



FIGHT FOR SAFETY: CHALLENGES AND OPPORTUNITIES OF HANOI VIETNAM

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Hanoi: From a City to a Metropolitan Region

Area: 920.7 km²
 Population: 3.4 million (2008)
 GDP/ capita: US\$ 2000 (2008)
 Number of MC: 1.6 million
 Number of car: 185 Thousand

1/8/2008

Area : 3,348 km²
 Population: 6.448 million (2009)
 GDP/ capita: US\$ 1700 (2009)
 Number of MC: 3.5 million
 Number of car: 250 Thousand



- 3. Bắc Ninh
 - 4. Hải Dương
 - 5. Hưng Yên
 - 6. Hà Nam
 - 7. Hòa Bình
 - 8. Phú Thọ
 - 9. Thái Nguyên
 - 10. Bắc Giang
 - 11. Vĩnh Phúc
 - 12. Thanh Hóa
 - 13. Thái Bình
 - 14. Nam Định
 - 15. Ninh Bình
- Diện tích: 36.544 km²
 Dân số: 24,6 triệu người
 MĐOS: 670 người/km²

- Phạm vi nghiên cứu trực tiếp
- Phạm vi nghiên cứu gián tiếp

(Source: General Statistics Office, 2009)

Hanoi before 1986: Non-motorized traffic



Thang - Nguyen Dinh - Anh

Panoramio



Hanoi 1990s: MNT + Bus and **Motorcycle**



Nguồn: <http://reds.vn/index.php/khoanh-khac-lich-su/402-ha-noi-1990/>

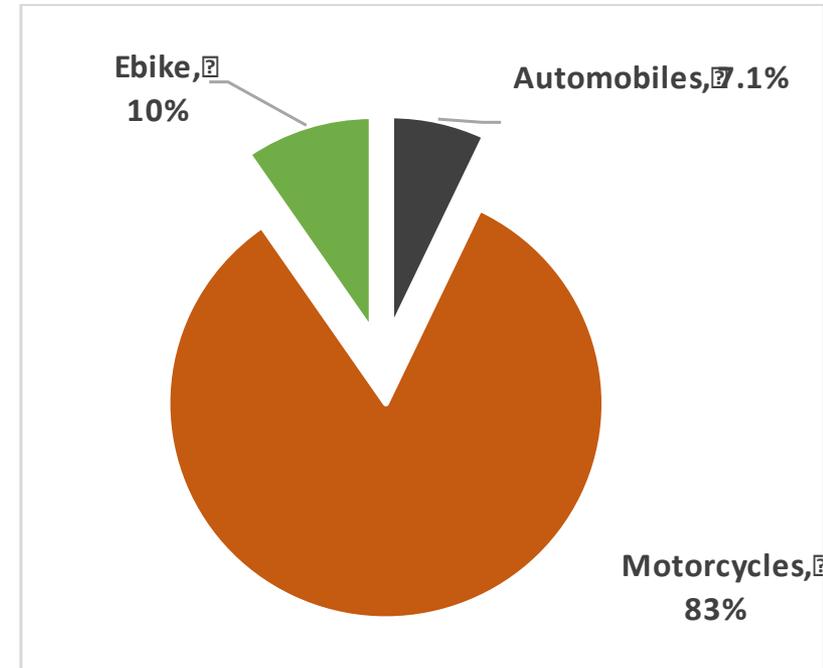


Hanoi today: Motorcycle Dependent city



Hanoi: a typical Motorcycle Dependent City

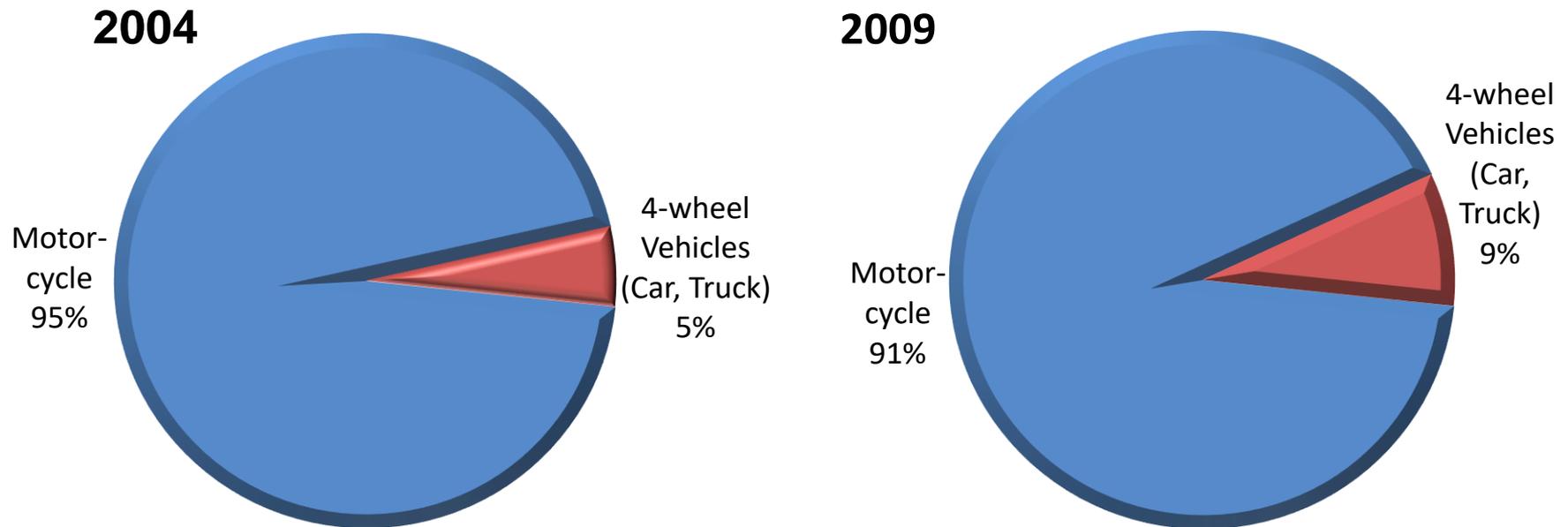
No	Tyle of Vehicles	Numbers	Growth rate (2010-2016)
1	Automobiles	485,955	11,1%
	Sedan	32,782	12,2%
	Buses	23,141	5,7%
	Trucks	123,841	10,7%
	Professional Vehicles	5,304	-
	Others	5,849	-
2	Motorcycles	5,735,110	7,2%
3	Electrical 2W	659,677	
4	Bicycles (approx.)	1,200,000	-
6	Electrical 4W Vehicles	86	-
7	Motorized Tri-Cycle	4,362	-
8	Pedalized-Tricycle	239	-



- Motorcycles are dominant among the vehicle fleet of Hanoi
- Cars are small in number but growing faster and eating most of road and parking space

Hanoi: a typical Motorcycle Dependent City

- Vehicle usage



Traffic composition on Hanoi urban arterial
(Cau Giay – Kim Ma, 7:00 am to 8:00 am)

Hanoi: a typical Motorcycle Dependent City

- Two-wheeler dependent's block



Formulated in 1990s



Formulated in 2000

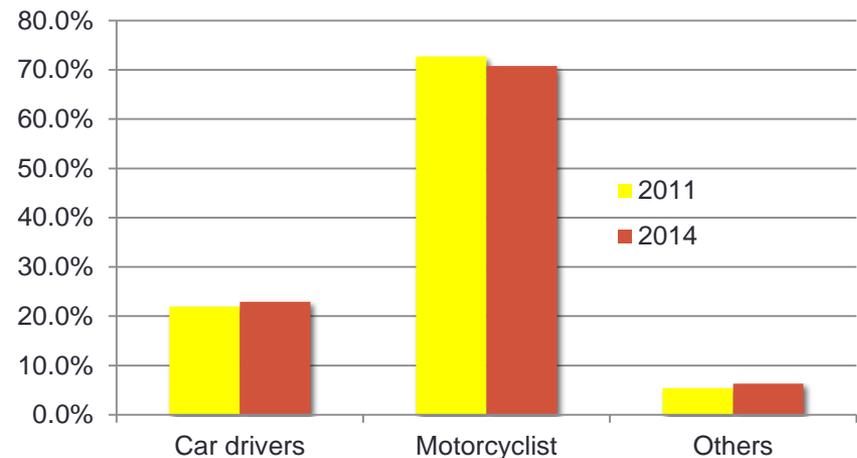
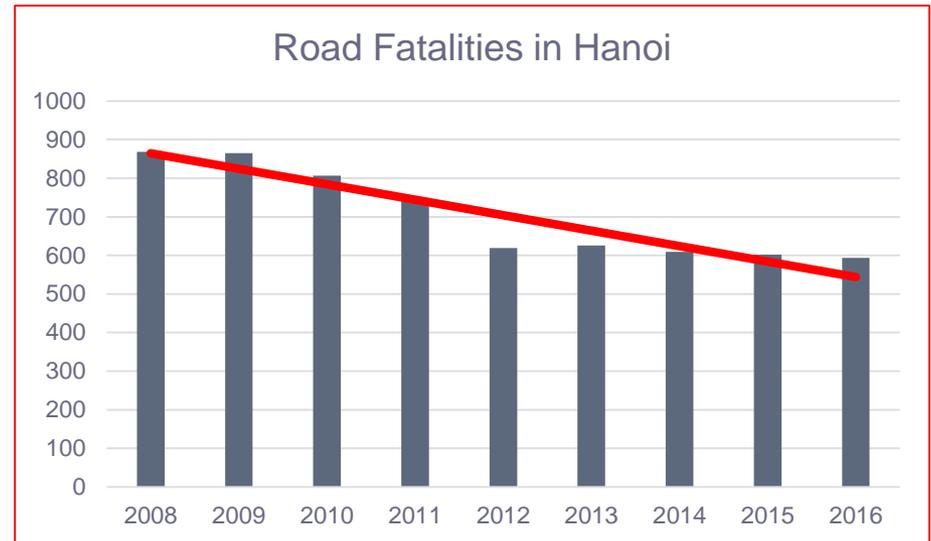


Source: TRANCONCEN/ITPM (2010)

Problems

- **Accidents**
 - High rate of fatalities
 - 70% of accidents caused by Motorcyclists
 - 85% fatal victims are motorcyclists
- **Congestion**
 - Extremely high volume
 - 60% travel time is delay
- **Pollutions**
 - Noise
 - Air pollution

Source: NTSC (2017)



Hanoi is Fighting for Safer mobility

- Safer Infrastructure
 - Dedicated lane for motorcycles
 - Intersection movement chanelization
 - Side walks and Safe School Zone
 - **Vehicle Free Zone**
- Safer Vehicle
 - Motorcycle inspection
 - Vehicle (motorycle) visibility inmpovement (Eg: Daytime Running Light)
 - ABS requirements for motorcylce and cars
- Strengthen Enforcement
 - Drink-Driving Control;
 - **Maintain and improve the wearing helmet;**
 - Enforce the teenagers in motorcycle driving;
 - **Commercial vehicle control**
- Traffic Education
 - Educate traffic safety in the schools;
 - Improve the traffic safety culture propaganda;
 - Improve driver training and test
- Post-crash services
 - Ambulance service
 - Pre-hostpital rescue capacity building

Good Practice: Vehicle Free Street - Hoan Kiem Lake!



Good Practice: Compulsory Helmet Regulation.



90% adults and 60-65% children are wearing helmets on traveling by motorcycle

Good Practice: GPS Monitoring System for Commercial Vehicles

The screenshot displays a web-based GPS monitoring system interface. The browser address bar shows the URL: `gsht.gov.vn/ufms/tracking/history.action?provinceId=89&companyId=1600626471&start=15%2F03%2F2015-19%3A48%3A53&end=15%2F03%2F2015-19%`. The page header includes the logo for `gsht.gov.vn` and the text "HỆ THỐNG XỬ LÝ & KHAI THÁC SỬ DỤNG DỮ LIỆU TỪ TB.GSHT THUỘC TỔNG CỤC ĐƯỜNG BỘ VIỆT NAM".

The interface is divided into several sections:

- Left Sidebar:** Contains navigation and filter options. The "Giám sát" (Monitoring) section is active. Filters include:
 - Sở GTVT: An Giang
 - Doanh nghiệp: CTY TNHH HÙNG CƯỜNG
 - Biển số: 67b00018
 - Bắt đầu: 14/03/2015-19:48:00
 - Kết thúc: 15/03/2015-19:48:53A green button labeled "Xem lại Hành trình" (View Route) is located below the filters.
- Main Map:** Displays a map of the An Giang province area, showing a blue route. The map includes labels for various districts and cities such as An Giang, Đồng Tháp, and Tiêng Giang.
- Map Controls:** Includes zoom in (+) and zoom out (-) buttons, and a "Trích xuất dữ liệu gốc" (Export Original Data) button.
- Speed Graph:** A line graph showing speed over time. The y-axis represents speed in km/h, ranging from 0 to 120. A red dashed horizontal line is drawn at 80 km/h. The x-axis shows time from 21:00:00 to 18:00:00 on 15/03. The graph shows several peaks exceeding the 80 km/h limit.

The Windows taskbar at the bottom shows the system time as 7:49 PM on 3/15/2015.

Good Practice: Overloaded Trucking Control



Challenges: Road Users

- Driving awareness
 - Road law is still unofficial in the education program in schools;
 - Unaware on the traffic law, especially road law;
 - Naturally make violations: Signal violation; Lane violation; ...
- Custom
 - One of the top countries in the world consume alcohol (wine and beer);
 - Popular drinking driving;
 - Driving due to natural habit, not based on the regulation (over speeding in low traffic road, willing to make violation if do not see the traffic police,...);
- Driving behavior
 - Uncooperative or selfish driving;
 - “Young phenomenon” in driving behavior;
 - Road users make violation because of the others make violation;



Challenges: Others

- Motorization (Motorcycle and Car)
- Law enforcement capacity
- Traffic Safety Education and Propaganda
- Infrastructure capacity and safety
- Technologies (Database & Coordination)
- Resources (Financial and Human)



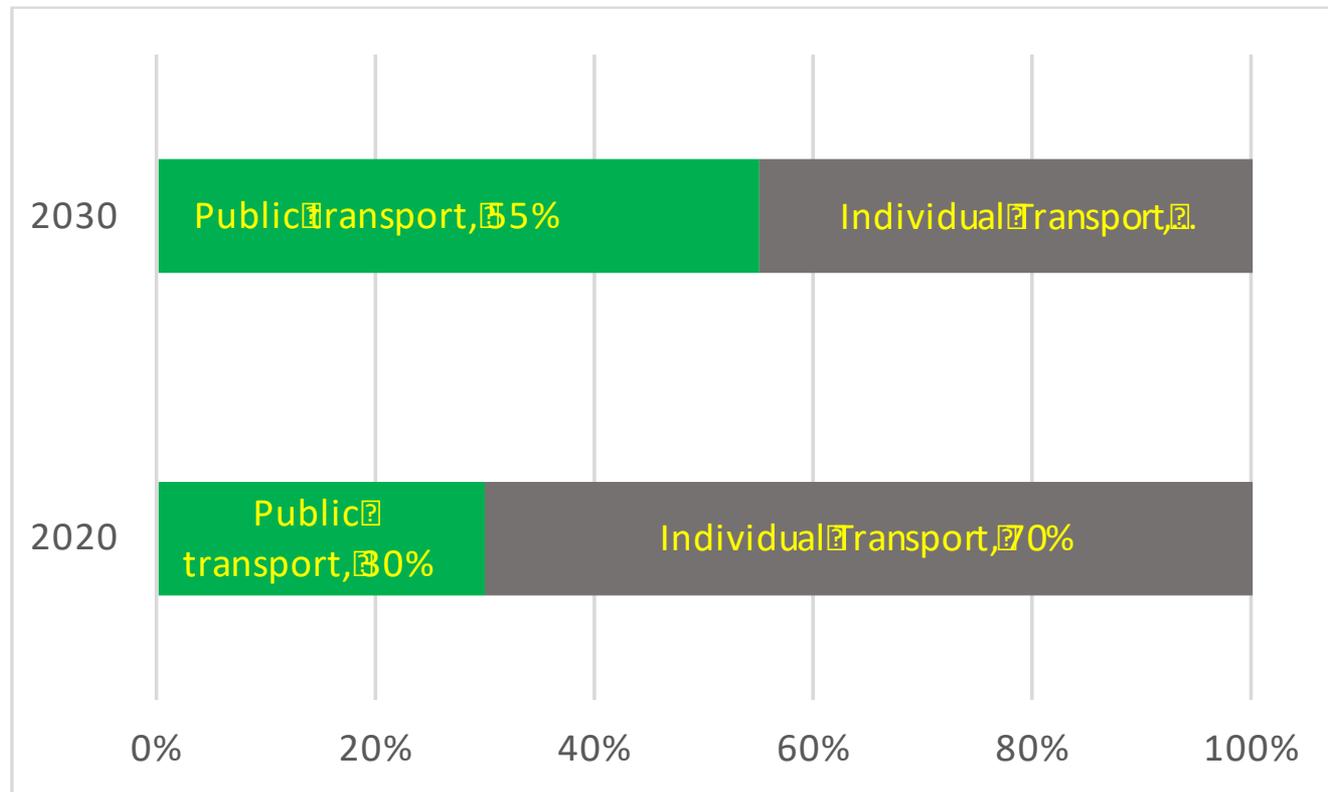
Opportunities: PUSH & PULL : HANOI 2030 VERSION

- Improvement of Walking Environment & Vehicle Free zone



Opportunities: PUSH & PULL : HANOI VERSION

- Strengthening Public Transport Services



Opportunities: PUSH & PULL : HANOI VERSION

- **Motorcycle Usage Control**
 - Emission Test for Motorcycle (2018)
 - Motorcycle Inspection (2020)
 - Designed Motorcycle Restricted Zone (2030)
- **Car Usage Control**
 - Parking Control (Odd-Even Plate Number, I-Parking - 2017)
 - Parking Pricing(2018)
 - Congestion Charging (2020)
 - Designed Car Restricted Zone (2030)
- **Modernized Traffic Monitoring & Enforcement**
 - Real-time traffic control centre (2020)
 - Enforcement Camera (2017)

Q&A