming and anxiety-producing experience. Cabs are not designed to accommodate wheelchair users or parents traveling with babies. Once in the cab, passengers feel the ride is “jerky” and often dangerous. For trips outside the familiar Manhattan grid, passengers worry about whether the driver knows the way.⁴ Customer satisfaction ratings are below par for cab availability, safety from accidents, driver understanding directions, driver courtesy, and driver knowledge of the route.⁵

¹ CTG Inc. and Schaller Consulting, “Passenger Focus Group Report,” prepared for the Taxi and Limousine Commission, December 2004. Available: http://www.nyc.gov/html/tlc/html/industry/taxicab_serv_enh.shtml

² Ibid.

³ Schaller Consulting, *New York City Taxicab Fact Book*, June 2004. Available: <http://www.schallerconsult.com/taxi/taxifb.htm>

⁴ CTG Inc. and Schaller Consulting, “Passenger Focus Group Report.”

⁵ Schaller Consulting, *New York City Taxicab Fact Book*.

This is an opportune time to both reinforce the strengths of New York's taxi service and address shortcomings. The taxi business is thriving, with revenue and ridership at or near all-time peaks. Both the City and the taxi industry have smart, capable leaders who are committed to improving the industry. The Design Trust's current efforts have brought new blood and increased focus to key issues. Technological advancements to be implemented in 2006 will give customers the option of paying by credit or debit card and will put Global Positioning System (GPS) devices in all cabs, opening a panorama of possibilities to enhance service.

So what are the keys to bringing taxi service to the next level? What will make the ubiquitous yellow cab an icon of the best that New York has to offer? Answering this question requires recognizing not only the strengths and accomplishments of the industry and regulators, but also frankly identifying and finding ways to rectify the weaknesses.

In the positive and collaborative spirit of the Design Trust's Designing the Taxi program, I will outline four important questions relating to weaknesses in the current taxi system, and I will touch on possible improvements in each area. My objective is to contribute a few new ingredients to this simmering discussion, while trusting that others will point out if I've tossed in any lemons.

Does One Size Fit All?

The presumption that "one size fits all" is perhaps the biggest deficiency in the current regulatory framework. It has two main dimensions. First, there is a presumption that one vehicle fits all customers—big and small passengers, able-bodied and disabled, long and short trips, multi-passenger groups and single riders, parents and business people.

One possible solution is to offer different vehicles to serve different needs. As you'll see in later sections of this book, a proposal from Hybrid Product Design + Development suggests there be three versions of a taxi: Mini (like a refined rickshaw), Maxi, and Mogul. Or there could be two versions: a two-seater primarily for short jaunts and a larger vehicle for bigger groups and longer trips. At least some, if not all, of the vehicles should be wheelchair accessible and should carry amenities such as baby car seats.

Another dimension to "one size fits all" is the presumption that one way to get a cab fits all. Since two-way radios were banned from taxis in the early 1980s, medallion cabs have been available only by street hail and at a few taxi stands, primarily at major transportation centers. To get a vehicle to come to your doorstep, you must telephone a black car or neighborhood car service base—huge industries by themselves, with 35,000 radio-equipped cars citywide, nearly one-half of which primarily serve the Manhattan market.

This two-tiered system, although created by history and circumstance, has considerable logic. Outer-borough riders, whose needs are not met by medallion cabs, have ready access to car services. In Manhattan, however, this system means that empty radio cars clog streets and avenues in the central business district, waiting for calls, even while it can be difficult or impossible to hail a yellow cab.

There is a great opportunity in the fact that demand for medallion cabs peaks during the evening rush, while black cars, which serve a business clientele, do not become busy until 7 p.m. Why not—using dispatch technology discussed below—set up a system where radio cars could help meet the peak rush hour taxi demand? This strategy could be part of introducing different vehicle designs, since radio cars are generally Lincoln Town cars, as opposed to the Ford Crown Victoria that comprises 92% of the yellow taxi fleet.

Can Customers and Cabs be Matched More Efficiently?

The current "cruising" system is not necessarily the most efficient way to match customers and yellow cabs, and any differentiation among different cab types would increase the importance of helping customers find the vehicle they want. Technology can go a long way toward addressing this need. With the Taxi and Limousine Commission mandating the installation of vehicle-positioning technology in cabs, a system could be designed to allow passengers to request a cab via a cell-phone text message and then be alerted when a cab arrives—perhaps at a marked taxi stand. The technical capability for this system has been proven in London. It would provide convenience to passengers and would guide drivers to the nearest customer.

Customer/vehicle matching could also be improved by expanding the number of cab stands. Stands currently work well at major trip generators, such as airports and train stations. Although attempts to reduce cruising through the establishment of a network of Midtown cab stands have not succeeded in the past, they might succeed in a situation in which customers could choose among different vehicle types or among drivers with different qualifications (as discussed below).

Bruce Schaller consults on urban transportation issues for local governments, transit and airport authorities, university and non-profit organizations, for-profit companies, the U.S. Department of Transportation, and the National Academy of Sciences. Prior to establishing Schaller Consulting in 1998, Mr. Schaller served as Director of Policy Development and Evaluation at the New York City Taxi and Limousine Commission and as Deputy Director for Marketing Research and Analysis at New York City Transit.

Is the Street Optimized for Taxis?

Taxis are accorded significant recognition by the City's transportation authorities. Taxis with passengers can use certain bus lanes; taxi stands have been created and staffed at major transportation hubs; and taxi relief stands, to facilitate driver breaks, are scattered throughout the city. But while important, these steps only incompletely address the need to make taxicabs an integral part of the city's transportation network. One possible solution is to add taxi stands, as discussed above. Another possibility is to establish taxi lanes.

The City and the Metropolitan Transportation Authority are currently evaluating a range of methods to speed up bus service, including additional bus-only lanes. Similar traffic-separated lanes could also be established for taxicabs. In certain circumstances, cabs and buses could share the same lanes. Since all cabs now have EZ-Pass cards, which allow for the automatic debiting of tolls, passengers wishing to take advantage of faster travel times could be charged a fee for using these lanes.

Can Drivers Gain Greater Respect?

Drivers want respect from passengers, the public, and the City. However, they recognize that they lack the recognition that is accorded to bus drivers and other City workers because of the failure by some drivers to provide courteous, knowledgeable, and safe service.⁶ Driver professionalism is thus a key to a better taxi system. If drivers consistently provided a professional service, they would earn the respect of passengers and the public. Passengers would feel treated as customers and, confident of their drivers' abilities, would be able to relax and enjoy the ride.

Important steps have been taken to professionalize the job. These steps include taxi driver training required for all new drivers; refresher courses for continuing drivers; the capping of lease fees; and the dedication of a large portion of the last fare increase to higher driver incomes. Additional actions to improve driver performance and the driver/customer relationship might include the following:

Make the partition optional. The partition, required for most cabs since 1994, was an important response to the crime wave of the early 1990s. However, crime in the city has plummeted over the past decade, and now the partition makes drivers feel they are "in a cage" and obstructs communications with passengers.⁷ Partitions are optional for owner-drivers who do not lease their cabs and who install a security camera. This program appears to have been successful. It could be expanded to lease drivers who own the vehicle but not a medallion.

Many other steps could be taken to improve the driver's work space. Drivers spend 8 to 12 hours a day sitting in the cab. They should have the most comfortable possible space, with firm back support, sufficient legroom, and other amenities. Improving the driver's space is one way to show drivers that they are valued and respected.

On a more ambitious scale, programs could be instituted to "brand" the best drivers. Why leave passengers in the dark as to whether their driver is a savvy veteran or a rookie still learning the city's streets? The Internet offers ratings of web merchants and eBay sellers. Why not rate cab service as well? Driver ratings could be based on acing a challenging geography test (like the exam required for London cabbies, known as "The Knowledge"), having a clean driving record, and/or customer feedback. When the new passenger information screens go in the cabs, why not ask every passenger to "Rate this Driver" and "Rate this Cab" at the end of the trip? Results from any of these assessment mechanisms could be visible inside the cab and in a simplified form on the exterior, as well. That way, the best drivers would not be tarred by the actions of others. And when cabs are plentiful, passengers could opt for the highest-rated drivers and vehicles, providing a better trip to customers and strong incentives to drivers and vehicle owners.

Finally, if multiple vehicle types are introduced for cabs, the most popular vehicles could be assigned to the best drivers. The larger cabs—which would presumably be most likely to get lucrative long trips—could be reserved for drivers with the top ratings. Drivers would then have an incentive to work their way up through the ranks.

Conclusion

Improvements to the vehicles used as medallion cabs must be integrated with a vision of how the City and industry can achieve an ideal taxi system. The ideal system has many components, among them the vehicle itself, the way it functions in the street network, and driver professionalism. Even more broadly, the ideal taxi system may incorporate black cars and car services which, though legally and operationally separate from the taxi industry, provide overlapping types of services.

By thinking broadly and in an integrated fashion, we can find ways to improve the vehicle, take advantage of new technologies, provide identity and respect to drivers, and wring inefficiencies out of the current system. We may not attain the ideal, but at least we could move demonstrably closer to that worthy goal.

⁶ Schaller Consulting, "The Leasing of Taxicabs to Drivers as Independent Contractors," report prepared for Service Employees International Union Local 74, March 1999.

⁷ Sewell Chan, "Taxi Partitions, Born of Danger, May Be Set for a Makeover," *New York Times*, August 9, 2005.

DESIGN FOR INDUST

DESIGNING FOR EVERY

New York's taxis are owned and operated by individuals and fleets, not by the City. If meaningful changes in the taxi system or vehicle are to be implemented, the input and support of the taxi industry is crucial. Michael Levine, a New York City fleet owner and a member of the Designing the Taxi steering committee, was asked to consider improvements to the taxi from an industry perspective.

DESIGNING FOR THE INDUSTRY by Michael Levine

Why can't I get a taxicab on Friday afternoon in the rain? That question has traditionally monopolized conversations concerning problems in the taxicab industry. More recently other concerns have evolved, namely how can we improve service in the outer boroughs? How can we offer taxicab service to nonambulatory passengers? And how can we reduce emissions in this already congested and polluted city? The age-old simplistic answers to the first question have always been put more vehicles on the street and change the shift time from 5 p.m. to, say, 3 p.m. Time has shown that neither of those solutions have ever made a dent in the original problem, and it is obvious that they will not help us with any of the newer problems in the taxicab industry. Most of the problems inherent in providing taxicab service in a city of this size and diversity cannot be solved by simply improving the vehicle itself. To improve taxicab service in New York City, the entire taxicab system—from the vehicle, to the driver and driving tools, to the roads they drive on—needs to be considered and improved.

Vehicles

In visits to car shows, we have all seen fantasy taxicab vehicles with special cabins built on pickup truck beds, or converted ambulances or minivans, all of which catered to one issue: increased rear compartment space for wheelchair accessibility and passenger comfort. For various economic and other reasons, none of these vehicles was ever mass produced. We also have seen various production model vehicles unsuccessfully tested as cabs. In the end we are still left with the Ford Crown Victoria as the current standard; listing the pros and cons of that vehicle will help us understand where we are and where we still need to go with regards to vehicles.

On the plus side, the Crown Vic is reliable and relatively easy and cost-effective to maintain. With the new “stretch” feature built for New York City, the vehicle is also very roomy in the back seat. Cons? The vehicle is not exactly an efficient machine. Gas mileage ranges from 10 to 16 miles per gallon in the city, with an average of 12 to 13 miles per gallon. That is distressingly low in this age of soaring gasoline prices and pollution concerns. In fairness, though, a taxicab will always get lower-than-average gas mileage, given its usage: heavy idle time in traffic, stop and go driving, etc. The Crown Vic is also not wheelchair-accessible, a major concern of the city and the industry. Finally, the Crown Vic is just large. It’s a hulk, and it takes up a lot of space on the city landscape.

In considering an “improved” vehicle, a taxi-fleet owner has certain monetary considerations that must be taken into account. How much will the new vehicle cost? Can the current fare structure support that cost? How much will the vehicle cost to repair relative to vehicles already available as taxicabs? What will be the availability of replacement parts for the new vehicles? The problems caused by not considering such issues can be considerable: In 2002, when Ford began producing the “stretch” Crown Victoria taxicab, the rear doors were extended and were produced in numbers sufficient to produce the vehicles. As more and more of the vehicles were put into service, some inevitably had accidents, and it was only then that fleet owners found out that not only were the replacement doors incredibly expensive, but also that there were no replacement doors available anywhere in the country. Vehicles that would normally be back in service in under a day were off the road for weeks at a time, causing financial hardships to fleet owners and drivers.

In addition to cost, there are other practical matters to consider. Vehicle longevity is a major factor. The Astro vans were great, but only for the short period of time they were able to stay on the road. Likewise the K frames on the front ends of the K cars split into two sideways V frames after prolonged exposure to New York City streets. Driver appeal is another significant factor. If drivers do not like the vehicles in your fleet, they will leave and go to a garage that has vehicles that they prefer. Gas mileage has become an increasingly important factor in driver appeal, and front-seat comfort is always a key to a happy driver.

Finally, there are passenger considerations. Can the vehicle support the wide variety of taxicab passengers in New York City? Is the back seat roomy enough to provide rider comfort even for larger passengers? As a six foot, two inch taxicab passenger, I generally had to either sit sideways in the back seat of cabs or chew on my knees until the stretch cars and minivans came along. On the other hand, smaller passengers and passengers with ambulatory issues often have trouble climbing into the back seats of these roomier vehicles. They may actually prefer the old smaller vehicles given a choice. Also, can the vehicle accommodate a wheelchair?

Every change brings some improvements and some compromises. The improvements may yield an accessible vehicle, or a cleaner-burning cab with greater gas mileage, but passenger comfort and space may suffer as a consequence. In the end, the question fleet owners and drivers will be asking is, “Does this car give me more than the Crown Victoria, and does it cost me more?” Going back to the pros and cons, from a fleet standpoint, reliability and vehicle price are important; from a driver standpoint, comfort and gas mileage are high priority. If a new vehicle does not sacrifice anything in those departments, and it can provide improved service to the public, it will catch on quickly.

Drivers and Driver Tools

When we speak about the driver in the context of improving service, we must consider both the driver as a person, as well as the tools the driver has available to him or her that will aid in providing quality rides to the public. The new initiatives set forth by the Taxi and Limousine Commission will provide much-needed communication in the driver compartment of yellow medallion taxicabs. Since the creation of the radio car in the ‘70s, there has been no communication whatsoever between drivers and fleets during the course of a shift. New vehicles will be equipped with global-positioning devices and mobile data terminals. Together these devices will be able to wed available vehicles to groups of available fares, thereby greatly improving efficiency. Furthermore, systems can be developed which will allow wheelchair users to call the nearest available accessible vehicle. Since we cannot determine what problems may develop in the future, having a basic computer and communications system in the vehicles is important, for it provides the flexibility needed to meet new industry challenges.

It is politically correct in New York to say that service should be equal in the outer boroughs to that provided in Manhattan. Why then can you not hail a cab in Flushing? And why do drivers frown on heading to Brooklyn? The answer is simple economics: In Manhattan, load factors are very high. One job ends and another begins almost immediately. Going to the outer boroughs almost guarantees a long empty ride back to the city. If we instead allow yellow cabs, now with communication systems, to do radio work in the boroughs as well as street-hail work, they could make up some of the income they would otherwise have lost. The city must also eliminate illegal pickups in the outer boroughs. A yellow cab with a meter cannot compete with a gypsy cab willing to charge three dollars for a ride from the train station to a passenger’s home. Removing illegal competition will increase driver income and will thereby increase the number of drivers willing to stay in the outer boroughs and provide street-hail service.

As we mentioned earlier, tradeoffs are generally required when new equipment is tested. Often the tradeoffs shortchange the driver. Finding ways of keeping the driver safe and comfortable during the course of a long shift is always a challenge. We have continuously improved passenger comfort, often at the expense of driver comfort. Passengers are in the vehicle for 20 minutes at a time, while the driver can be on the seat for 12 hours. Perhaps the public would be willing to accept a smaller compartment in order to get a happier driver.

Driver availability is always a concern. We spoke of increasing the fleet of vehicles in the city as a way to provide peak-hour service. If we do not create a corresponding increase in the pool of available drivers, however, the exercise is pointless. You are simply moving drivers from old medallions to new ones. Instead of more vehicles on the road, you instead have different vehicles on the road, and you now create financial hardship for long-time medallion owners. How can the city increase the driver pool? When I first started working in the taxicab industry in the late '70s and early '80s, there was a large pool of part-time drivers whose regular jobs were intermittent or seasonal. School teachers, construction workers, security officers, and students made up a significant portion of the workforce. There were also police officers, firemen, and others who had full-time jobs but who wished to supplement their income. It is rare to find these part-time workers now.

Part of the problem is that it is costly and time consuming to get a license. An unemployed father of three or a construction worker who has three weeks between jobs cannot really afford to pay over \$400 and wait six to eight weeks to get a hack license. While it is understandable that the city wants new drivers to get the proper training in geography and safety, the reality is that if you place a bunch of potential drivers in a classroom situation, and keep them there for eight hours a day, the most that they will absorb is about an hour's worth of material. Perhaps we can give new drivers a quick one-day seminar, let them drive, and bring them back after they have earned some money and driven on the street a bit. This will help defray costs, and it will enable drivers to have real-life experience to relate to their classroom training.

Driver income has eroded over the last year due to the soaring price of gasoline. Moreover, driver income is cyclical to begin with, due to the nature of the fare-increase system. Given the aforementioned political nature of the taxicab industry, no one really wants to be the mayor who gives the taxi industry a fare increase. Since it usually runs between six and eight years from increase to increase, the jump tends to be significant, and it never sits well with the public. During that same six to eight year period, however, the drivers' expenses increase, while his income remains level. Take-home pay drops precipitously in the final few years. If we instead design a system that automatically reviews driver costs and income every two years, much like the rent review board looks at landlord expenses, then the politics of the situation are removed and drivers can maintain steady income levels. With the new electronic meters and data collection systems, it will be easier than ever to quantify driver income. It should be intuitively obvious, but it needs to be said: The greater the potential income, the larger the pool of available competent drivers will be.

City Streets

The solutions to many of the issues we have discussed here lie not with the vehicle, or even the taxicab industry, but instead with the streets that the cabs occupy. It is not that there are not enough cabs on a Friday night, it is more precisely that the available cabs cannot pick up enough fares. A trip from 18th Street and Park Avenue to 90th Street and Madison Avenue at 8 a.m. takes 20 minutes. That same trip at 4 p.m. could take 45 minutes. Try to go across town and the results can be even more dramatic. You have effectively reduced your fleet by more than half, for the vehicles can do less than half the trips in the same amount of time. Creating taxi lanes and improving traffic flow by cracking down on illegal parking will do far more to solve the availability problem than will adding new medallions and vehicles.

Accessibility has become one of the top taxicab issues of late. Understandably, wheelchair users wish to be afforded the same service afforded to ambulatory taxi riders. The solution to this issue is much more complicated than merely finding an affordable accessible vehicle, which is no small task. Assuming we find a suitable vehicle, where can an accessible vehicle be guaranteed a spot at the curb to drop its ramp and pick up a wheelchair? Does the city need to provide special wheelchair loading zones on every block? If the city does so, will that meet the criteria of same service? Even a solution with dispatched vehicles, which might provide better, albeit not the same, service would require open curb spaces for pick ups.

Michael Levine is the owner of Ronart Leasing Corporation, which operates one of the largest taxi fleets in New York City. He also owns Yellow Cab of Chicago, a fleet of 1,500 vehicles, the largest in that city. He is currently the president of the Committee for Taxi Safety, a fleet-owner's association, and is a former executive board member of the International Taxicab and Livery Association. Mr. Levine is a third-generation fleet owner; his family's garage was featured in the NBC TV series *Taxi* and the movie *Taxi Driver*.

Towards The Future

The results of the Designing the Taxi workshops were both encouraging and frustrating as a fleet owner. Many creative ideas were proposed, and designers provided entertaining, if a bit impractical, solutions to some problems that we as an industry never knew we had. Had we known that finding a comfortable place for drivers to have lunch was a priority, we certainly would have addressed that issue earlier as an industry. It was heartening, on the other hand, to see that for once the problems of the New York City taxicab were considered on a more citywide scale. Urban planners, city officials, vehicle designers, and industry representatives discussed ways to reduce traffic congestion, add for-hire-vehicle lanes, and otherwise improve the utilization and efficiency of the current fleet, as well as ways to improve vehicles and the environment. We need to maintain this "global" perspective as we move forward. "Taxicab the vehicle" is by necessity only a part of "taxicab the system". If we succeed in that focus, then instead of spending our lunch hours griping about how we cannot find a cab in the rain, wheelchair, outer-borough, and other passengers will all spend their ride time remarking on how far we have come as an industry.

THE TAXI ICON

Phil Patton is the author of many books on design and culture and writes for the *New York Times*, *ID*, and other publications. Among his most recent titles are *Bug: the Strange Mutations of the World's Most Popular Automobile*, and *Michael Graves Designs: The Art Of The Everyday Object*. His other books include *Open Road*, a study of the American highway, and *Made in USA*, named a *New York Times* notable book.

THE TAXI AS ICON by Phil Patton

The taxicab is a symbol of New York to millions of tourists. It marks arrival and departure—the modern equivalent of a city gate. It is the space of entrance to the city. It frames the visitor's first glances.

Great cities are symbolized by structures and spaces—bridges and domes and towers, rivers and boulevards and plazas. Think of the Eiffel Tower, St. Peter's or St. Paul's, the Golden Gate or the Brooklyn Bridge. But they are also symbolized by their subways, buses, and taxis. As much as by Big Ben, London is symbolized by its red double-decker busses, its red phone booths—and its black taxis. Just as much as it is represented by its piers or subways, by the same token, New York is symbolized by its taxis.

That is why taxis figure among the most popular souvenirs of the city, along with models or images of the Empire State Building or Statue of Liberty. The current Crown Victoria, as well as the old Caprice and Checker, are rendered in toys and models. So are taxis that never existed, such as a New York City VW Beetle taxi. There are taxi plates and taxi cookie jars.

Writers and artists have understood the cab's power. Saul Steinberg appreciated the taxis of the 1940s and 1950s and drew and painted them for several *New Yorker* covers. He wrote: "The taxis, much bigger than they are now, were built precisely to be taxis: six, seven, even eight people could fit in them; there was a sliding panel in the roof, so that from inside you could see the tall skyscrapers and at night the moon—it was something beautiful, which, as often happens all of a sudden ended without anyone protesting." Writer Fran Lebowitz, who once owned a Checker, has declared it a quintessential New York artifact.

The New York taxi, like the New York taxi driver, has always played out as a tough guy — a Dodge, a Ford, a Chevrolet, a Checker. The rotund Chevrolet Caprice, often derided as "Shamu," looked better as a yellow taxicab than in any other style. The aging Ford Crown Victoria is the last of the traditional big American rear wheel drive sedans and has won respect and grudging affection for its durability and endurance. During the 1960s, a noted NASCAR driver came to Manhattan and spent a day driving a taxi. Afterwards, he declared the experience as harrowing and exhilarating as driving in a stock car race. It takes a tough car to make it in a tough town, is the rolling implication of the New York taxi. If you can make it here, you can make it anywhere.

While the aim of this project is to propose pragmatic improvements to the New York City taxicab system, any changes must also take account of the taxi's vital symbolic status. Phil Patton, a member of the Designing the Taxi steering committee and an author who has written extensively on automotive and design issues, was asked to contribute some thoughts on the New York City taxi's role as an icon of the city it serves.

THE TAXI SYSTEM

The taxi is not a yellow car. A yellow car may be the icon, but taxis, collectively, are a system. That social and economic system includes the passengers, drivers, fleet owners, garages that service and own taxis, and regulatory agencies like the New York City Taxi and Limousine Commission and the Department of Transportation. The system also includes some prime New York City real estate – streets and sidewalks – that taxis and passengers rely on and that every New Yorker maintains with tax dollars.

This civic investment in taxi infrastructure, buttressed by laws that oblige taxis to service anyone who hails them, point to an important fact: Taxis are an extension of New York City's public space. Just as Fifth Avenue or Grand Central Terminal have a distinct public identity, enjoyed by anyone who has ever strolled past the Plaza Hotel or stood under the starry ceiling of the main hall, so too does the taxi. Like all great public spaces, New York cabs both serve the city and stand as an important part of its identity.

Despite the public character of the taxi and the crucial role taxis play in regional transport, the taxi system is in fact a unique public/private hybrid. New York City regulates taxis, but private owners – both individuals and fleets – exert at least as much control over operations as the city does. In practice, this means that within certain guidelines, taxi owners decide what vehicles to buy, how they should be maintained, and to a large extent, how the system should operate. Consequently, improvement efforts that fail to incorporate the owner's perspective are doomed.

There is a real risk that an improved taxi would be a more expensive taxi. But an improved taxi system could actually decrease costs over time. Innovations outlined in this chapter, like cell-phone hailing, smart taxi stands, combining radio and for-hire vehicles (black and yellow cabs), taxi lanes, and a more energy efficient fleet, all have the potential to lower costs. By minimizing time cabs spend without a fare, and maximizing vehicle efficiency through traffic management and improved technology, overhead costs could decline, which would be a benefit both owners and users could share.

TAXI IDENTITY

WE NEED TO RECOGNIZE THAT YOU DON'T REVAMP AN ICON WITHOUT CONSIDERING THE EMOTIONAL COMPONENT.

FRED DUST
IDEO

I DO THINK OF THE CAB AS THIS MYTHIC NEW YORK CHARIOT. IT'S EVER-PRESENT, A SAFE CONDUIT.

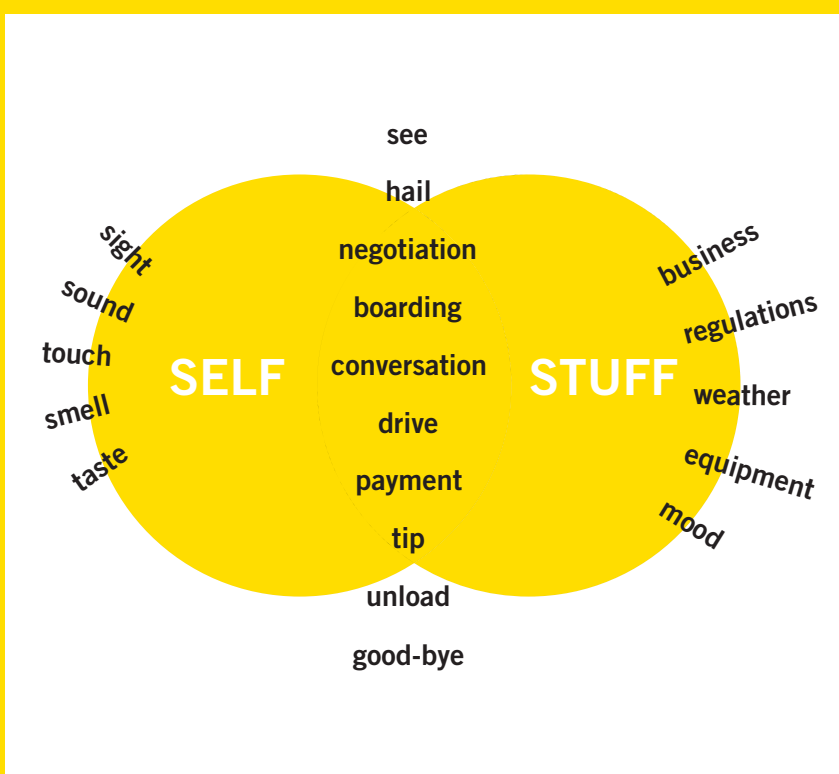
JOHN REDDICK
CITYSCAPE INSTITUTE

WITHOUT YELLOW CABS, SOMEBODY COULD TAKE THEIR OWN CAR AND PICK UP PASSENGERS ON THE STREETS. THAT'S WHY HAVING THE VEHICLE YELLOW IS SO IMPORTANT, BECAUSE EVERYBODY KNOWS WHAT A YELLOW TAXI IS.

RON SHERMAN
MIDTOWN OPERATING CORPORATION



above: CITYSTREETS
Citystreets proposes driver hats that acknowledge the diversity of origins of New York's cabbies, while also professionalizing their appearance.



left: SPRINGTIME
Taxi identity is based not just on the physical appeal of the cab, but also on the intangible qualities of the taxi trip. Springtime assesses the intersection of the passenger's sensory experience and the circumstances of the ride.

Look out the window of a Manhattan office building at pretty much any time of day or night, and you are likely to see a stream of yellow, restlessly parting and converging again. This ebb and flow has become a kind of visual geographic shorthand for New York City, immediately establishing location in innumerable films, television shows, and commercials. Taxi identity does have something to do with that distinct shade of yellow, but the effectiveness of the taxi as an icon goes beyond its color.

At its most sublime, the taxi symbolizes the power and freedom of New York. Step off the curb, stick an arm in the air, and it can take you where you want to go at any time of day or night. While you enjoy the ride, it can be your office or refuge, boudoir, or confessional. And it comes with a captive confessor: the driver. With every fare, driver and passenger enter a brief, strangely intimate, and occasionally profound relationship.

Despite the unique qualities of the New York City cab experience—and the profound identification of the yellow cab with the city—few efforts have been made to develop a consistent identity for the taxi, short of the iconic color. A number of designers proposed that the first step in strengthening taxi service could be to create a coherent “brand” for the taxi experience, an identity that would move beyond the car into merchandising and driver training. Revenue generated by sales and increased fares could underwrite further improvements in the system or to driver pay and benefits.

PENTAGRAM ON “ICON”—A PROPOSAL FOR A NEW TAXI FOR NEW YORK

New York City is a city of icons. The Statue of Liberty. The Empire State Building. The Big Apple. The ubiquitous yellow taxi is another such icon, but it’s disguised as an ordinary car, the Ford Crown Victoria. Its utility is arguable. Its distinctiveness is nonexistent.

New York was once dominated by a taxi as unique as the city itself: the Checker Cab. Big, muscular, with an instantly recognizable silhouette, the Checker blended utility and glamour. To generations of New Yorkers, stepping into a Checker always felt like you were headed for a night on the town.

We propose to reinvigorate the iconography of the New York City taxi by updating the Checker for the 21st Century. This means marrying an honest, strong, romantic, “Only in New York” form to the needs of today’s passengers.

The design of the New Checker is intended to contribute to the image of New York as indelibly as the Chrysler Building or the opening strains of “Rhapsody in Blue.” More than a way to get from here to there, it is an icon that could be promoted throughout the city and around the world, creating pride among passengers, drivers, and all New Yorkers.



left: PENTAGRAM
Pentagram developed a brand for the New York taxi based on the iconic Checker cab. The “New Checker” logo could be applied to a wide variety of merchandise, such as this t-shirt.

bottom right: PENTAGRAM
In this Pentagram proposal, cabbies’ favorite tunes would be compiled annually for a CD celebrating the international character of New York’s drivers.



GREENING THE TAXI FLEET

LOW EMISSIONS, LOW POLLUTION, FUEL EFFICIENCY—I THINK THESE ARE FUNDAMENTAL CHARACTERISTICS OF A GREENER CAB.

YERINA MUGICA
NATURAL RESOURCES
DEFENSE COUNCIL

GREEN TAXI

- ENVIRONMENTALLY GREEN**
30 MPG VS 13 MPG
• FUEL EFFICIENT OR HYBRID VEHICLE
- ERGONOMICALLY GREEN**
ROOMY & COMFORTABLE
• ADVANCED ERGONOMIC DESIGN
- VISUALLY GREEN**
SAFETY GREEN
• MAXIMUM VISUAL CONTRAST
- ZONALLY GREEN**
DEDICATED TAXI LANES
• EASY TO FIND
- SPATIALLY GREEN**
75'
5 GREEN = 4 YELLOW
• REDUCES TRAFFIC CONGESTION

above: KEN SMITH
LANDSCAPE ARCHITECT
Ken Smith's proposal for a Green Taxi promotes safety, reduces traffic congestion, and is fuel-efficient.

THE TLC APPROVES HYBRID-ELECTRIC VEHICLES FOR TAXI USE

In October 2005, the New York City Taxi and Limousine Commission authorized the use of hybrid-electric cars as medallion taxicabs. The 2006 hybrid models that comply with the TLC's vehicle specifications include the following: Ford Escape Hybrid, Mercury Mariner Hybrid, Toyota Highlander Hybrid, Toyota Highlander, Toyota Prius, Honda Civic hybrid, Honda Accord hybrid, and the Lexus RX 400H.

Fuel savings—combined with state and federal tax incentives totaling as much as \$6,000—make the hybrid vehicles competitively priced with the Ford Crown Victoria. According to a cost/benefit analysis presented by the TLC, “estimated annual expenses (including maintenance, insurance, loan payments, fuel, and MSRP) place the Crown Victoria at approximately \$25,296.48, with Toyota and Honda models coming in, approximately, at between \$18,000 and \$19,000.”

Taxis affect the environment of New York City. Every day cabs discharge significant amounts of carbon dioxide and other airborne pollutants, and this pollution is exacerbated by the fact that current taxi vehicles are ill-suited to their purpose. Given that the majority of taxi trips carry only one passenger, diversifying taxi fleets to include smaller vehicles would increase fuel efficiency dramatically. Traffic control strategies, like congestion pricing and designated taxi lanes, would decrease daily fuel consumption and emissions, as would switching to hybrid or smaller vehicles. Decreasing the time taxis are idle or trolling for fares by employing currently available technologies, like cell-phone or text-message hailing, would also cut gas consumption and emissions. These concepts are considered in some detail in the sections that follow.

Environmentally sustainable materials provide another mechanism for greening the taxi fleet. Vehicles converted to cab use are retrofitted with special interiors, providing an opportunity for using environmentally friendly materials. The upholstery, floor and ceiling coverings, plastic paneling, seat covers, adhesives, floor coverings, and partitions could all be improved upon from an environmental standpoint. Material improvements would provide a healthier environment for drivers and passengers and minimize the many tons of obsolete taxi materials conveyed to landfills each year.

HYBRID PRODUCT DESIGN + DEVELOPMENT

Hybrid Product Design's green MiniModal concept proposes that a hybrid-power taxi can be much smaller, lighter, and more efficient than a conventional cab. The combustion engine, located under and behind the driver, provides for average power demand rather than peak power demand. The power curve of the electric motor, also under the driver, is better suited to variable speeds and can provide substantially greater torque at low speeds compared with the internal-combustion engine. These motors share the same drive train, which powers the front wheel by double jointed transaxels. A torque converter is coupled through an automatic clutch. Hybrid Product Design also investigated reducing overall vehicle mass and weight. The MiniModal's curb weight would be around 2,500 pounds. The vehicle is 144 inches long, by 80 inches high, by 67 inches wide—considerably smaller than an Access-A-Ride bus or typical converted minivan.

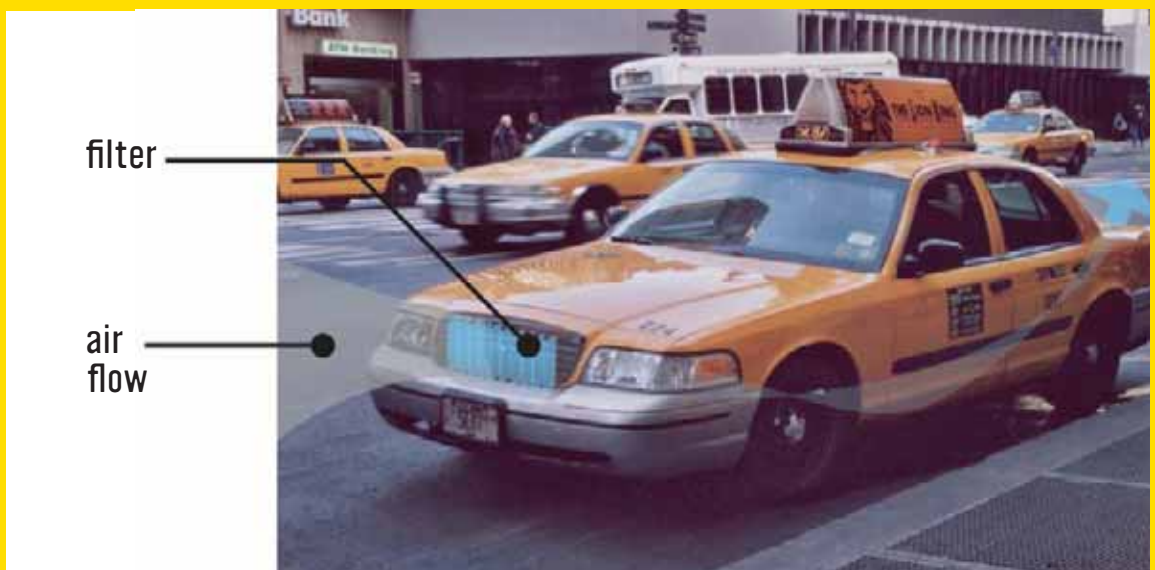


GREENING THE TAXI FLEET CONTINUED

FOX & FOWLE ARCHITECTS ON CAB AIR FILTERS

Beyond implementing hybrid power, taxis could take an active roll in cleaning our air. Filters, installed to collect airborne particulate matter from the air used to cool cab engines, could mitigate some of the damage that internal-combustion engines do to the city's air quality. Cabs would become roving air filters, collecting dust, soot, smog, and other airborne pollution where it is most prevalent: at street level. The continuous operation of over 10,000 cabs throughout the city could have a tremendous impact over time.

A study would be necessary to identify and target the most appropriate pollutants for filtration—what pollutants are most easily captured and what pollutants are most harmful to New Yorkers are of primary concern. After identifying target pollutants, a filtration system must be designed for their collection, most likely using both mechanical filters and electronic air cleaners.



above: FOX & FOWLE ARCHITECTS

Electronic air cleaners use an electrical field to trap charged particles. Like mechanical filters, they could be installed in the intake grille, allowing cars parked sequentially in traffic or at a cab stand to filter the exhaust of cars ahead in line. Filters can be made to be washable along a regular maintenance schedule and easily replaceable in case of damage.

right: FOX & FOWLE ARCHITECTS

Mechanical filters typically are installed in ducts in homes with central heating and/or air-conditioning but could be mounted at the intake grille of a cab.



THE TAXI IS A POLLUTER. I WOULD LIKE TO SEE FILTRATION DEVICES, A MEANS FOR CLEANING UP SOME OF THE HARM DONE BY PAST GENERATIONS OF VEHICLES. WITH THE RIGHT TECHNOLOGY, I CAN IMAGINE EXHAUST COMING OUT OF CABS BEING CLEANER THAN THE INTAKE.

JASON ABBEY
FOX & FOWLE ARCHITECTS

Technical Nutrients



Antron Carpet Fiber
Content: Solution Dyed Nylon
Color: 1245 / C738A Dress Blues
Limited 10 Year Warranty



Designtex Zeftron
Content: Solution Dyed Nylon w/ Acrylic Backing
Abrasion: 100,000 + Wyzenbeek
Color: Boreas 2728-403
Warranty: 5 Years



Designtex Recycled Polyester
Content: 100% Recycled Polyester
Abrasion: 100,00 Wyzenbeek
Color: Midnight 5E87
Warranty: 3 Years



Trevira CS
Content: 100% Polyester
Flame Spread: DIN 4102 Class B1
Color: 7298 / 44
Certifications: ISO 14001 Oeko-Tex 100 10



Interface Frequency Carpet
Content: Type 6, 6 Nylon Polymer
Climate Neutral Manufacturing
Color: 2817 Heration



Designtex ReUse 2039
Content: Recycled Polyester
Abrasion: 200,00 Double Rubs
Color: 401 Midnight
Warranty: 5 Years vertical 3 Years upholstery

Biologic Nutrients



Climatex Lifecycle Fabric
Content: 65% Wool, 35% Ramie
Abrasion: 20,000–60,000 rubs on Martindale
Compostable



Ultratouch Cotton Fiber Insulation
Content: Recycled Denim Fiber
Flame Spread: 5
Fungi Resistant
Bacteria Resistant
Moisture Absorption > 15%



Lantal Clean Wool
Content: Wool
Biodegradable

FOX & FOWLE ARCHITECTS ON “GREENING” CAB MATERIALS

Vehicles converted to cab use are retrofitted with specialized interior materials. It is possible to reduce the environmental footprint of the taxi fleet by re-examining the materials used in the upholstery, floor and ceiling coverings, plastic paneling, seat covers, adhesives, floor coverings, and partitions.

When considering cab interiors, primary consideration should be given to minimizing the Volatile Organic Compounds (VOCs), which are known to cause cancer, respiratory ailments, and other illnesses. Specifications reducing VOCs will provide a healthier work environment for drivers and reduce passenger exposure to harmful compounds.

Cab specifications should also consider the complete lifecycle of the materials chosen for the cab. “Nutrient materials” — which can be reused or that break down organically — should be given priority over those that will become potentially toxic landfill. The samples materials listed here come from companies that strive for the highest levels of environmental responsibility in their material design and manufacturing. Some are already in use in the transportation industry.

FOX & FOWLE ARCHITECTS

Nutrient materials can be classified into two categories: technical nutrients and biologic nutrients. Technical nutrients become stock for other products and thereby maintain a heightened level of usefulness. Salvaged copper plumbing reformed to make new copper pipe is an example of a technical nutrient process. Biologic nutrients become food for other organic processes.

In the proper conditions, cornstarch-based plastics can be composted to become fertilizer for plants. Materials that follow a cradle-to-cradle lifecycle should be prioritized over cradle-to-grave materials.

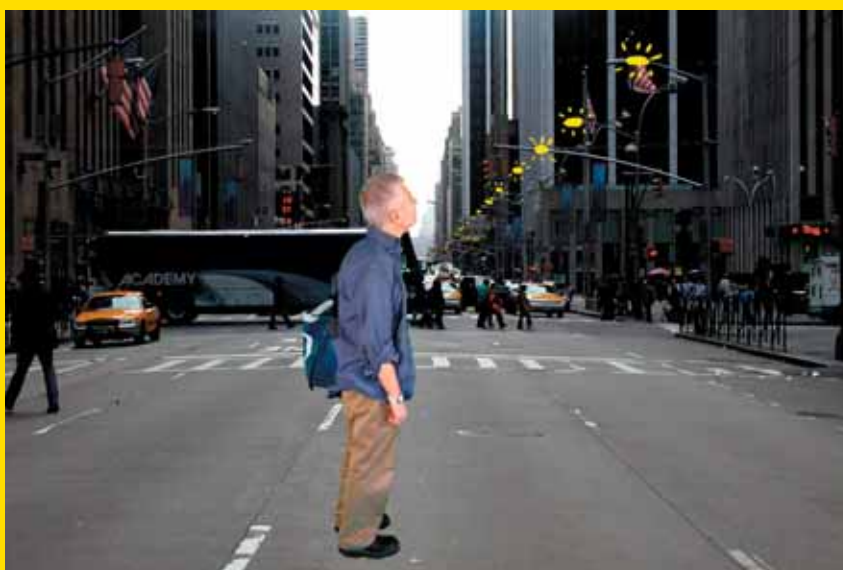
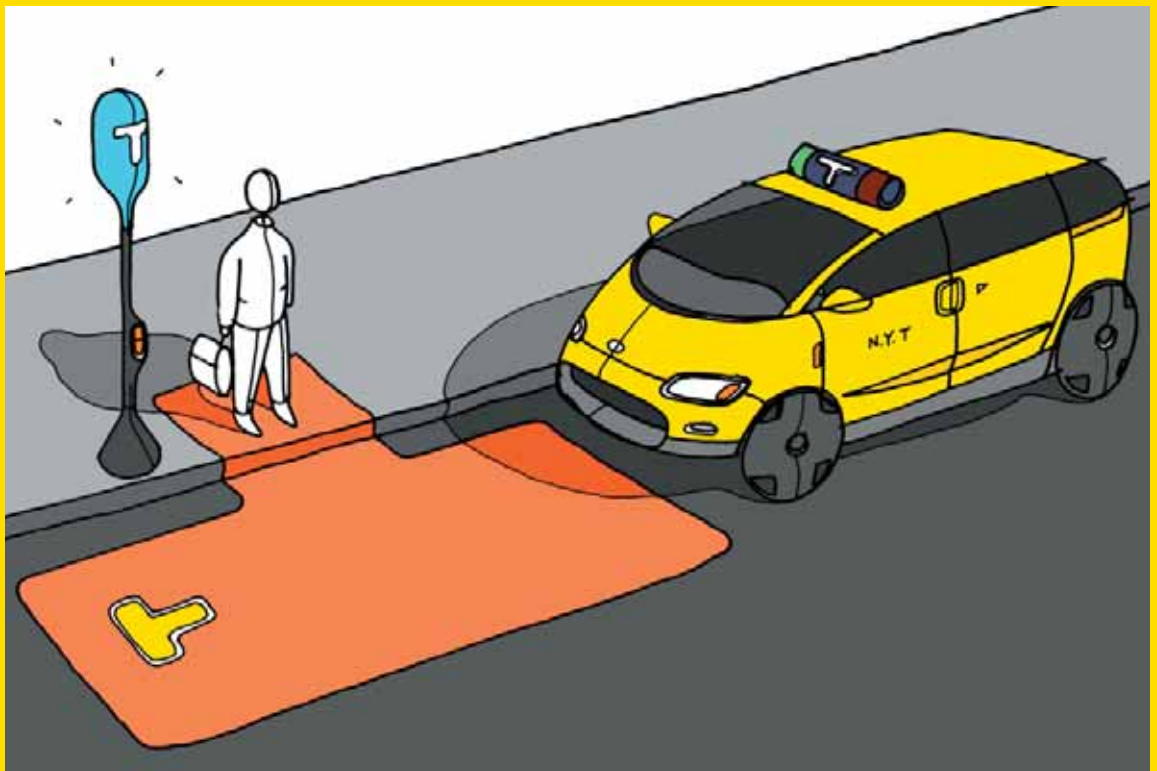
OPTIMIZING THE STREET

HONG KONG HAS MORE CARS PER MILE THAN NEW YORK, BUT THERE ARE STRICTLY REGULATED PLACES TO PICK UP AND DROP OFF PASSENGERS. POLICE TICKET DRIVERS IF THEY PICK UP PASSENGERS OUTSIDE THE DESIGNATED AREAS, SO TRAFFIC FLOWS BETTER.

ZACK MCKOWN
TSAO & MCKOWN

IN RUSH HOUR, AN AVENUE SHOULD BE DEVOTED SOLELY TO FOR-HIRE VEHICLES AND BUSES—NO TRUCKS, NO PRIVATE CARS. THAT WOULD SPEED UP TRIPS SO MUCH AND MAKE DROP-OFFS FAST, SO CABS COULD BE AVAILABLE FOR MORE PASSENGERS.

ERHAN TUNCEL
TAXI DRIVER



above: BIRSEL + SECK
Birsell + Seck have addressed the transition from pedestrian to passenger, from sidewalk to street, by colorfully demarcating a section of the roadway as a loading and unloading zone.

left: IDEO
Taking an innovative approach to passenger loading zones, IDEO proposes that frequency and flow indicators, overlaid on the city grid, could use existing urban infrastructure to highlight the best locations to get a cab. The intensity of the “trail markers” would indicate the number of available cabs that have recently passed through an area.

In a city the size and density of New York, traffic congestion is nearly unavoidable. Nonetheless, city streets could be better optimized for taxi use. Dedicated lanes for cabs—similar to existing bus lanes—and designated loading zones would ease movement for cabs while minimally altering the current streetscape. These cab-only areas would also provide safer access for passengers and cut down on dangerous driving by cabs hustling for fares. Another strategy to maximize driving efficiency is “road pricing” or “congestion charging,” a system that has been utilized in London to dramatic results (see sidebar). Contributors imagined how each of these innovations could function in New York City.



CONGESTION PRICING EXPLAINED

By instituting a £8 charge (around \$14) to travel within the central zone of the city, London has greatly reduced the number of vehicles on its streets—leading to a 30% reduction in traffic congestion since the system was introduced in February 2003. The city has also created an incentive for traveling by taxi and alternative-fuel vehicles, since both vehicle types are exempt from the charge. Negative impacts on business-owners, a major concern prior to the fee's introduction, have been negligible. More information is available from Transport for London at <http://www.cclondon.com/>

If a similar system was put into place in NYC, it could potentially yield several results—a significant reduction in the number of vehicles on the roads; a greater incentive to travel by taxi and other forms of public transit; and increased traffic movement and flow through the streets, which in turn saves time for the passenger and could also maximize the number of fares a taxi will have during a shift (currently about half of a 12-hour shift is spent looking for fares).



above: **KEN SMITH
LANDSCAPE ARCHITECT**

As part of Ken Smith's design for a “green” taxi system, dedicated lanes for taxi travel are marked on the street in green.

TAXI STANDS



RELIEF FROM THE LOUSY BREAK

TRUCK's proposal for the STRETChfence relief stand imagines how a typical New York park fence can be turned into a piece of durable, inexpensive urban furniture. Taxi drivers could stretch their legs and have a meal without cramming into an overcrowded lunch counter or eating in the cab.



top: TRUCK PRODUCT
ARCHITECTURE
Houston and First Avenue

bottom: TRUCK PRODUCT
ARCHITECTURE
East Broadway and Essex

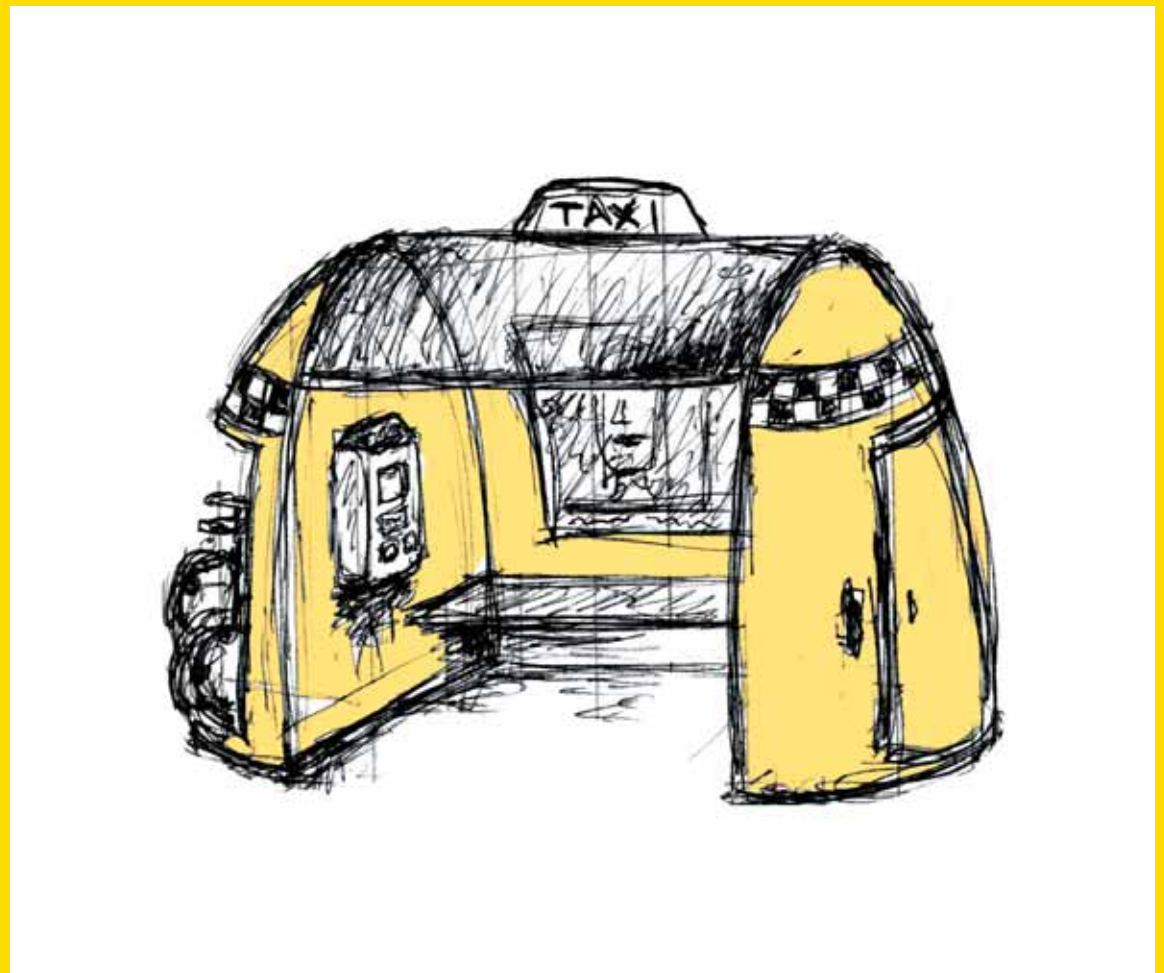
There are two kinds of taxi stands in New York City—one for passengers and one for drivers. Active taxi stands are used for rider pick-up, matching waiting passengers with available cabs. Relief stands are used by taxi drivers as a place to park their off-duty cabs and take up to a 60-minute break.

Active passenger stands, of which the city has around 50, are located at busy hubs, like Grand Central Station, the Javits Convention Center, and area airports. Although they lack the thrill of the street hail, stands take the uncertainty out of catching a cab, a valuable service for natives and non-natives alike.

Additional active stands, particularly at major shopping destinations and outer-borough hubs, would assist riders; if actively policed to prevent poaching of passengers by non-yellow cabs, stands would also provide an efficient source of fares for drivers.

Drivers would also benefit from additional relief stands. The entire city is served by only 20 stands; inadequate enforcement allows non-cab vehicles to monopolize even these limited spaces, and construction zones often swallow other stands. Additional relief stands would not only provide a minimum level of service to drivers working 10- to 12-hour shifts, but also ease traffic flow: The prohibitive cost of garage parking and lack of relief stands sometimes requires drivers to double-park when taking food or bathroom breaks.

In addition to increasing numbers of taxi stands and improving enforcement at the stands, many designers also suggested making stands more useful for both drivers and passengers. Stands could contain maps, MetroCard machines, and restrooms, as well as comfortable seating. Others proposed repurposing the common street fence to provide resting spots for drivers.



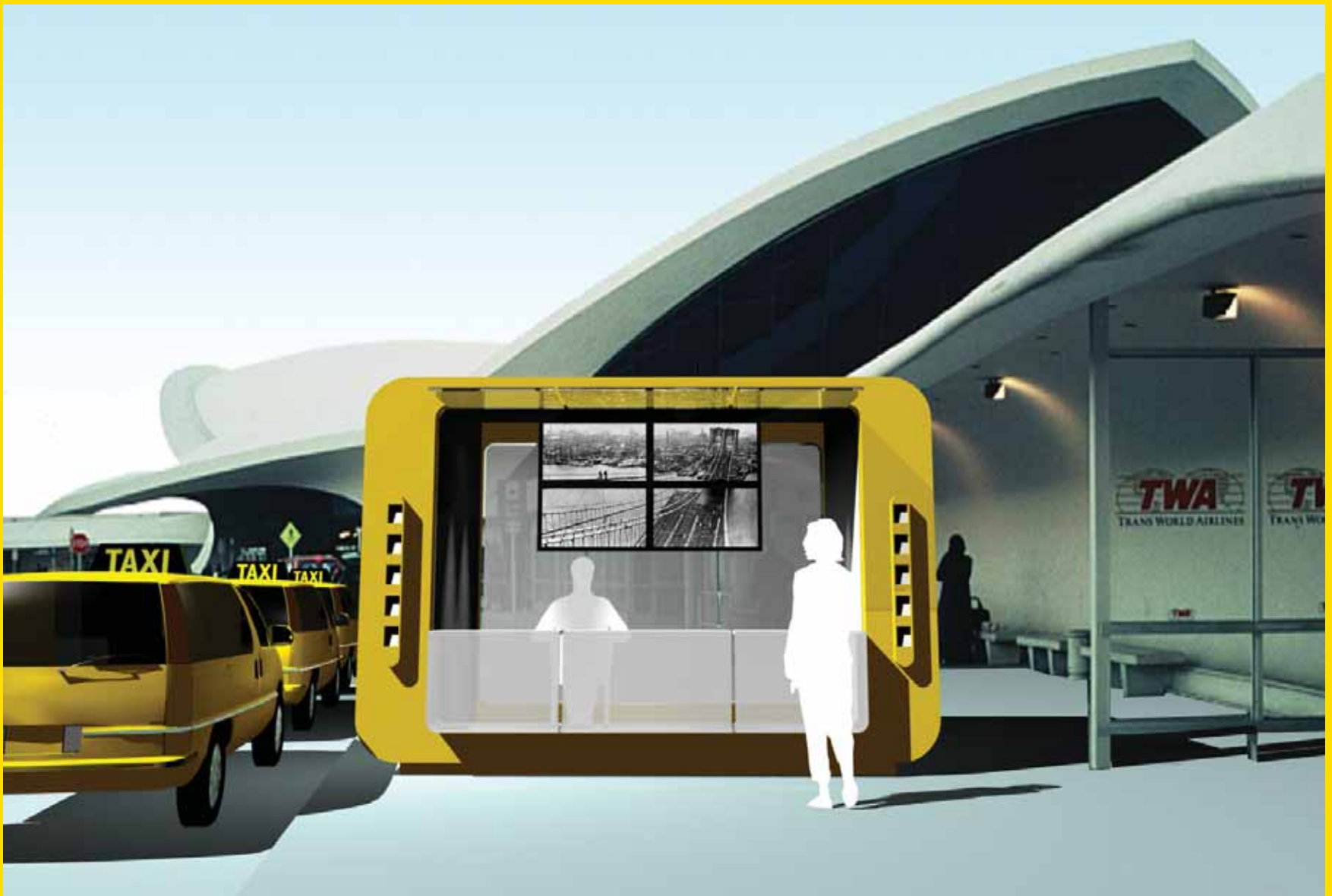
A DRIVER'S PERSPECTIVE

Erhan Tuncel, a taxi owner/operator, suggests the number of relief stands should be tripled—from 20 to 60—with some underused active stands converted to relief stands. New active stands should be added along main cab routes in the outer boroughs, such as the following:

- Bronx: 3rd Avenue, Grand Concourse
- Queens: Northern Blvd., Queens Blvd.
- Brooklyn: Clinton Street, Atlantic Avenue

above: CITYSTREETS
Citystreets proposes a taxi stand where passengers can get a cab and purchase MetroCards, and also where drivers can take a break, use the restroom, and recharge the batteries of future electric cabs.

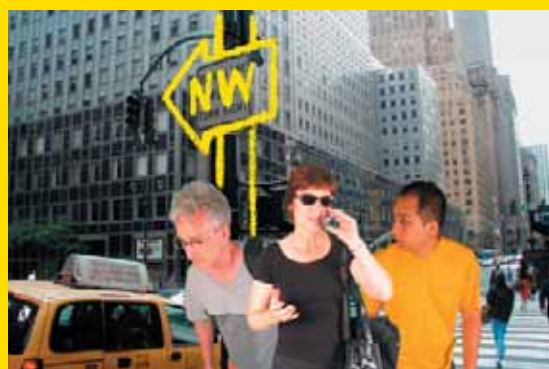
TAXI STANDS CONTINUED



above: WEISZ + YOES
Weisz + Yoes' airport
cab stand brings modern
glamour to the wait for
a taxi.

I END UP HAILING IN THE MIDDLE OF THE STREET IN ORDER TO DISTINGUISH MYSELF FROM ALL THE PARKED CARS, THE SIDEWALK TRAFFIC, ETC. THERE SHOULD BE A WAY TO HELP DRIVERS RECOGNIZE A POTENTIAL CUSTOMER OTHER THAN HAVING SOMEONE HOLD OUT THEIR HAND.

KEVIN OLINGER
DEPUTY DIRECTOR
NYC DEPARTMENT
OF CITY PLANNING



IDEO ON “MIGRATORY PATTERNS”

Many people in the city share common daily transportation patterns. Centralized gathering places facilitate an efficient shared journey.

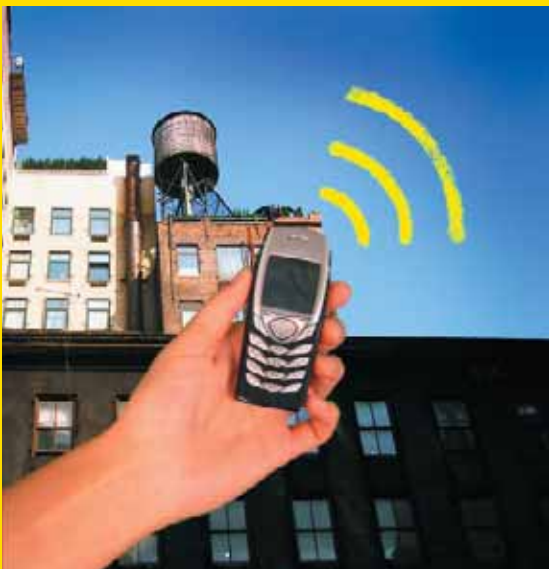
left to right: IDEO

Gather
New Yorkers flock to a designated destination to hail a cab.

Go

If others are present when a cab arrives, passengers may save money by choosing to rideshare.

WIRELESS TECHNOLOGY



IDEO ON "CALL OF THE WILD"

In the vast terrain of the city, it is hard to be heard. A powerful signal that transcends the city's architecture is used to connect New Yorkers to their cabs.

left from top to bottom:

IDEO

Broadcast

The signal is sent anytime from any cellphone.

Detection

If available, cabs pick up the signal and identify the sender's location.

Response

Cabs make their way to the specific location for pick-up.

above: CITYSTREETS

Citystreets' proposals include GPS-based navigation systems in all taxis, "black boxes" for crash data, electronic logbooks, networked on-board cameras for security and law enforcement, and wireless communication to match passengers with cabs—thus reducing the 308 million yearly miles New York taxis spend trolling for passengers.

New Yorkers will go to great lengths to secure a cab—we run into traffic, stake out advantageous corners, “steal” cabs from our fellow citizens. Still, during peak hours or when caught in a rainstorm, it can be nearly impossible to locate an available taxi. This fruitless search for a cab could be addressed through a range of wireless technologies, including cell phones, text messaging, and satellite locating.

Contributors shared a remarkably consistent vision of how wireless technologies could make the taxi experience not only more efficient for passengers, but also beneficial for drivers and fleet owners. A passenger could use their cell phone to call in a wireless “hail”; this signal would allow dispatchers, using GPS, to alert nearby drivers to a passenger’s location, perhaps through a text message. If a cabbie chose to accept the fare, a confirmation message could be sent to the passenger’s cell phone with the medallion number of their soon-to-arrive taxi. Dispatchers would know where to send taxis, so drivers would spend less time cruising for fares. Multiple passengers—perhaps waiting at a taxi stand—could call in a hail and rideshare, saving money and time.

I THINK THERE ARE WAYS WE CAN USE EXISTING TECHNOLOGIES TO GREAT EFFECT. A TEXT-MESSAGE SYSTEM COULD ALLOW A DISPATCHER TO SAY “WAIT, THERE ARE ABOUT 70 PEOPLE IN THE SAME AREA, GET OVER THERE.”

**FRED DUST
IDEO**

IT’S THE LACK OF TECHNOLOGY IN TAXIS THAT ASTOUNDS ME—THE FACT THAT YOU CAN’T ORDER A CAB ON THE INTERNET, ORDER ONE ON YOUR CELL PHONE. WE HAVE ALL THIS AMAZING TECHNOLOGY—HOW DO YOU INTEGRATE THAT IN A TAXI?

**HARRIS SILVER
CITYSTREETS**



above: **WEISZ + YOES**
Weisz + Yoes imagines a dedicated yellow button on cell phones for calling a cab.

NEW TECHNOLOGY SLATED FOR NYC CABS

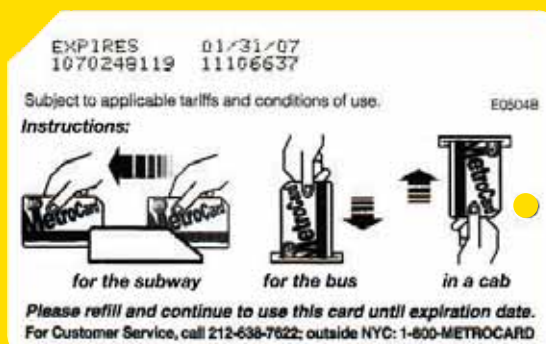
Many of the proposals on this page are on the verge of becoming technically possible. In March 2005, the New York City Taxi and Limousine Commission (TLC) released a Request for Proposals to build, install, and maintain enhanced technology services in city cabs. Among the services the TLC intends to require are credit/debit card payment, text-messaging capability, and the installation of an interactive passenger information monitor (PIM) in all New York City taxicabs. According to the TLC, these technologies will allow for near real-time location of passengers’ lost property, the opportunity for passengers to follow their trip’s progress, and the possibility of alerting drivers to passengers looking for service.

The proposal is not without controversy, however. The TLC also intends to use these technologies—specifically the GPS component—to collect electronic trip data, a valuable resource for citywide transportation policy, as it will allow the TLC to study taxicab availability and usage patterns. A number of driver organizations are opposing the data collection, citing civil liberties concerns.

CASHLESS PAYMENT

MY WIFE IS FROM ZURICH,
AND THERE YOU CAN TAKE
THE TRAIN, THE BUS, THE
TRAM, A TAXI—ALL WITH
ONE PASS.

YORK BLEYER
IMAGINATION



Multiple designers suggested that the MTA's MetroCard system—now used for subway and bus travel—be expanded for use in cabs.

Despite the ubiquity of card payment, the cash economy is alive and well in the New York taxicab. In addition to obvious limitations for passengers, reliance on cash also places drivers at risk for robbery. A cashless payment system could provide increased convenience, efficiency, and safety; it might also offer incentives for passengers, drivers, and fleet owners.

In addition to acceptance of regular credit cards, designers suggested two other card systems: an expansion of the MTA's MetroCard system, and loyalty cards that offer benefits. Allowing MetroCards for payment would fully integrate taxis into the city's public-transit system. A payment and loyalty card, which can be conveniently reloaded by topping-up the credit balance online, might earn metered mileage with each use. These points could be redeemed for rides during periods when drivers are less busy, equalizing demand.

**IMAGINATION ON "HAILSTONE,"
A CASHLESS-PAYMENT AND LOYALTY CARD**

Think of a cab this way: It is New York City's oldest wireless mobile device. Should you be on a weekends-and-evenings plan, or pay as you go? What if it were cashless? At certain times of day, everyone wants one. What if cab fares were combined with other prepaid or credit services? Would frequent riders earn miles? What if promotions drove cabs to meet demand, as the curtain falls in the theater district, at closing time, as it starts to rain? Imagination (USA) Inc. has conceived Hailstone — a cashless loyalty card to benefit riders, drivers, and fleet owners. Riders carry the card with their credit cards; drivers feel less like a mobile ATM waiting to be robbed at the end of a shift; fleet owners happily co-brand with New York retailers and landmarks.

Anya, downtown rider:
'Now I always carry the cashless card. I can reload it or check the balance online, by phone, or around town.'



Hector, cab driver:
'I have a stake in the prepaid income that Hailstone cards generate. Promotions encourage ridership.'

Bob, fleet owner:
'Hailstone is a means of exchange and a store of value — like air miles for the five boroughs.'

FLEET DIVERSIFICATION

CHANGE THE STRUCTURE OF THE INDUSTRY. INSTEAD OF HAVING 12,000 YELLOW CABS WITH NO RADIOS, WHICH ONLY PICK UP STREET HAILS, AND 35,000 LIVERIES THAT CAN'T PICK UP STREET HAILS LEGALLY AND CAN ONLY TAKE RADIO CALLS, HAVE 25,000 YELLOW CABS THAT DO BOTH.

MICHAEL LEVINE
RONART LEASING CORPORATION



MAKING THE CASE FOR FLEET DIVERSIFICATION

According to the *New York City Taxicab Fact Book* (available at www.schallerconsult.com/taxi) 69% of all taxi trips carry only one passenger, and 24% percent of fares are two people, meaning that for the vast majority of rides, half of the Crown Victoria could be lopped off, and it would make no difference in its ability to provide service. Implementing a two-passenger taxi would make sense economically (it would be cheaper to maintain and run), environmentally (smaller cars use less fuel and have lower emissions), and logistically (traffic flow would be improved, as smaller vehicles would require less lane space).

These statistics provoked a range of suggestions from *Designing the Taxi* participants. The National Resources Defense Council proposed creating two types of taxis, where 70% would be two-passenger taxis and 30% would carry six passengers. Bruce Schaller, former chief analyst for the Taxi and Limousine Commission, believes that the ideal balance would be a fleet where two-thirds are two-passenger vehicles and the balance would be six-passenger vehicles. The smaller vehicles would be designed for short trips and would have a maximum speed of 30 mph, while the larger vehicles would be capable of highway speeds and also accommodate a wheelchair. He also recommends integrating the taxi fleet with livery-car services in order to spread service more efficiently—yellow cabs are busiest during rush hour, while livery cabs are most active after 7p.m. but are underutilized during the day.

The taxi is New York's all-purpose schlepper of people and objects—luggage, children, pets, band equipment, groceries, or a new rug, just across town or out to the airport. But aside from a few mini-vans, the city's cab fleet is made up of only one type of vehicle, the mid-sized, four-door, four-passenger Ford Crown Victoria.

There is an alternative to the yellow cab—the livery car, or neighborhood car service. Whereas yellow cabs can only be summoned on the street, livery cars are radio-dispatched vehicles requested by phone. In less densely populated areas of the city, where foot traffic is not sufficient to attract prowling yellow cabs, radio cars provide the bulk of car service. Combined, these two types of service provide New York with roughly 42,000 for-hire vehicles.

Better integration of the yellow-cab and livery-cab fleets, as well as additional vehicle types for various uses, would provide New Yorkers with higher levels of cab service. Designers considered the varied needs of passengers and proposed a diversified fleet made up of several types and sizes of vehicles.

**opposite and right:
HYBRID
PRODUCT DESIGN +
DEVELOPMENT**

Hybrid's stout, mono-form MiniModal is a compact vehicle that could function as an ultra-efficient yellow cab or black car. Despite its smaller overall size and weight, the MiniModal has a full complement of features, including: a unique and appropriate shape with emphasis on a robust appearance, greater fuel efficiency, better accessibility for all riders, better use of space in the passenger area, new platform/layout for improved ingress/egress, and better visibility for driver and passengers.

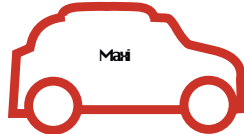


SELECTION

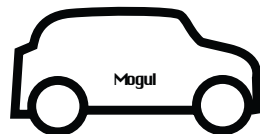
7 wheel chair + 2 people



7 wheel chair + 3 people



7 wheel chair + 4 people



**bottom: HYBRID
PRODUCT DESIGN +
DEVELOPMENT**

Hybrid proposes three versions of their Modal taxi—a Mini, a Maxi, and a Mogul—to accommodate all types of trips and passengers.

FLEET DIVERSIFICATION CONTINUED

WE'RE STUCK IN THIS BOX OF MODIFYING THE 92% OF THE FLEET THAT IS THE CROWN VICTORIA. TAXIS TURN OVER EVERY THREE TO FIVE YEARS — THAT'S A GREAT OPPORTUNITY TO EXPERIMENT AND HAVE MANY TYPES OF VEHICLES OUT THERE. PROVIDE A SERVICE, BUT BE A LABORATORY FOR EXPERIMENTATION.

ERNEST TOLLERSON
PARTNERSHIP FOR NEW YORK CITY

WHEN I THINK ABOUT THE REASONS I WOULD CHOOSE A CAB OVER THE SUBWAY, IT'S USUALLY BECAUSE I HAVE A BIG LOAD TO CARRY. AND OFTEN, WHEN I NEED A MINIVAN, I CAN'T FIND ONE. IT'S SORT OF LUCK.

MICAELA BIRMINGHAM
DIRECTOR, PLANNING CENTER
MUNICIPAL ARTS SOCIETY



DIVERSIFICATION OF USE: IDEO ON "PIGGYBACK"

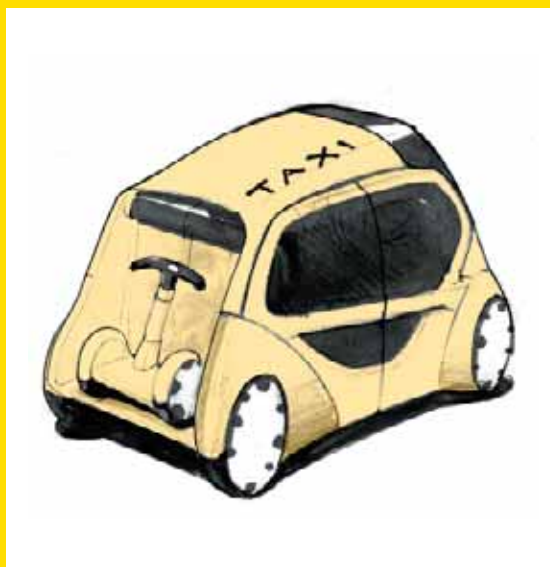
Cab downtime is an un-utilized resource. Cabs could keep active and profitable through participating in more diverse services that leverage their constant mobility.



top to bottom: IDEO
Book Return
New Yorkers can use the book return service by hailing a cab and paying a small fee.

Recycling
Trunks double up as recycling bins for clothing and small second-hand items.

Supplies
Cabs become delivery services for small non-profit organizations.



left: CITYSTREETS

Given that 70% of all taxi trips are single-occupancy, the CABsule proposal supports a secondary, on-demand vehicle for a "Drive-Yourself-Taxi" service, intended for short trips. A possible choice for personal local transportation would be the Segway Human Transporter, the innovative electric scooter. The Segways could be picked up and dropped off at taxi stands and also loaded onto the backs of taxis themselves.

above: CITYSTREETS

The CABsule design from Citystreets proposes expanding the taxi fleet to include a tall, narrow vehicle that would be more space efficient than the Crown Victoria.

THE TAXI VEHICLE

Stepping into a New York City cab should not bring to mind the vehicular equivalent of Frankenstein's monster. Unfortunately, with their many makeshift adaptations, wrought over decades, current cabs whisk passengers through New York's dynamic streets under circumstances that feel provisional and look like a mess.

The main culprit here is the Ford Crown Victoria, a production-model sedan reconfigured for use as a taxi, which now comprises 92% of all yellow cabs. Sturdy and reliable, the Crown Vic provides a basic level of service at low cost, but the vehicle is in a state of almost continual adjustment. Some upgrades, like air conditioning, have stood the test of time, while others, like the recordings by Sesame Street's Elmo and other luminaries admonishing passengers to buckle up, have not. Despite the Crown Vic's malleability, most would agree that it has been pushed nearly to the limit of its potential.

Some of the vehicle upgrades explored in the sections to follow could be implemented with the current fleet. A legible roof-indicator light and a partition equipped with passenger services would go a long way toward moving taxis into the 21st century and could be retrofitted onto Crown Victorias. Safety features like built-in child seats, passenger airbags, and sliding doors might also be adapted to current taxis. But a radical re-imagining of the taxi, such as reconfiguring interior proportions for comfort and full accessibility, will likely require an entirely new vehicle.

In a perfect world, the taxi would be a purpose-built vehicle designed to be a taxi only, just as post-office vehicles are designed to deliver mail. In all probability, however, cost limitations will require that the next generation of taxis be reconfigurations of existing vehicles. Nevertheless, with the current state of technology and the wealth of knowledge available regarding how taxis are used, there is no reason why future taxis should not be safer, more comfortable, and more accessible. Given that most New Yorkers hold strong opinions about taxis, designers of the new cabs should have no trouble whatsoever soliciting feedback.

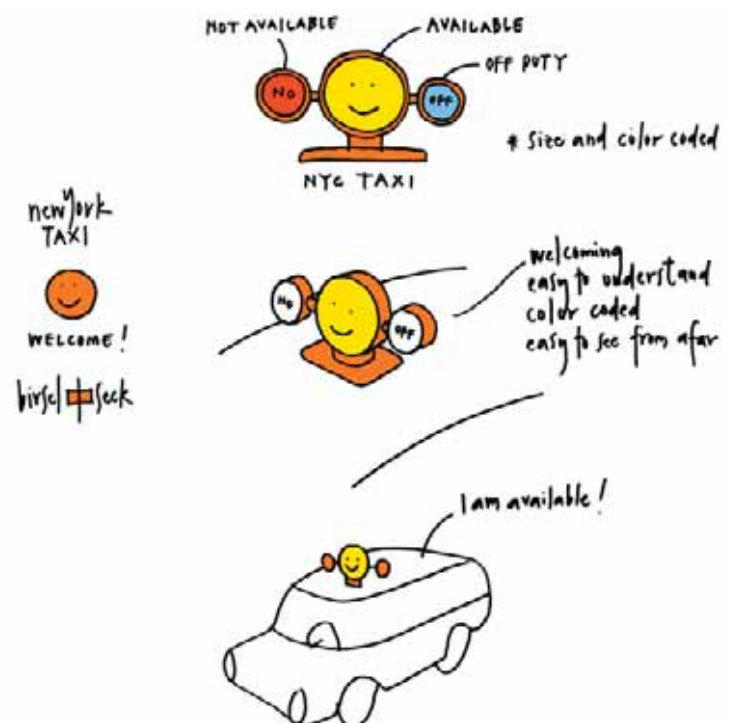
E

ROOF LIGHT



above: WEISZ + YOES
Weisz + Yoes' roof light enthusiastically declares these taxis' status in the local vernacular.

right: BIRSEL + SECK
Size, color, and the universally recognized happy face make Birsell + Seck's roof light welcoming and easy to understand.



Availability of a New York City taxi is indicated by a light on the roof. Deciphering the iconography of the roof light is a baseline indicator of city savvy: As visitors soon discover, there is no way to tell if a cab is available unless you happen to know that an illuminated medallion number on the roof means the taxi is free — except, of course, if the tiny sidelights that read “Off Duty” are also illuminated. In bright sunlight, the roof light becomes completely illegible, placing even veteran New Yorkers in the awkward position of the out-of-towner, since they are forced to hail all cabs in the general vicinity.

As several designers demonstrated, solving these problems is eminently possible. Roof-light text could be literal, describing the taxi’s status in simple descriptive terms, such as ‘vacant.’ Appropriate symbols could also be useful, given that visitors may not read English. Daylight visibility could be improved through the use of color or by employing new lighting technologies, such as light-emitting diodes (LEDs).



**ANTENNA DESIGN
NEW YORK INC.**

Antenna retains the centrality of the license number, but expands the entire housing to afford space for a literal description of taxi status, rendered highly visible through LED technology.

ANTENNA ON THEIR IDEAL ROOF LIGHT

- Available taxi is spelled out clearly with “Vacant”
- “Vacant” is indicated in super bright, large LED sign, clearly visible even in direct sunlight
- Large type, readable from afar, duplicated left and right
- When taxi is occupied, display is off
- “Off-Duty” is spelled out in dimmed type, legible, but not attention catching

ACCESS AND SAFETY

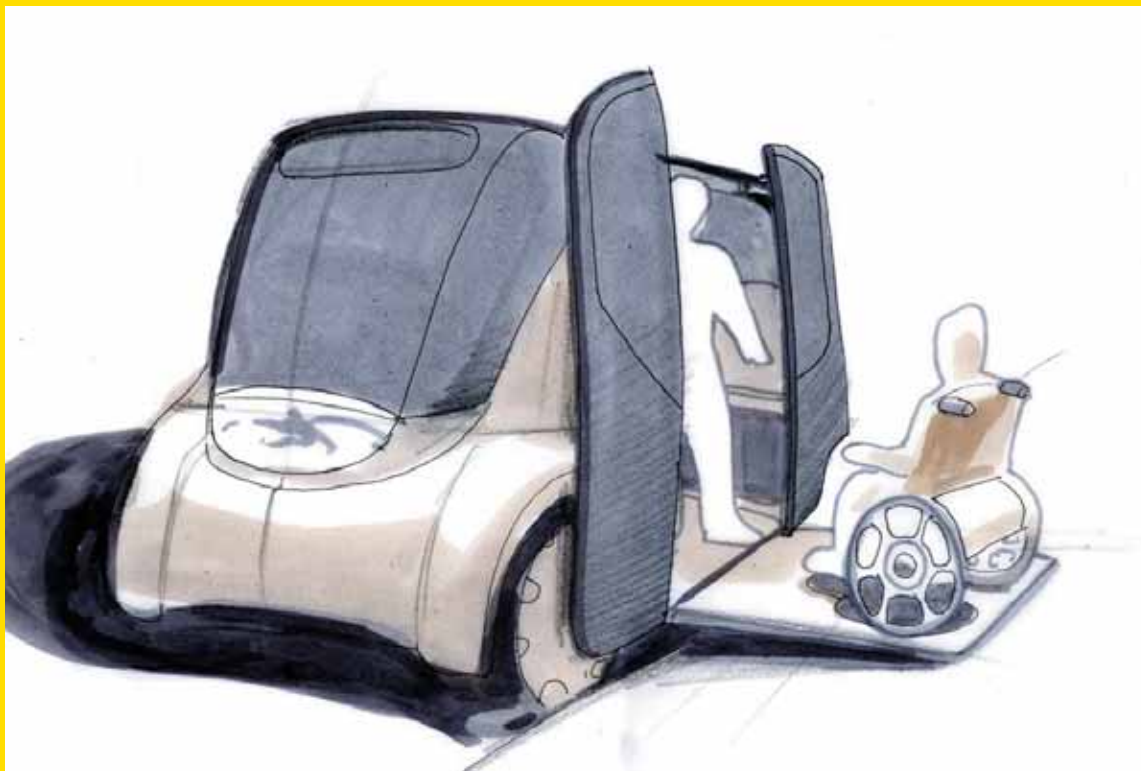
TAXI DESIGN FOR PEOPLE WITH DISABILITIES

Accessible taxis in New York City will benefit wheelchair users as well as the general public: people with children in strollers, bulky packages, pets, musical instruments, or luggage, and tall people.

Taxis are a form of public transportation. It is our civil right to use public transportation, including taxis, but taxi sedans are inaccessible to wheelchair users. The Americans with Disabilities Act has minimum standards for accessible taxi design. Relatively inexpensive converted minivans are now available with side or rear entry. Many of us prefer the side entry minivans over the rear entry vans because they are safer to enter and exit on the curb, and they are roomier. A manual flip-out ramp works well. In the future, a purpose-built accessible taxi vehicle might be preferable to current vehicles.

Disabled In Action, a disability rights organization, and the Taxis For ALL Campaign, a coalition of groups working for accessible taxis in NYC, want all taxi sedans and inaccessible minivans to be replaced, as they wear out, with accessible minivans, eventually leading to a fully accessible NYC taxi fleet. Only then will we be able to go to the curb, hail a taxi, and have a good chance of getting in one.

Jean Ryan
VP for Public Affairs, Disabled In Action
Vice Chair, Taxis For ALL Campaign



top: CITYSTREETS
Citystreets' distinctive CABsule opens with sliding doors to deploy a curbside ramp for wheelchair access; the vehicle is also tall enough for passengers to walk inside.

bottom: CITYSTREETS
Citystreets' "league of pedestrians" exemplifies the diversity of New York's taxi passengers.

Ease of access is paramount in the fast-paced and sometimes hazardous environment of New York's streets. Opening the door and entering often poses a challenge in the midst of traffic, and accidents are common when a door is opened on the street side of a taxi, rather than at the curb. Access can also be an issue for the elderly, passengers with children or packages, and the disabled; fewer than a dozen yellow cabs can accommodate a wheelchair.

Designers addressed these issues through the addition of automated sliding doors and curbside ramps that provide equal and safe access for people with disabilities. Proposals for increased entrance width and height would also accommodate passengers of varying size. Doors that open onto the curb rather than swinging out prevent traffic accidents, and a rear safety indicator light would flash during boarding and exiting. Further, automated sliding doors require less force to open, facilitating entry for the elderly and passengers who may be carrying packages.



**above: HYBRID
PRODUCT DESIGN +
DEVELOPMENT**

Hybrid's MiniModal is fully wheelchair accessible, with sliding doors, a low curbside ramp, interior floor locks for stability, and a rear safety light to indicate boarding and exiting.

ACCESS AND SAFETY CONTINUED

MY OFFICE MAKES SURE THAT THERE ARE EQUAL OPPORTUNITIES FOR DISABLED PEOPLE IN THE CITY. FUNCTIONALITY IS THE MOST IMPORTANT PLACE TO START IN DESIGNING A TAXI. IT'S HARD TO RETROFIT ANYTHING, SO THE IDEAL TAXI WOULD BE ACCESSIBLE BY DESIGN.

MATTHEW SAPOLIN
EXECUTIVE DIRECTOR
MAYOR'S OFFICE FOR PEOPLE
WITH DISABILITIES



above: ANTENNA DESIGN NEW YORK INC.
Antenna's rear safety indicator alerts other drivers when a passenger is entering or exiting a taxi.

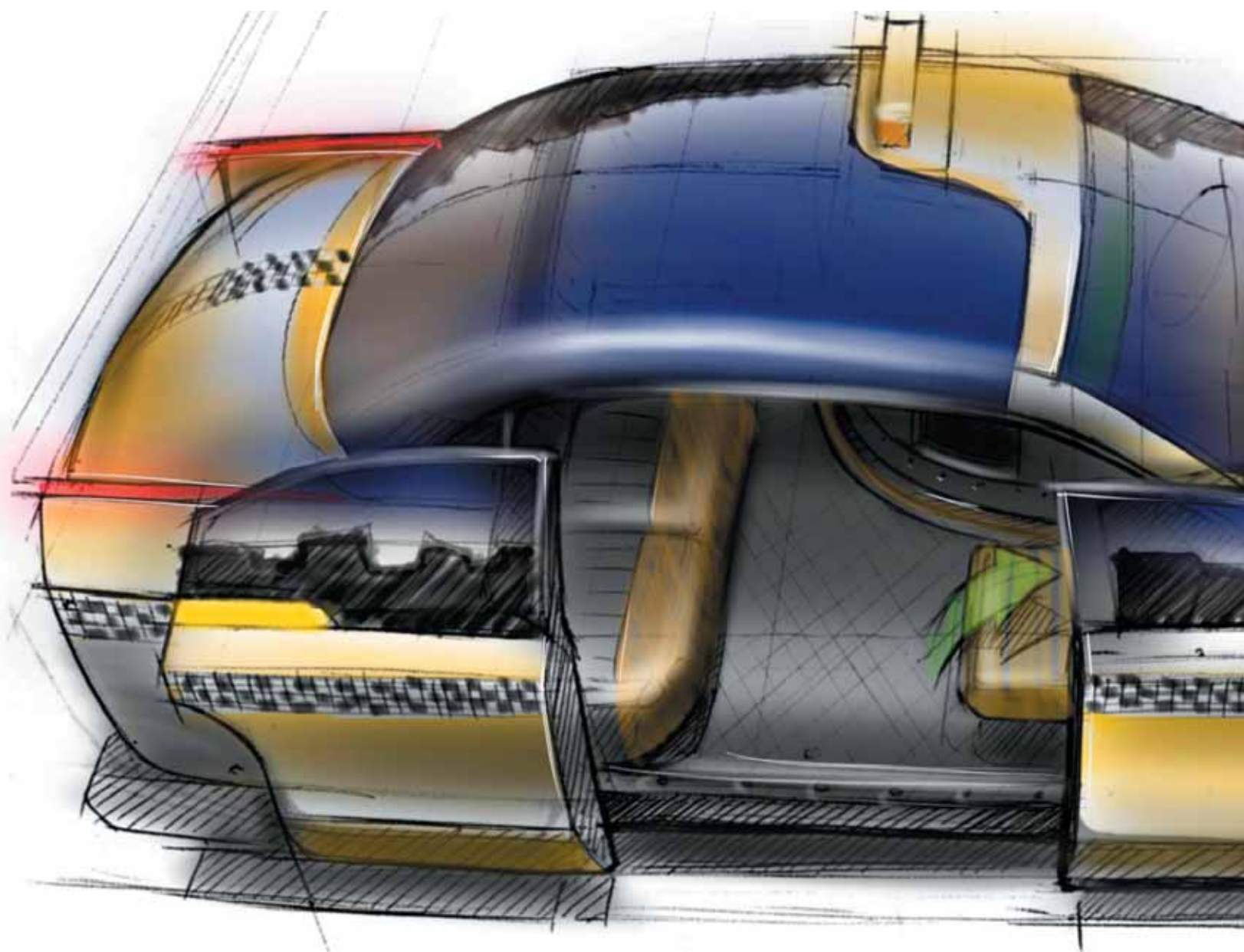
left: ANTENNA DESIGN NEW YORK INC.
Antenna's easy-to-use, touch-sensitive panel activates the door, replacing the traditional handle.



left: **BIRSEL + SECK**
The welcoming doors and high roof on this Birsel + Seck design ease passenger entry.

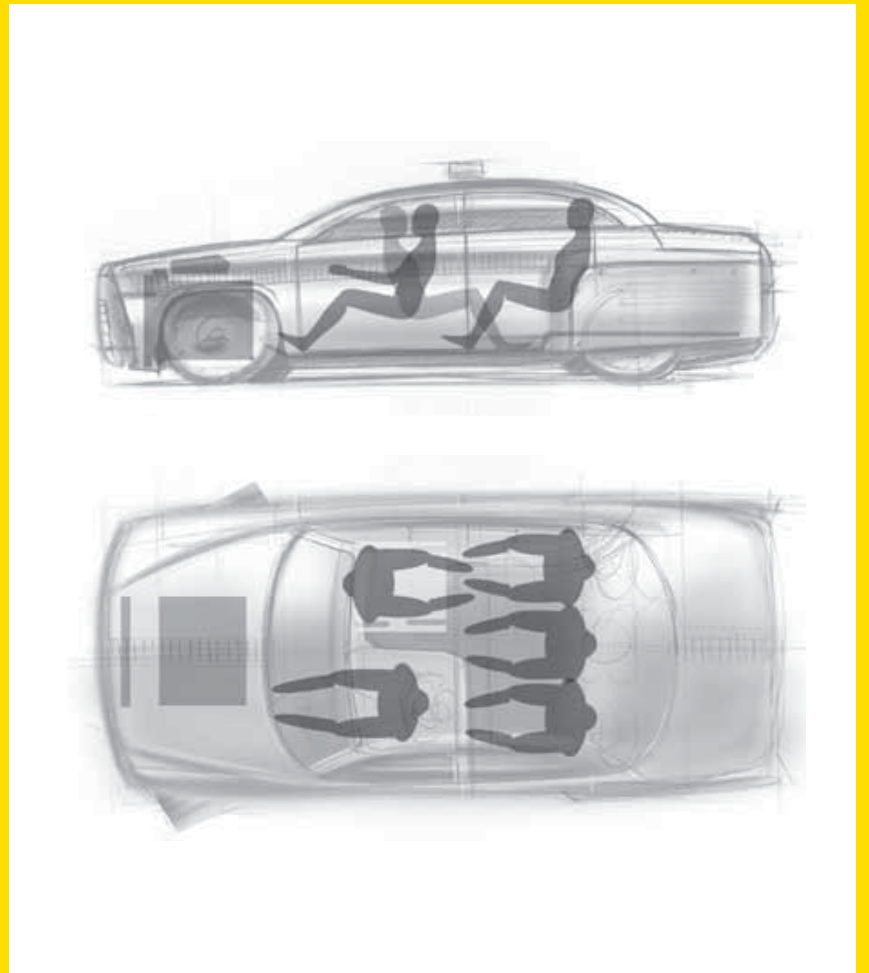
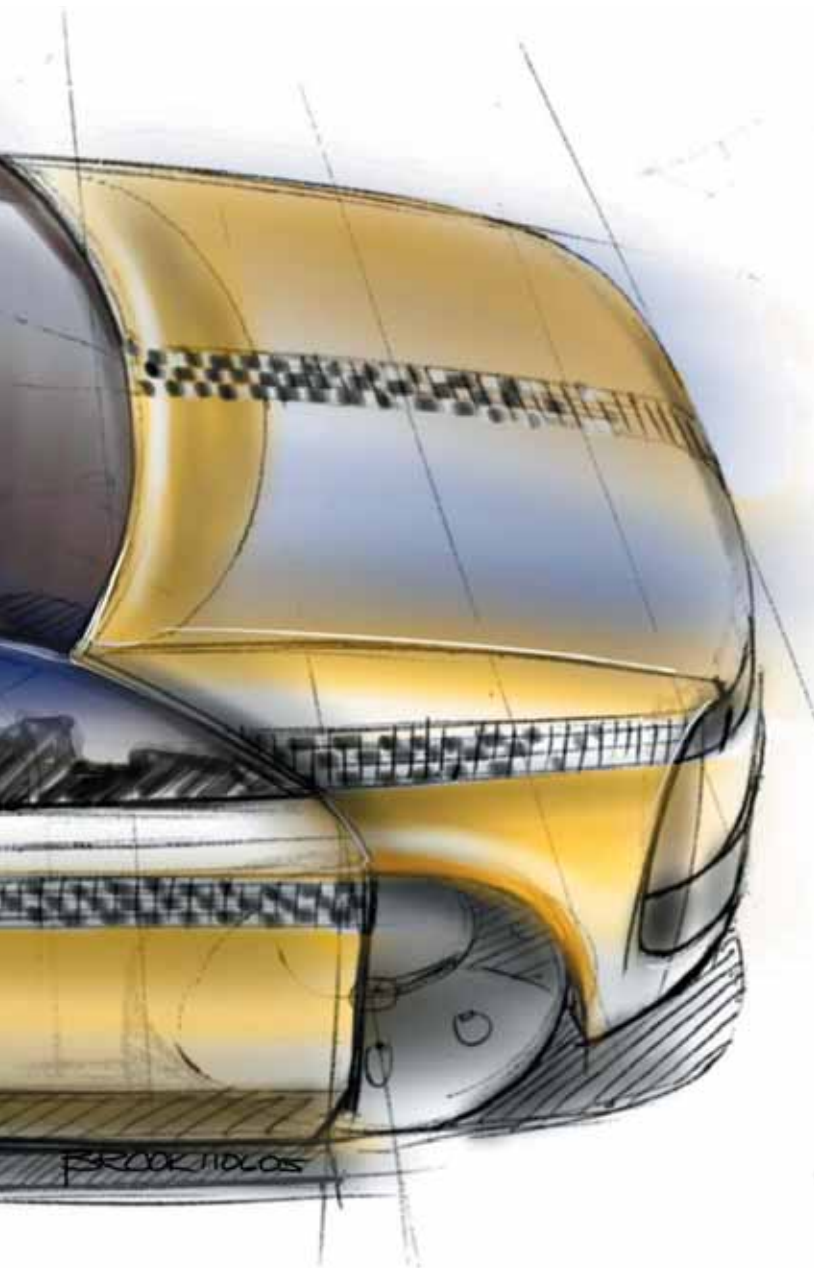


INTERIOR COMPARTMENTS



A New York taxi ride will take you from Point A to Point B, but it won't necessarily be a comfortable, let alone productive, experience for either the driver or passengers. The cab's interior spaces — the driver "cockpit" and the passenger compartment — are poorly adapted for their specialized uses. Drivers work long shifts, during which physical movement is restricted and few creature comforts are available. Meanwhile, a stream of different passengers occupy the space, engaging in work, conversation, or myriad other activities.

These proposals explore how the needs of drivers and passengers can be reflected in the cab's interior. Creating an area customized for the driver might mean raising seat height for increased sightlines, an ergonomic steering wheel and driving chair, a microphone, and even a personal storage area and small refrigerator. The passenger interior could be a more flexible space, with greater height, increased legroom and seats that might be reconfigured to face different directions or folded to accommodate more people, luggage, and packages.



left: PENTAGRAM
Pentagram's "New Checker" incorporates a folding, rear-facing front passenger seat and an ergonomically designed cockpit to enhance driver comfort, reducing stress and fatigue.

above: PENTAGRAM
Four adults ride comfortably in Pentagram's reconfigured passenger compartment.

INTERIOR COMPARTMENTS CONTINUED

I REMEMBER WHEN THEY
HAD JUMP SEATS IN CABS—
AS A KID, I LOVED THEM.

DEBERA JOHNSON
CHAIR
INDUSTRIAL DESIGN DEPARTMENT
PRATT UNIVERSITY



IDEO ON THE “HOMING INSTINCT”

The New York habitat teems with life. Every individual claims a territory and makes it their own—surrounding themselves with the comforts unique to their needs. The cab becomes an extension of the home.



left top to bottom: IDEO

Bathroom
Preening and grooming on the way become part of the overall experience of travel.

Kitchen
Cabs are great places for snacking and taking a break.

Bedroom
In the ‘Nap Cab,’ New Yorkers can find all they need to relax and switch off.

above: CITYSTREETS

As many city residents take their pets everywhere, Citystreets suggests that the passenger section incorporate a separate compartment for four-legged New Yorkers.


opposite: BIRSEL + SECK

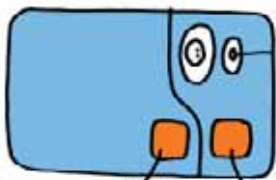
Birsel + Seck’s reconfigured interior shifts some space to passengers, while the driver “cockpit” considers comfort and utilities for a shift spent in the front seat.

new York
TAXI



DRIVER

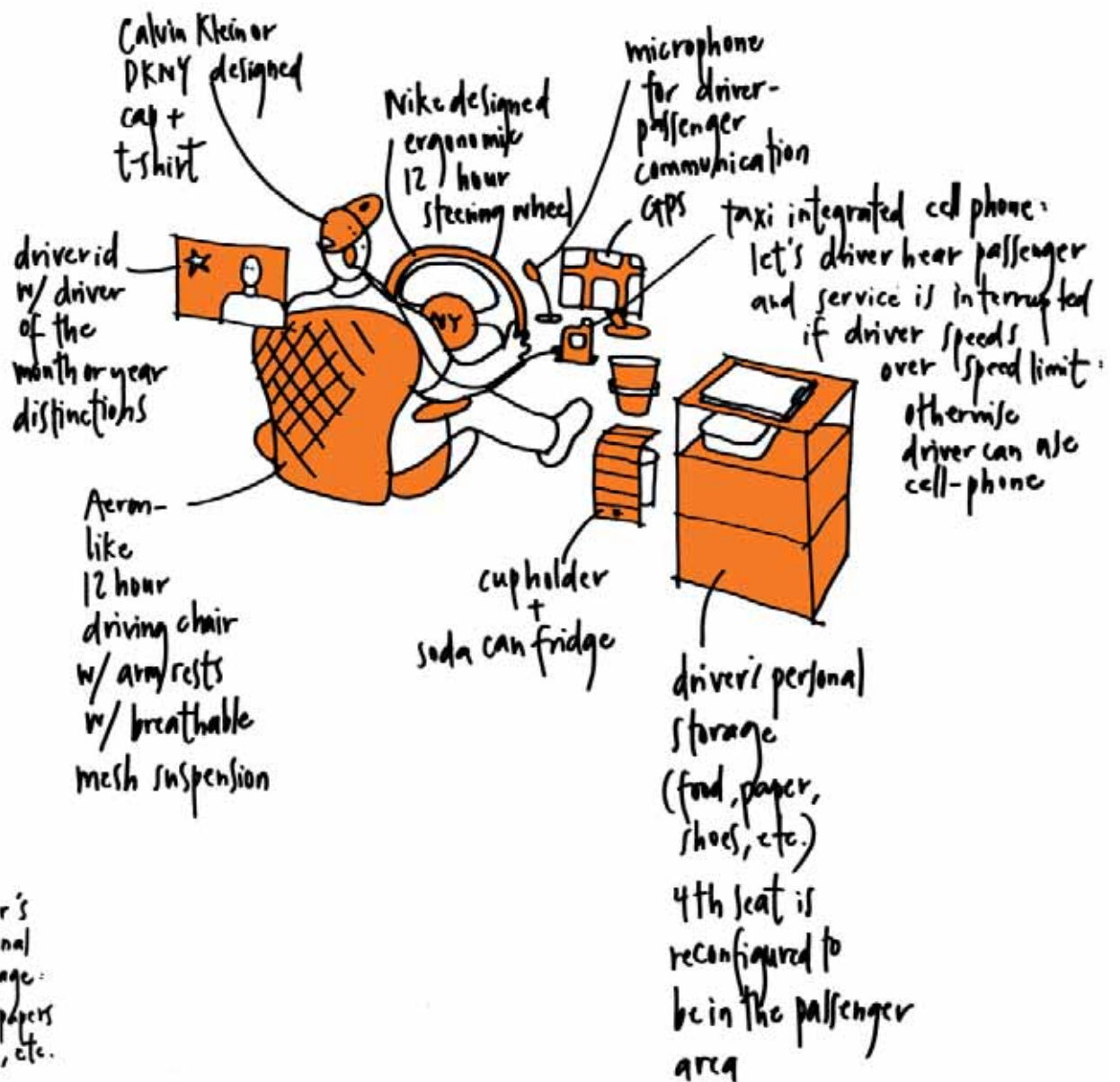
bird's |  | seat



room for
4th seat
(fold-down)
or for
wheelies
or your legs

curved
divider:
factory-
made

driver's
personal
storage:
food, papers,
shoes, etc.



CHILD SEAT

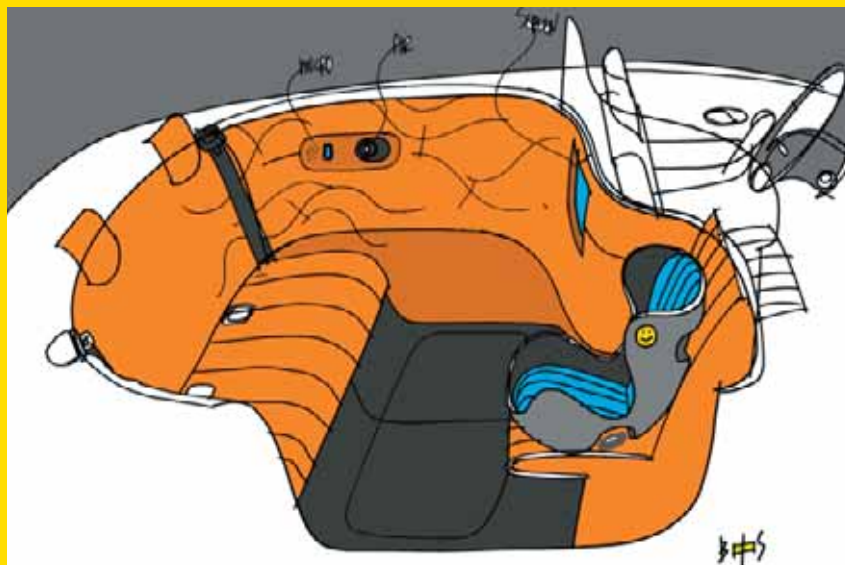
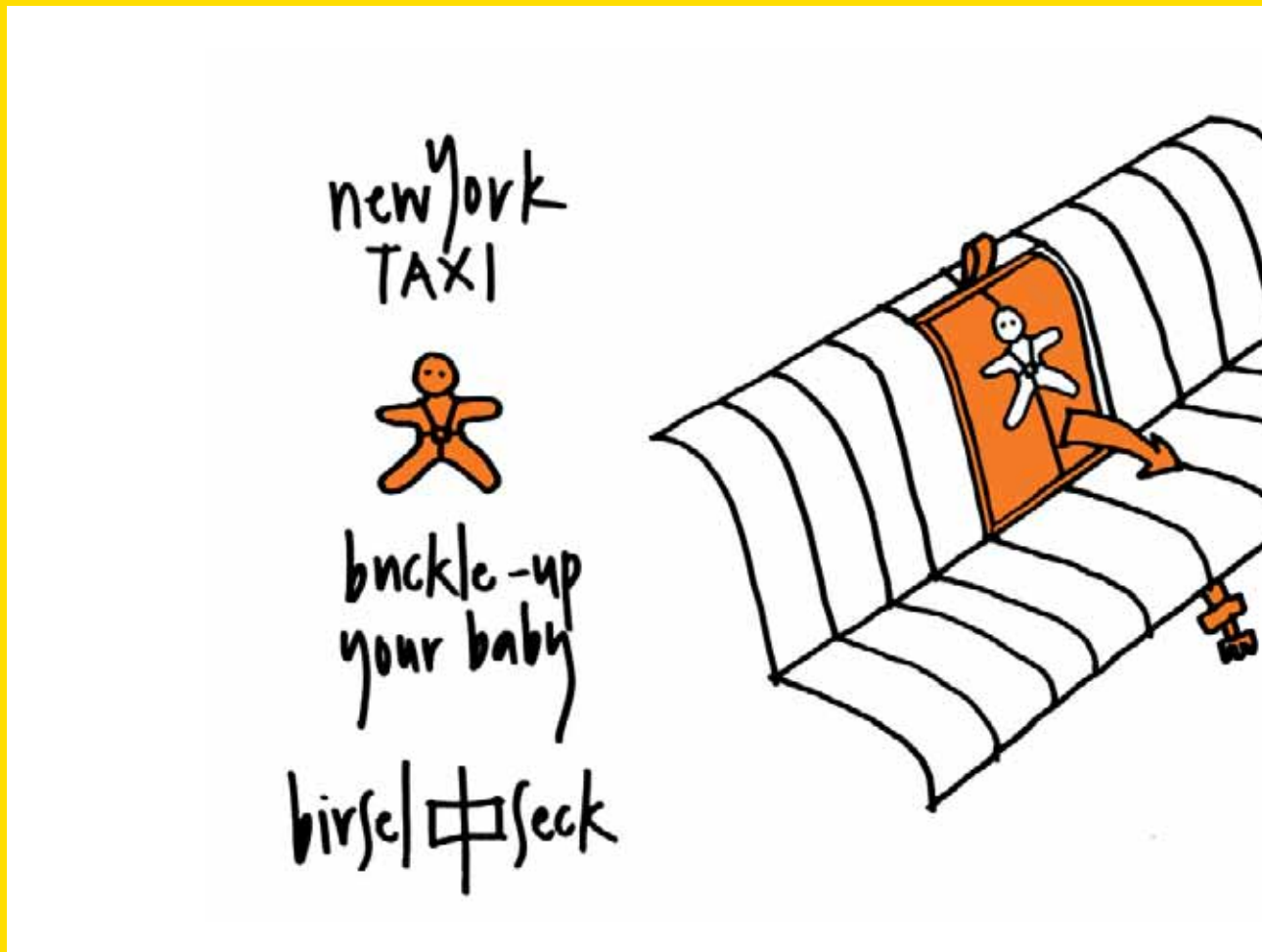


YOU SHOULD BE ABLE TO GET TWO KIDS IN WITH BUILT-IN CAR SEATS. FOR ME THIS IS A BIG PROBLEM. I CAN'T USE A CAB BECAUSE IT CAN'T ACCOMMODATE THE KIDS.

JENNIFER CARPENTER
TRUCK PRODUCT ARCHITECTURE

THERE ARE SO MANY PEOPLE WHO ARE TRYING TO STAY IN THE CITY WITH KIDS. IF THERE WERE SOME WAY TO HAVE A CHILD SEAT OR CHILD RESTRAINT, IT WOULD BE REALLY HELPFUL.

ALISON BAUER
DESIGN TRUST FOR PUBLIC SPACE
MODERATOR



left: **BIRSEL + SECK**
In this redesigned interior, Birsel + Seck include a fold-down, rear-facing front passenger seat, which can accommodate a child seat.

Parents like the convenience of taking a taxi, especially when traveling with multiple children and all their necessary gear. However, existing cabs have no provision for young children, so a taxi ride for a baby or toddler may be on a parent's lap, rather than in the security of a child seat. Taxi drivers would like to accommodate families, but have found the storage and temporary installation of a child seat to be a hindrance.

The designers of Birsel + Seck presented several ways to make a taxi ride more welcoming to families. A built-in child seat that folds down from the center of the back seat would take up a minimum of interior space and demand no assistance from the driver to use. A more flexible interior would also provide a back-facing front passenger seat that would double as a temporary child seat or stroller storage area.



CAB CHILD SEATS IN ACTION

Child seats in taxis are more than just a fond fantasy of New York parents—in some cabs, they're already standard equipment. Taxi fleets in Detroit, Chicago, and San Francisco have purchased London-style black cabs with fold-down child seats built in to the back-seat armrest area (see photos, above). These purpose-built cab vehicles come at a price, however: \$70,000, or nearly three times the cost of the Ford Crown Victoria.

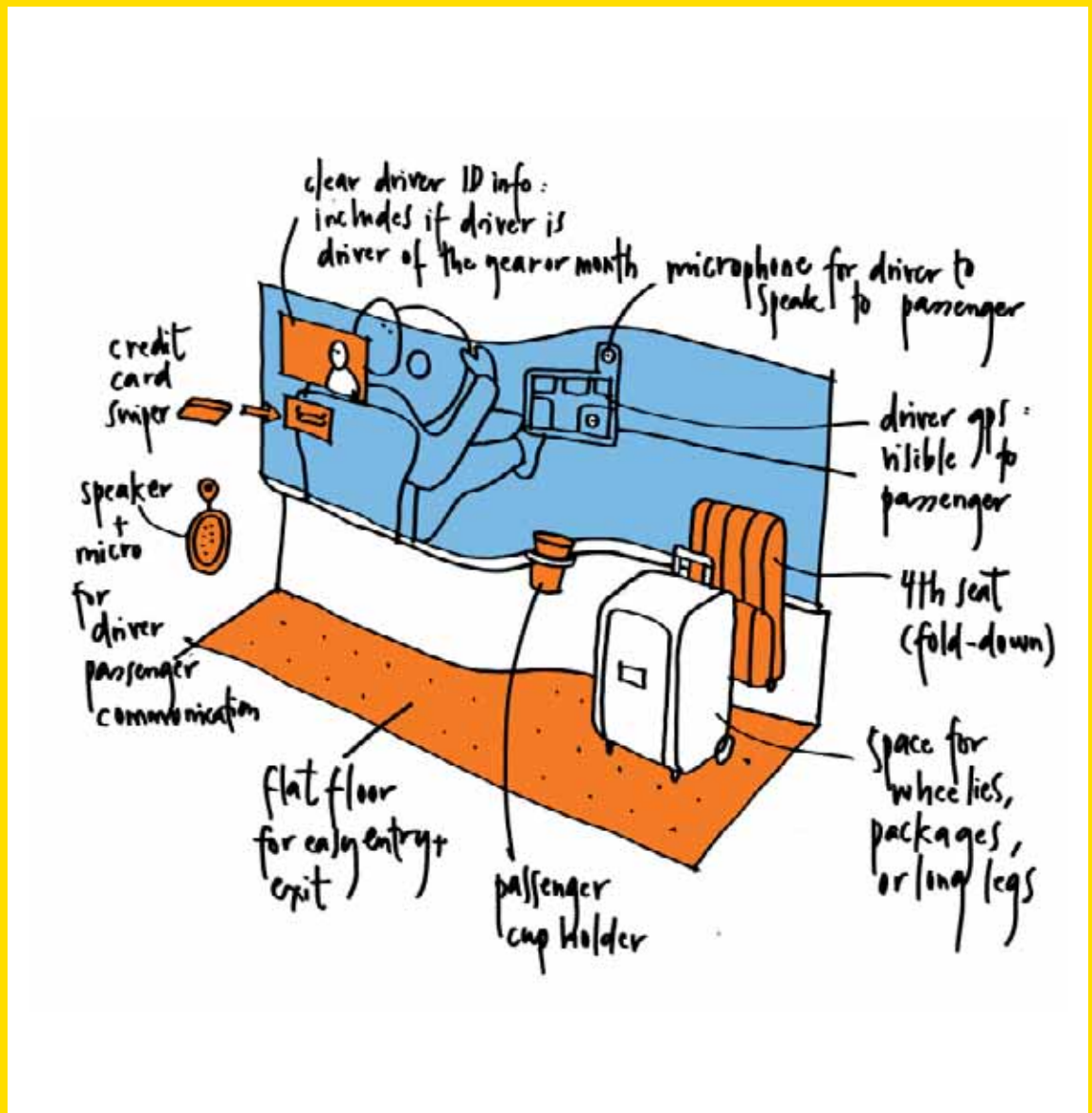
On a more modest scale, booster seats — which lift kids between four and eight years old to a height where standard seat belts provide adequate protection — may soon be required equipment for New York taxis. Councilmember David Yassky has plans to introduce a bill that calls for cab drivers to carry the seats in their trunks at all times. In contrast to standard child car seats, booster seats are relatively small and are easy and quick to install.

above: **BIRSEL + SECK**
Birsel + Seck promote safety and comfort for young children through the "buckle up your baby" built-in folding child seat.

PARTITION AS PASSENGER CONSOLE

I SPOKE TO 100 PASSENGERS THIS WEEKEND WHILE I WAS DRIVING, AND I ASKED THEM WHAT THEY WOULD LIKE TO SEE IN A FUTURE CAB. THEY ALL TOLD ME: NO PARTITION.

MIKE LEWKOWITZ
CAB DRIVER



above: BIRSEL + SECK
Birsell + Seck propose a partition with a microphone, cup holder, and a credit-card reader.

In most New York City cabs, a Plexiglas divider with sliding panels separates the driver and passenger areas of a taxi's interior space. First implemented in the 1960s for the driver's security, and mandated for most cabs in 1994, the partition does provide privacy for passengers, and many drivers say the partition is necessary to prevent crime. However, as currently implemented, the partition is a visual and communicative barrier.

Designers proposed that the partition be less visually obtrusive while also incorporating a host of useful features. A basic "passenger console" might have a microphone for the driver and passenger to communicate, along with temperature and radio controls, a tip calculator, and cup holder. A technologically advanced console might also include a GPS screen, AC power, and Wi-Fi capability. Slots for cashless payment (discussed in some detail earlier in the book) would also reduce the robbery risk for drivers — possibly rendering the original purpose of the partition obsolete.



NEW PARTITION COMING SOON?

In June 2005, the New York City Taxi and Limousine Commission released a Request for Information (RFI), calling for suggestions for materials, designs, and technologies that could be incorporated into new taxicab partitions. The TLC is specifically seeking to improve scratch resistance, ballistic resistance, communication between the driver and passenger, means of receiving payment by the driver, UV resistance, and safety and comfort for both the passenger and driver. The TLC says that "information contained in the responses received to the RFI will be used by TLC staff, the TLC Board of Commissioners and any other NYC agency, to develop implementation strategies that may include proposed rulemaking, specifications for approved equipment, criteria for evaluating vendors, and parameters for pilot programs to test equipment." *More info is available on the TLC's website, at www.nyc.gov/html/tlc.*



above and left:
**ANTENNA DESIGN
NEW YORK INC.**
Antenna's glass
partition is combined
with a sleek console that
includes a swipe card
system, GPS panel, and
microphone.

SKYLIGHT

THIS IS A VERTICAL CITY, BUT RIGHT NOW THE CAB DOESN'T ALLOW YOU TO ENJOY THE VIEW. IF THERE WERE A SUNROOF OR GLASS ABOVE YOU, YOU COULD TAKE IN THE PERSPECTIVE OF THE STREET.

JEFFREY SHUMAKER
SKIDMORE, OWINGS & MERRILL

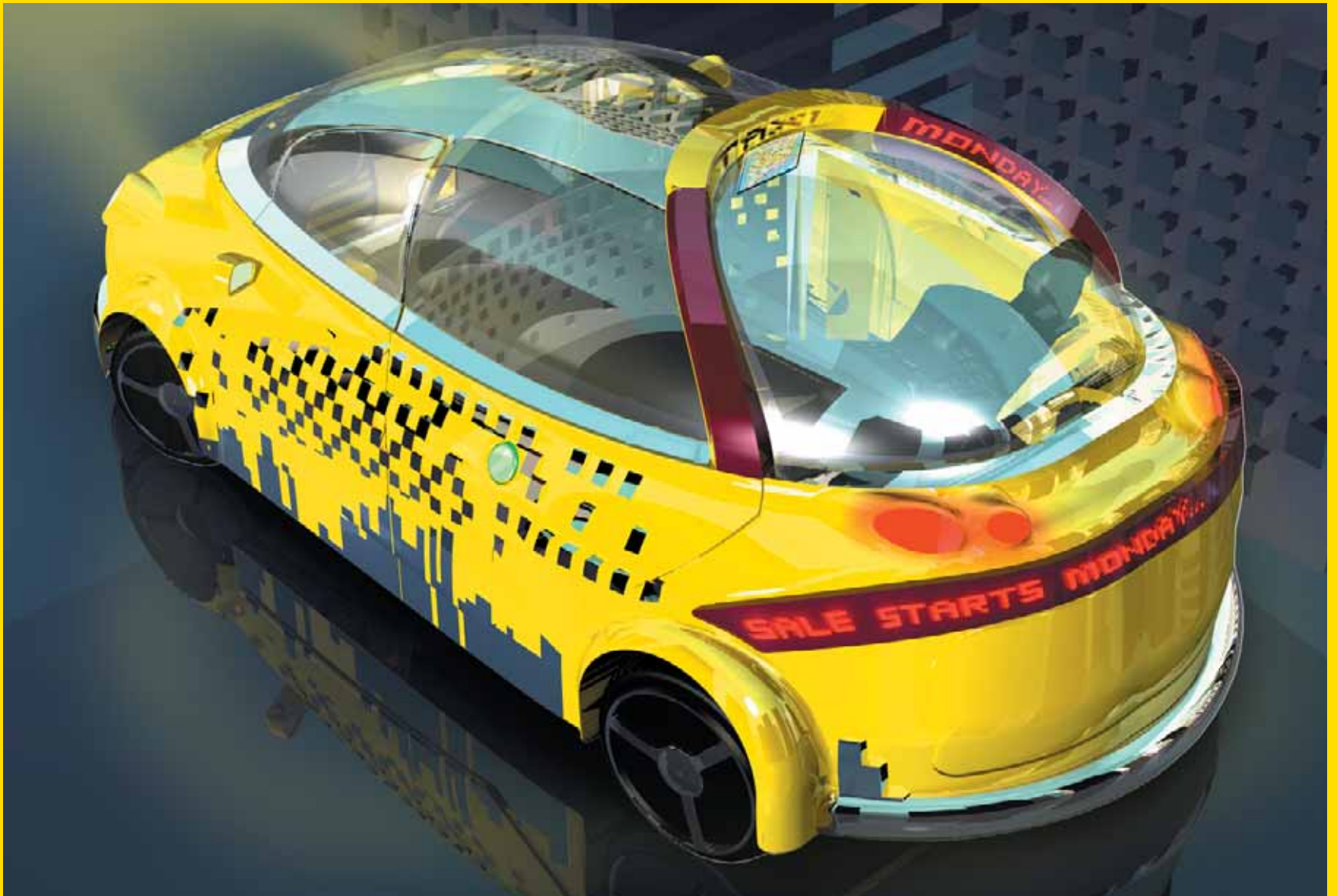


top: PENTAGRAM
Pentagram's design for a glass roof compliments the classic contours of the checker cab.

**bottom: HYBRID
PRODUCT DESIGN +
DEVELOPMENT**
Large glass windows and roof panels offer passengers better views and drivers increased visibility in Hybrid's MiniModal taxi.

New York offers some of the world's most distinctive and exciting views. A ride in a New York taxi should allow passengers to take in the staggering heights of skyscrapers, the sparkle and glow of neon at night, and the constant and varied display of street life. Both visitors and New Yorkers delight in an opportunity to look up at the city, though this is often difficult from the perspective of a taxi's back seat windows.

Several designers incorporated a skylight or glass roof into vehicle designs for the taxi. A skylight serves the dual function of allowing for increased visibility for passengers, as well as energy-efficient temperature control through the use of LCD glass. Mirrored glass would maintain privacy but not interfere with taking photographs.



**above: BLUE MARLIN
BRAND DESIGN**

Blue Marlin's fully domed glass roof allows for optimum views of the city.

MOVING FORWARD

ROAD

RECOMMENDATIONS & CONCLUSIONS

Turning the concepts presented by *Designing the Taxi* into reality requires a realistic appraisal of short- and long-term goals. Short-term goals involve incremental improvements to the currently existing system or vehicle. Long-term goals are those that seek fundamental adjustments that would result in an entirely new system or vehicle. The recommendations that follow distinguish short- and long-term goals, and suggest processes by which each might be achieved.

SHORT-TERM RECOMMENDATIONS

In this context, short-term recommendations are those that accept the current system of one vehicle type (the four-passenger sedan), separate for-hire and radio fleets, and the Crown Victoria as the dominant taxi vehicle.

Even assuming that those conditions remain unchanged, there are a number of improvements that would make taxis easier to use, safer, more comfortable, and more efficient. These improvements could be realized through existing processes, such as the Taxi and Limousine Commission's Request for Proposals and Request for Information systems. Assessment and implementation by TLC and the Department of Transportation staff may be sufficient in some cases.

Short-term Vehicular Improvements

- partition with passenger services
- roof light with improved legibility
- integral child seats
- skylight
- "greener" interior-compartment materials
- on-board air filters

Short-term Systemic Improvements

- additional passenger stand locations in outer boroughs, with rideshare assistance
- additional relief stand locations
- more stringent parking enforcement
- designation of taxi loading zones near midtown street corners

LONG-TERM RECOMMENDATIONS

Long-term recommendations are those that seek to reorganize the entire taxi system or to introduce new or fundamentally altered vehicle types. Achieving long-term goals would require a departure from the existing procedures designed to facilitate incremental improvements. Realizing goals may require amendments to New York City's regulations governing the industry and/or significant economic incentives for owners.

Long-term Vehicular Improvements

- wheelchair accessibility
- improved interior compartments and overall proportions
- multiple vehicle types

Long-term Systemic Improvements

- cashless payment options that integrate mass transit and offer rewards
- mobile-phone taxi hail
- redesigned cab stands
- integration of yellow-cab and radio fleets
- designated taxi lanes
- congestion pricing

CONCLUSIONS

Designing the Taxi initiated a productive and ongoing dialogue between the design community, the taxi industry, and New York City's Taxi and Limousine Commission about possible short- and long-term improvements to the yellow cab. To build on this momentum, the Design Trust for Public Space has launched Taxi 07, a consortium of organizations, led by the Design Trust, whose mission will be to help New York City make plans for greener, safer, and more accessible taxis by 2007, the taxi's centennial. A first step for Taxi 07 will be to determine the best processes for carrying out the recommendations outlined above.

In implementing the ideas described in this book, understanding the taxi's role as a cultural icon will be essential. No symbol better embodies the joys of city life and the New Yorker's sense of possibility and freedom than the taxi. By building a broad awareness of how integral taxis have been to New York's conception of itself, the Design Trust for Public Space is confident that we, as a city, can create the cultural and political climate crucial to realizing significant improvements to the New York City taxicab.

ACKNOWLEDGMENTS

Designing the Taxi owes its success to the highly collaborative nature of its development. The Design Trust for Public Space deeply appreciates the vision, enthusiasm, and support of the following individuals and firms:

DESIGNING THE TAXI STEERING COMMITTEE

Paul Goldberger, Dean, Parsons The New School for Design, and architecture critic, *The New Yorker*
Paul Herzan, President, Cooper-Hewitt, National Design Museum
Michael Levine, Owner, Ronart Leasing Corporation
Deborah Marton, Executive Director, Design Trust for Public Space
Christopher Mount, Director of Exhibitions and Public Programs, Parsons The New School for Design
Phil Patton, Author and Design Journalist, *New York Times*
Andrew Salkin, First Deputy Commissioner, NYC Taxi and Limousine Commission
Bruce Schaller, Transportation Consultant, author of *The New York City Taxicab Fact Book*

PARSONS THE NEW SCHOOL FOR DESIGN

The Design Trust for Public Space gratefully acknowledges the enthusiastic assistance of the following Parsons staff, who helped make this program a success.

Deborah Bogosian, Director of External Affairs
Paul Goldberger, Dean
Erin Kane, Assistant to the Dean
Kristina Kaufman, Coordinator of Public Programs
Deborah Kirschner, Director of Public Relations
Christopher Mount, Director of Exhibitions and Public Programs
Daisy Wong, Assistant Director of the Galleries

PENTAGRAM

Our deepest thanks to everyone at Pentagram who helped create this beautiful book and the related exhibition and made the entire process enormously enjoyable.

Josh Berta
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Michael Bierut
Robert Brunner
Alex Mergold
Denise Ramzy
Jena Sher
Joseph Tobens

PARTICIPANTS IN DESIGNING THE TAXI

WORKSHOP 1: WHAT DO WE WANT?

Designing the Taxi Workshop 1 was an invitation-only brainstorming session in which participants discussed trends in taxi design, the taxi's role as a New York public space, and the ideal taxi and taxi system of the future, from the perspective of a taxi passenger. Workshop 1 was held May 24, 2005, at Parsons The New School for Design.

Jason Abbey, Architect, Fox & Fowle Architects
Kenneth Adams, President, Brooklyn Chamber of Commerce
Alison Bauer, Board Member, Design Trust for Public Space
David Beier, Counsel, Committee for Taxi Safety
Michael Bierut, Partner, Pentagram
Micaela Birmingham, Director, Planning Center, Municipal Art Society
Ayse Birsal, Principal, Birsal + Seck
York Bleyer, Designer, Imagination (USA), Inc.
Bob Brunner, Industrial Designer, Pentagram
Jennifer Carpenter, Architect & Furniture Designer, TRUCK Product Architecture
Michael Cushing, NYC Department of Parks and Recreation
Brooke Dubose, Project for Public Spaces
Thierry Dumoulin, Designer, Imagination (USA), Inc.
Fred Dust, IDEO
Jonathan Flaherty, Masters Candidate, Business and Urban Planning, Columbia University
Bruce Fowle, Senior Principal, Fox & Fowle Architects
Paul Goldberger, Dean, Parsons The New School for Design
Neil Greenbaum, Owner, Pearland Brokerage/All Taxi Management
Kitty Hawks, Principal, Kitty Hawks, Inc.
Paul Herzan, President, Cooper-Hewitt, National Design Museum
Debera Johnson, Chair, Industrial Design Department, Pratt University
Eric Kim, Chief of Staff to the First Deputy Commissioner, NYC Taxi and Limousine Commission
Michael Levine, Owner, Ronart Leasing Corporation
Mike Lewkowitz, Taxi Driver
Tom Maguire, Transportation Engineer, Arup
Deborah Marton, Executive Director, Design Trust for Public Space
Chelsea Mauldin, Deputy Director, Design Trust for Public Space
Zack McKown, Principal, Tsao & McKown
Sigi Moeslinger, Principal, Antenna Design New York, Inc.
Christopher Mount, Director of Exhibitions & Public Programs, Parsons The New School for Design
Paula Mueller, Managing Director, Rockefeller & Co.
Yerina Mugica, Analyst, Natural Resources Defense Council
Kevin Olinger, Deputy Director, NYC Department of City Planning, Transportation Division
Gregg Pasquarelli, Principal, SHoP Architects
Phil Patton, Author & Design Journalist, *New York Times*
Michael Pocobello, Vehicle Engineering
David Pollack, Director, Committee for Taxi Safety
John Reddick, President, Cityscape Institute
Russell Robertson, Principal, Hybrid Product Design + Development
Andrew Salkin, First Deputy Commissioner, NYC Taxi and Limousine Commission
Matthew Sapolin, Executive Director, NYC Mayor's Office for People with Disabilities
Bruce Schaller, Transportation Consultant, Schaller Consulting
Peter Schenkman, Assistant Commissioner for Safety & Emissions, NYC Taxi and Limousine Commission
Christian Schmidt, IDEO
Bibi Seck, Principal, Birsal + Seck
Charbel Sfeir, Taxi Driver
Ron Sherman, President, Midtown Operating Corporation
Jeffrey Shumaker, Senior Urban Designer, Skidmore, Owings & Merrill
Harris Silver, Citystreets
Todd Smit, Director of Advanced Manufacturing, Quality, & Materials, ASC Incorporated
Ken Smith, Principal, Ken Smith Landscape Architect
Ernest Tollerson, Senior VP, Research & Policy, Partnership for New York City
Erhan Tuncel, Taxi Driver
Masamichi Udagawa, Principal, Antenna Design New York, Inc.
Tucker Viemaster, Principal, Springtime
Claire Weisz, Principal, Weisz + Yoes
Andrea Woodner, Founder & Board Chair, Design Trust for Public Space
Mark Yoes, Principal, Weisz + Yoes

PARTICIPANTS IN DESIGNING THE TAXI WORKSHOP 2: HOW DO WE GET THERE?

At Designing the Taxi Workshop 2, a group of participants presented preliminary designs and proposals sparked by the first workshop to the press and public. Presentations were ordered as listed below. Workshop 2 was held June 16, 2005, at Parsons The New School for Design.

Moderator

Kurt Andersen, host of public radio show *Studio 360*, novelist, writer for *New York*, *The New Yorker*, *Time*, and other publications.

Speakers

Deborah Marton, Design Trust for Public Space
Paul Goldberger, Parsons The New School for Design
Matthew Daus, NYC Taxi and Limousine Commission
Andrew Salkin, NYC Taxi and Limousine Commission

Proposal Creators

Session A

"Systemic Approaches: The Taxi in the Public Realm"

Schaller Consulting: Bruce Schaller
Taxi Driver: Erhan Tuncel
TRUCK Product Architecture: Jennifer Carpenter
Partnership for New York City: Ernest Tollerson
Ronart Leasing Corporation: Michael Levine
Citystreets: Harris Silver, Dan Sturges

Session B

"Welcoming & Green: The Taxi Vehicle"

Birsal + Seck: Ayse Birsal, Bibi Seck
Antenna Design New York, Inc.: Sigi Moeslinger, Masamichi Udagawa
Hybrid Product Design + Development: Jeanne Pfordresher, Russell Robertson, Bernardo Guillermo, Jr., Walter Holle
Ken Smith Landscape Architect: Ken Smith, Hardy Stecker, Yuka Yoshida
Fox & Fowle Architects: Jason Abbey
Natural Resources Defense Council: Yerina Mugica

Session C

"Wired & Branded: Taxi Identities & Services"

IDEO: Fred Dust, Christian Schmidt
Imagination (USA), Inc.: Rachel Abrams, York Bleyer, Thierry Dumoulin
Pentagram: Michael Bierut, Robert Brunner
Springtime: Tucker Viemaster
Weisz + Yoes: David Fung, Claire Weisz, Mark Yoes

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