

POLIS: PAYING FOR MOBILITY BRUSSELS NOVEMBER 2017

Building More Connected, More Inclusive Cities

Andrew Slattery Director, Enterprise Partnerships



Cities are hubs of activity



Society

นับนับ 70%

of the world's population will live in cities by 2050¹

Economy



80%

of global GDP generated from cities²

Environment



70%

of global CO2 emissions²

¹ OECD ² World Bank But, they face a complex set of challenges...

- Shrinking budgets
- Aging infrastructure
- Diminishing environmental resource
- Shifting demographics and labor skills
- Continued rise of economic inequity



Forward-thinking organizations who can meet these challenges...

..will write the next chapter in urban development & capitalize on the opportunities.



\$3.5 Trillion

Revenue from smart city technology will grow over the next 10 years¹

\$41 Trillion

This revenue will **grow even more** dramatically over the next 20 years²

¹ Persistent News Research Report

²CNBC

Partnering to enable more connected and efficient cities.

Mastercard is enabling globally interoperable digital payments and holistic public-private-partnerships that help cities move beyond the daily friction caused by cash and checks.



Cost effective digital transit payments.

By combining payment, ticketing and mobile technology, Mastercard is transforming how cities collect fares and how people connect with city services.



Extra funds for service improvements



Remove barriers to public transit use



Understand what people do in a city



Engage citizens in real-time



Establishing digital identity

The "smart" journey – our approach.



Digital Payments & Acceptance

Digital Enablement

Provide new solutions to manage growing demand, deliver personalized city services, incentivize behavior, and help predict future outcomes



Data & Analytics

Measurement, reporting, trend analysis, benchmarkingextract insights from data to run the city more efficiently



Digital Payments & Acceptance

Drive digital payments and displace cash to improve security and help the city run efficient services

Incentives help manage transit demand



Pilot launched in Chicago uses economic levers to incentivize travelers to change mode or time

Mastercard Offers Platform and Personalized Card-Linked Offers



- Once payments are digitized, data insights help cities understand and connect with their citizens better
- In Chicago, Mastercard has brought together partners to find ways to better predict transit supply and demand around Chicago Cubs baseball games.
- Recently, 2,500 commuters participated in a trial where they were offered a fare rebate or a charitable donation in their name if they changed their travel pattern.
- Preliminary results indicate that up to **25 percent** changed the time of their ride when offered an incentive, helping the city to manage high demand around Cubs games.

Digital Payments

Urban mobility

Tourism & Planning

Economic Development

Inclusive Growth

Helping cities to make smarter, more informed decisions – Travel & Tourism Platform

- The first big data platform specially designed to mine real-time destination Intelligence from Mastercard transactions, social sentiment and booking data
 - Leverages a wide range of data sources from a Global Distribution System through Amadeus, Social Media (Twitter/Instagram/TripAdvisor), Google and Mastercard
 - Covers the full travel cycle from pre to post-trip to deliver and more accurate insights and understand different behavioral patterns for a destination
- Subscription-based to guide cities and businesses to make informed decisions





Measure the true economic health of your city

Identify the areas that could drive the highest potential growth

What if you could....

- Measure the impact of your own interventions and other events at a truly hyperlocal level
- Identify areas most needy of regeneration investment ... and track the efficacy of that investment over time
- Understand your catchment area where do people come from and what do they do in your City when they get here
- What is your retail gap? Which merchants should you attract to your City to ensure that supply is reflective of actual demand for goods and services
- How does the City perform at different times of day





Economic Development

Inclusive Growth

Drive Financial Inclusion and Inclusive Growth

Inform policies through data

Partnering with governments and academia to use data to better understand cities such as helping to uncover "financial deserts"

• With the White House's Data Driven Justice Initiative, Mastercard used its aggregated merchant data and Baltimore's open source public safety data to show the impact crime has on jobs and retail

Financial Inclusion

Commitment to providing safe and secure access to financial services through our financial inclusion

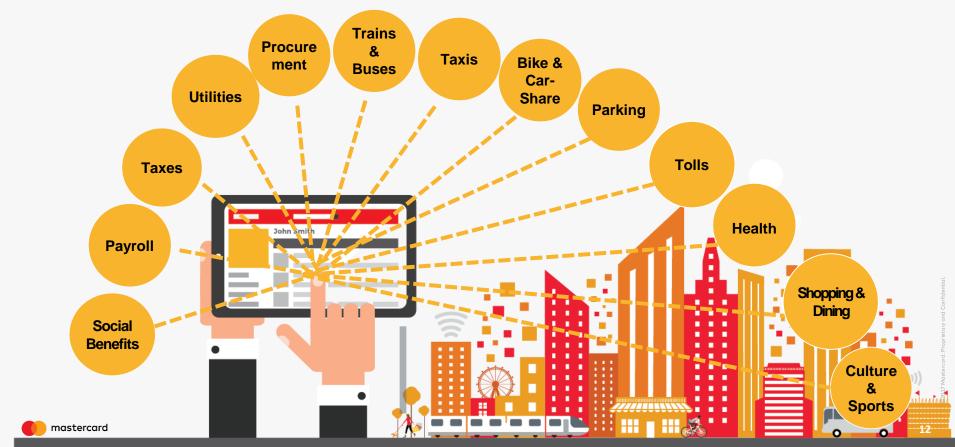
- Digitizing social benefits disbursements
- Multi-function cards for receiving and making payments for citizens with or without bank accounts
- Access to social benefits and services transit, libraries, museums, build financial identity

Inclusive Growth

Commitment to leveraging Mastercard's expertise, data, technology and philanthropic investments to drive equitable and sustainable growth

- Bring grassroots innovation to scale
- Prepare people for the jobs of tomorrow
- Unlock the power of data for social impact
- Connect economic mobility to urban mobility
- Enable more stability for gig economy workers

Co-creating smarter urban services that benefit all citizens, – Your city at their fingertips





WORKING WITH 100+ CITIES

EXPAND TO 500+ CITIES BY 2020

City Partners

Singapore, London, Sydney, Cyberjaya, Mexico City, Chicago, New York

















FOR INNOVATIVE TRANSPORT SOLUTIONS







World Class Assets

Global Network, Open Standards, Data

 ${\tt Gateway*TMIP-Transit-Enhanced\,Mastercard\,Interface\,Processor}$

Analytics, TMIP*, Priceless Platform,

Masterpass, Labs, MDES, Payment



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Let's get started.

www.mastercard.com/smart-cities

