



<https://www.sae.org/shared-mobility>

CAMMM-PDG Vision, Policies, And Strategies November 2019



New York



Vision:



DOT seeks to double the number of active cyclists and make New York the best biking city in the United States. [1]



- 1- Eliminate traffic deaths and injuries [2].
- 2- Expand opportunities for safe and secure bike parking, especially near transit hubs [3].



- 1- DOT will boost bus speeds and reliability[4].
- 2- Expand travel choices for all New Yorkers [5].



Promotes physical activity [6].





Strategies:

Type	Strategies	Incentive	Disinc entive	Physical changes	Non-physical changes	Proactive	Preventive
	DOT will create at least 10 miles of new protected bike lanes each year, improve bike access to bridges, and explore an expansion of the Brooklyn Bridge pedestrian and bike path [1].	✓		✓		✓	✓
	Connected Vehicle Pilot Deployment Program: pedestrian signalized crosswalk, Alerts the driver of the presence of pedestrians crossing at a signalized intersection[2].	✓			✓	✓	
	Cycle Center offers 300 bike parking spaces with showers, lockers, and towel service. The stations offer 24-hour controlled access parking and free daily valet service[3].	✓		✓	✓	✓	
	Pilot new technology to obtain data that can prevent crashes[4].	✓			✓	✓	
	DOT is establishing the EL-Space Program to enhance, active, and reclaim EI-spaces reconnecting neighborhood and providing more open space to communicate [5].	✓		✓			✓



[1] [2] [3] [4] [5] : New York City Department of Transportation Strategic Plan 2016



Strategies:

Type	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	DOT launched the NYC Ferry system, added 244 miles of bike lanes, expanded Select Bus Service to serve an additional 300,000 riders a day, and reduced transit fares for low-income New Yorkers [1].	✓		✓			✓
	DOT will work with the MTA to implement congestion pricing to fund the transit system and reduce congestion[2]. (New electronic Tolls)	✓			✓		✓
	DOT will boost bus speeds and reliability by creating at least 20 Select Bus Service (SBS) routes, implementing bus signal priority and new bus lanes on more local routes, and advocating for all-door boarding across the bus system [3].	✓	✓			✓	✓
	Appropriately regulate low-speed electric bikes [4].	✓		✓		✓	



[1] [3] [4] : New York City Department of Transportation Strategic Plan 2016
 [2]: <https://www.nytimes.com/2019/03/26/nyregion/what-is-congestion-pricing.html>



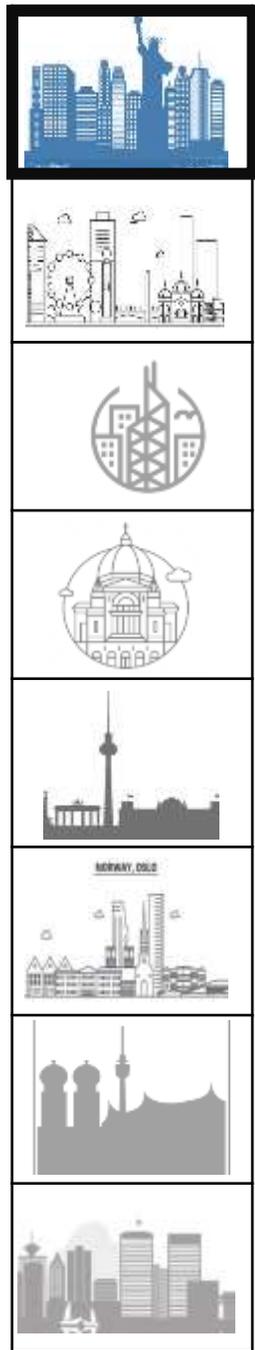
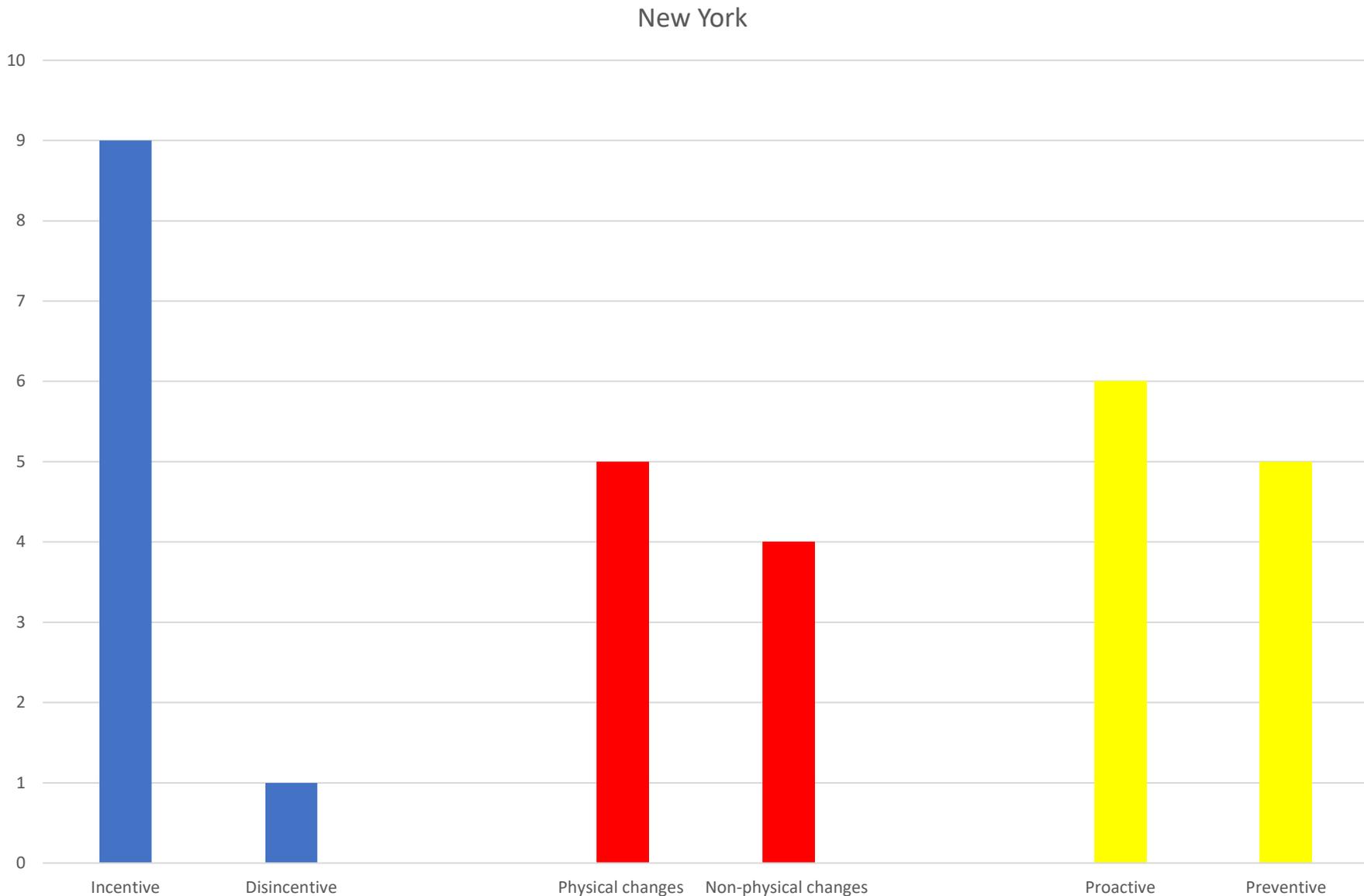
Governance: (Laws)

- The New York State Senate passed a bill Wednesday (2019-6-19) to pull back restrictions for electric-assisted bicycles and e-scooters. Scooter-share companies like Bird, Lime, Spin, Uber, Lyft, and many others haven't been able to operate in New York City and other parts of the state, while the scooter craze has run rampant for the past year (and longer) throughout the country and abroad[17].



[17] <https://mashable.com/article/electric-scooters-nyc-state-passes-bill/>

Overall Assessment





Melbourne



Vision:



- The city's transport network will need to cater for around 10 million more trips a day — an increase of more than 80% [1].
- Create a metro-style rail system with 'turn up and go' frequency and reliability[2]
- Private vehicle access to the city will be prioritized for deliveries, servicing and for people who need to use a car [7].



- Support cycling for commuting[3]
- Create a network of cycling links for local trips[4]



- Locate schools and other regional facilities near existing public transport and provide safe walking and cycling routes and drop-off zones [5]
- provide more space for people on footpaths and around major transport hubs [6]

[1] [2] [3] [4] [5] Plan_Melbourne_2017_2050_Summary

[6] Transport Strategy 2030 Guiding the future of transport in the city.

[7] Melbourne Draft Transport Strategy 2030





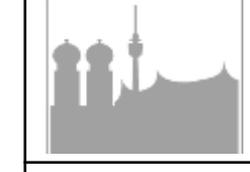
Strategies:

Type	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	Living locally -20-minute neighborhoods[8]	✓		✓		✓	
	The development of self-driving cars [9]	✓		✓		✓	
	recently embedded sensors into an intersection to support speed management, intersection collision avoidance, and vulnerable road user protection [11].	✓	✓	✓			✓
	Reduce pedestrian crossing distances at intersections to improve safety, accessibility and enable shorter wait times for pedestrians[13].	✓		✓	✓		✓
	Install additional road crossings to address gaps in the walking network and increase safety [15].	✓		✓	✓		✓
	Pricing or regulating empty running: AVs help with congestion, but not if we send them home empty or just let them drive by themselves to avoid parking fees. Without regulating empty trips, Melbourne could face serious congestion [12].		✓		✓	✓	

[8] Melbourne's orbital mobility challenge

[9] <https://www.computerworld.com.au/article/636128/uni-melbourne-gets-driverless-shuttle-test-connected-transport-system/>

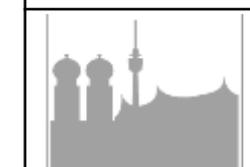
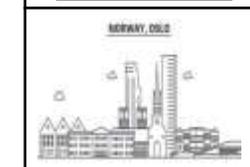
[10] [11] [12][13] Australia's future transport and mobility February 2019





Strategies:

Type	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	Reduce vehicles travelling through the central city (currently 43 per cent) with improved transport options, encouraging use of bypass routes and allocating more road space for people transport [17].	✓	✓	✓			✓
	Install an initial 300 additional on-street motorcycle parking bays to provide an alternative to parking on the busiest footpaths.[14]	✓		✓			✓
	During 2018 the City of Melbourne engaged with the community across eight discussion papers to help it refresh it's <i>Transport Strategy to 2050</i> [10]	✓			✓	✓	
	Deliver an expanded network of protected on-road bicycle lanes - increasing from around 6km today to more than 50km by 2030 - connecting into and through the central city to get more people who want to ride on a bicycle[16].	✓		✓		✓	
	Support the growth of e-bikes by helping our community experience this new technology and advocating for government support [18] .	✓		✓		✓	





Governance: (Laws)

- In 2016, state and federal transport ministers agreed to a phased reform of current driving laws to enable fully autonomous vehicles from 2021. This reform is being led by the National Transport Commission (NTC) [19]
- Published a policy paper on changing driving laws to support AVs. Transport ministers agreed to the recommendations, making a strong commitment to removing barriers to AVs through the development of a national law[20].
- Convert parts of ‘Little’ streets into people-priority shared zones with lower speed limits[21].
- Install formal and informal crossings to address gaps in the walking network [22].
- Deliver a new Car Share Policy to support growth[23].

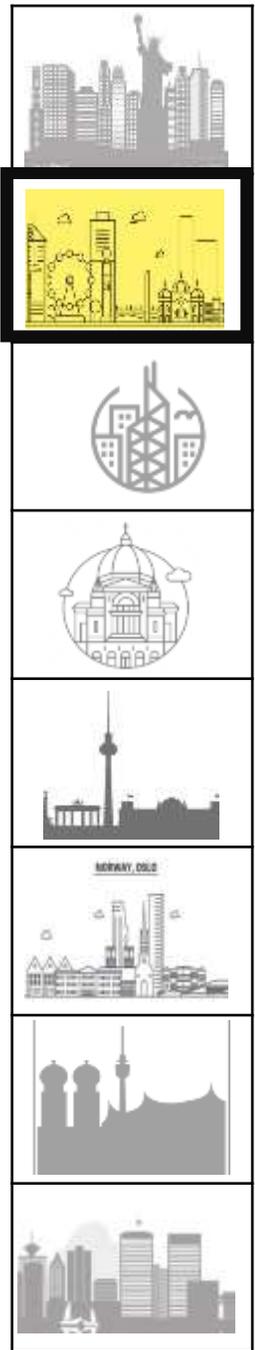
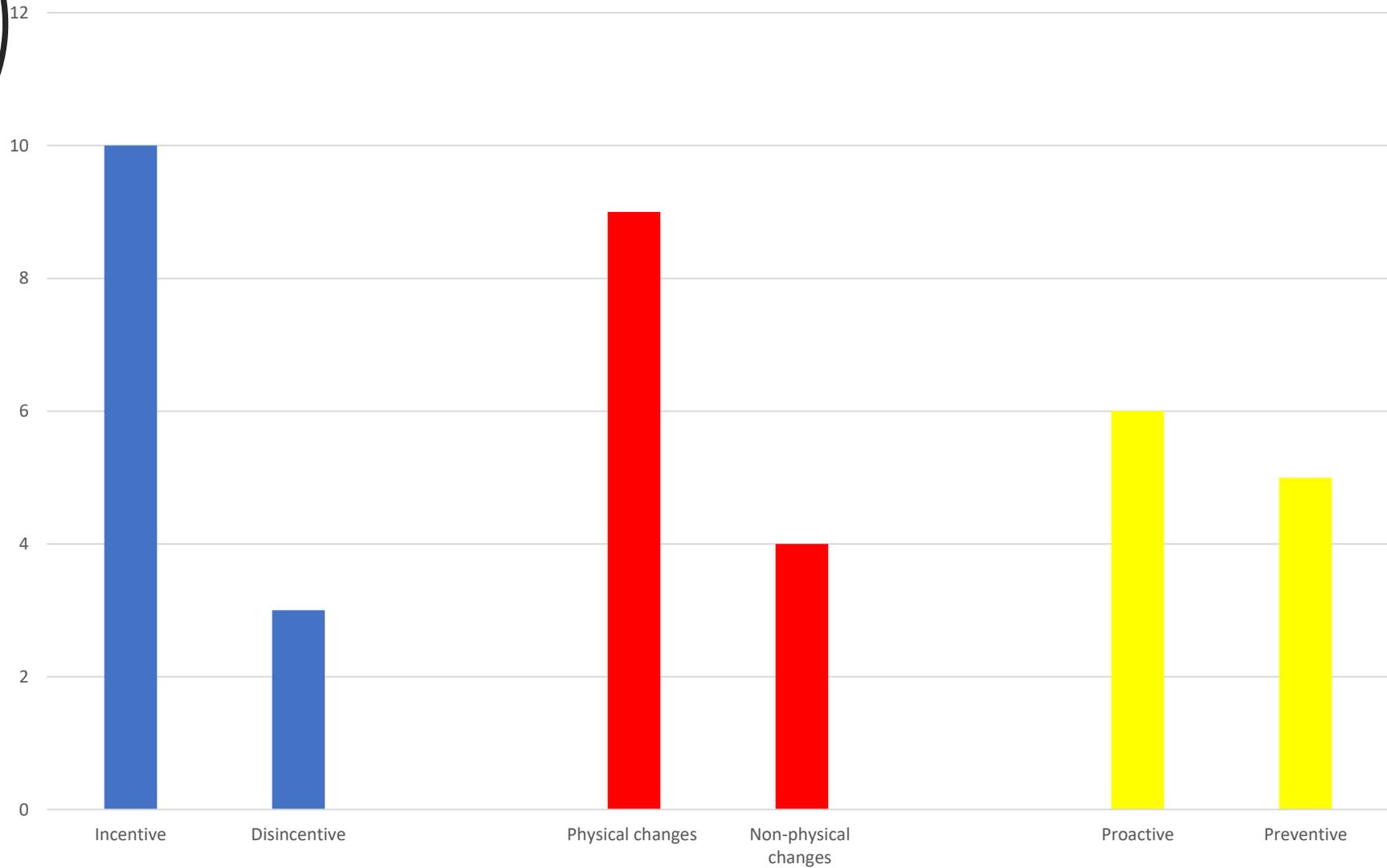
[19] Australia’s future transport and mobility February 2019

[20] [21] [22] [23] Melbourne Draft Transport Strategy 2030



Overall Assessment

Melbourne





Hong Kong



Vision:



- Provide equitable public transport choices for every income group[2].
- The city is investing in new highway projects [1]
- Focusing on better use of railways as the back-bone of our passenger transport system[4].



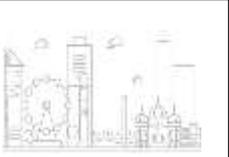
- Create smart parking infrastructure in and around the central business district [3].
- e-payments infrastructure [1]
- Better use of advanced technologies in transport management [5].



- Focusing on commercial electric vehicle (EV) adoption[1].

[1] [2] [3] Deloitte Insight Hong Kong

[4] [5] https://www.thb.gov.hk/eng/psp/publications/transport/publications/hk_move_ahead_txt.htm





Strategies:

	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	Hong Kong is planning to launch a transport subsidy scheme by 2019, under which commuters with monthly public transport expenses <u>exceeding HKD 400 (USD 60) can claim tax rebates</u> [1]	✓			✓	✓	
	<u>Porous Pavement</u> , This type of footway surface could avoid ponding of surface water and prevent pedestrians from slipping [2]	✓		✓		✓	✓
	Make electronic parking meters and payment [3]	✓		✓			✓
	Octopus card (one card for several services) [4]	✓			✓		✓
	Center street Escalator link between third street and Bonham road[5]	✓		✓			✓
	Access internet on trains and buses, use smart cards and payment systems for easier city travel, and plan trips on smart phone applications [6]	✓			✓		✓
	The Hong Kong 2030+ strategic plan considers a range of solutions that places public transport nodes closer to offices and residential areas[7]	✓		✓		✓	

[1] [3] [4] [5] Deloitte Insight Hong Kong

[2] Hong Kong 2030+ A Smart, Green and Resilient City Strategy

[6] SUSTAINABLE CITIES MOBILITY INDEX 2017 BOLD MOVES





Strategies:

	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	All transport apps in one integrated app [1]	✓			✓	✓	
	With an aim to reducing the amount of land used for above-ground parking for both cars and bicycles, <u>underground storage facilities</u> , ECO-Cycle and ECO-Park, are developed[2].	✓	✓	✓		✓	
	Provide Real-time traffic information[3].	✓			✓		✓
	Park-and-ride facilities will be developed at major transport interchanges on the fringe of urban areas [4].	✓			✓		✓



[1] Deloitte Insight Hong Kong

[2] [3] Hong Kong 2030+ A Smart, Green and Resilient City Strategy

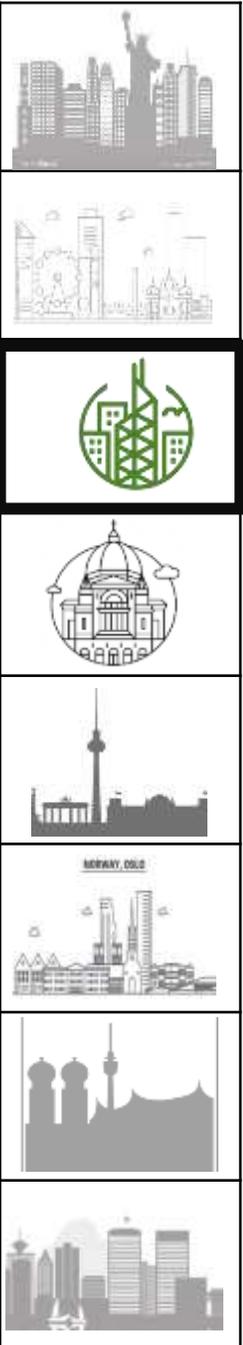
[4] https://www.thb.gov.hk/eng/psp/publications/transport/publications/hk_move_ahead_txt.htm

[5] Hong Kong Smart city blue print



Governance: (Laws)

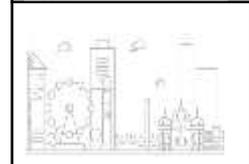
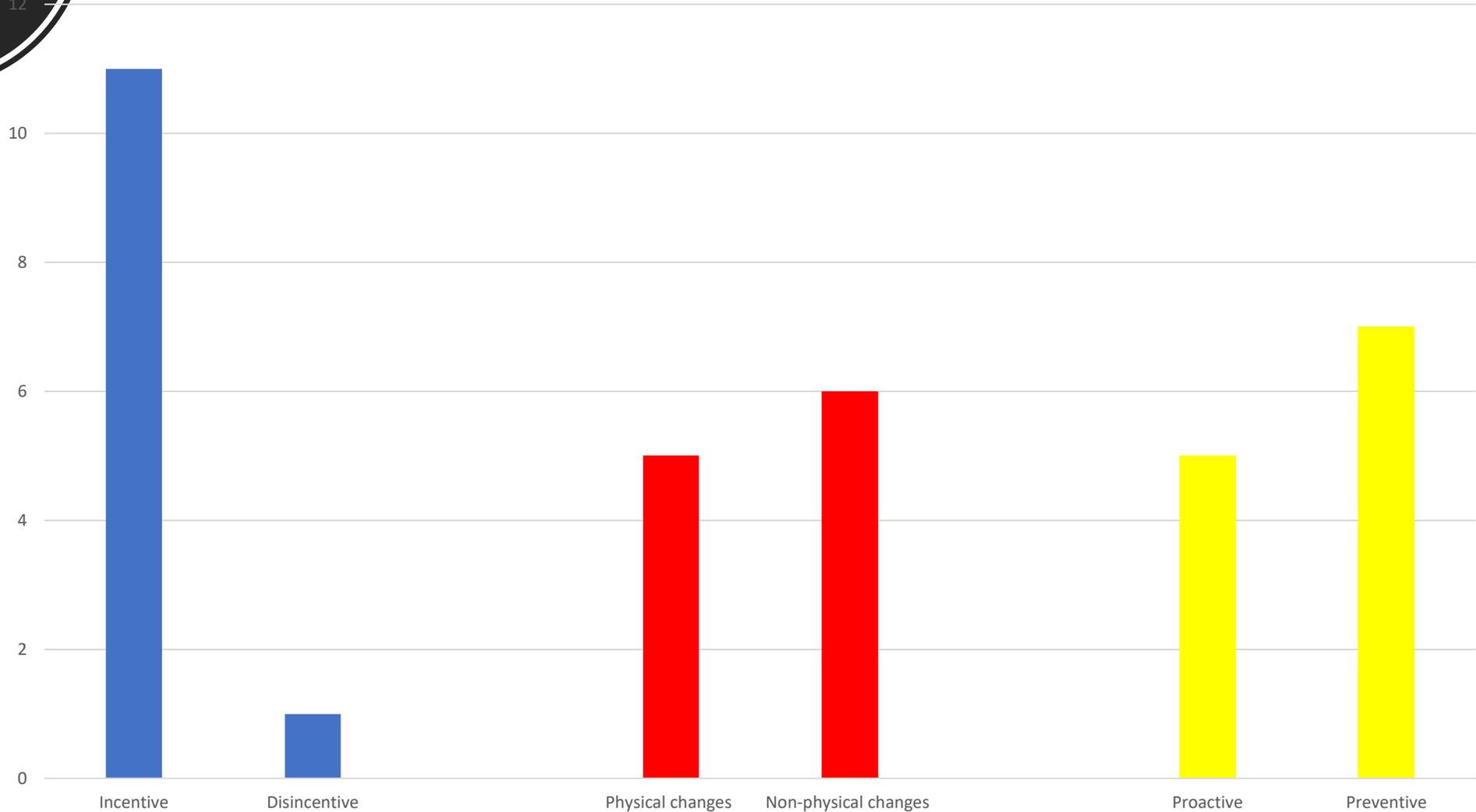
- Complete the installation of about 1 200 traffic detectors in all strategic roads to provide real- time traffic information by 2020 [1]



Overall Assessment

12

Hong kong





Montreal



Vision [*]:



- Reach a modal split, for the morning peak, of 55% of trips made on foot, by bike or by public transport by 2021.



- Reduce collective green gas emissions from 30% by 2020 compared to the levels of 1990 and from 80% by 2050.
- Reach the Canadian norm for quality in terms of fine particles in the air ($8,8 \mu\text{g}/\text{m}^3$) by 2020 .



Increase the canopy index from 20% to 25% by 2025.



Reduce from 10% the inactivity level for the island of Montreal population by 2025.



[*] Montreal Information extracted from Amélie Tremblay file.



Strategies:



	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	Create 20 new pedestrian or shared streets.	✓		✓		✓	
	Add 100M\$ to the public transport budget.	✓			✓	✓	
	Add 1000 electric vehicle charging stations.	✓		✓		✓	
	Plant 300 000 trees on public and private grounds across the territory of the city of Montreal by 2025.	✓		✓		✓	
	Add parking spots dedicated to alternative transport modes.	✓	✓	✓			✓
	Adapt space currently destined for parking over the different seasons («placotoirs», bikes, terrasses, etc).	✓	✓	✓		✓	

[*] Montreal Information extracted from Amélie Tremblay file.



Strategies:



	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	Add 270 km to the network of bike paths.	✓		✓		✓	
	Convert 30% of the bus fleet from fossil fuels to hybrids amongst the Société des Transports de Montréal.	✓		✓			✓
	Double the annual budget for universal accessibility.	✓			✓	✓	

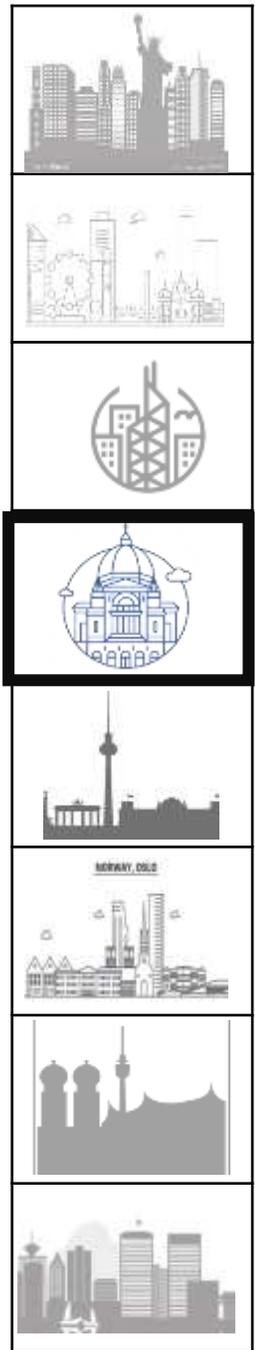
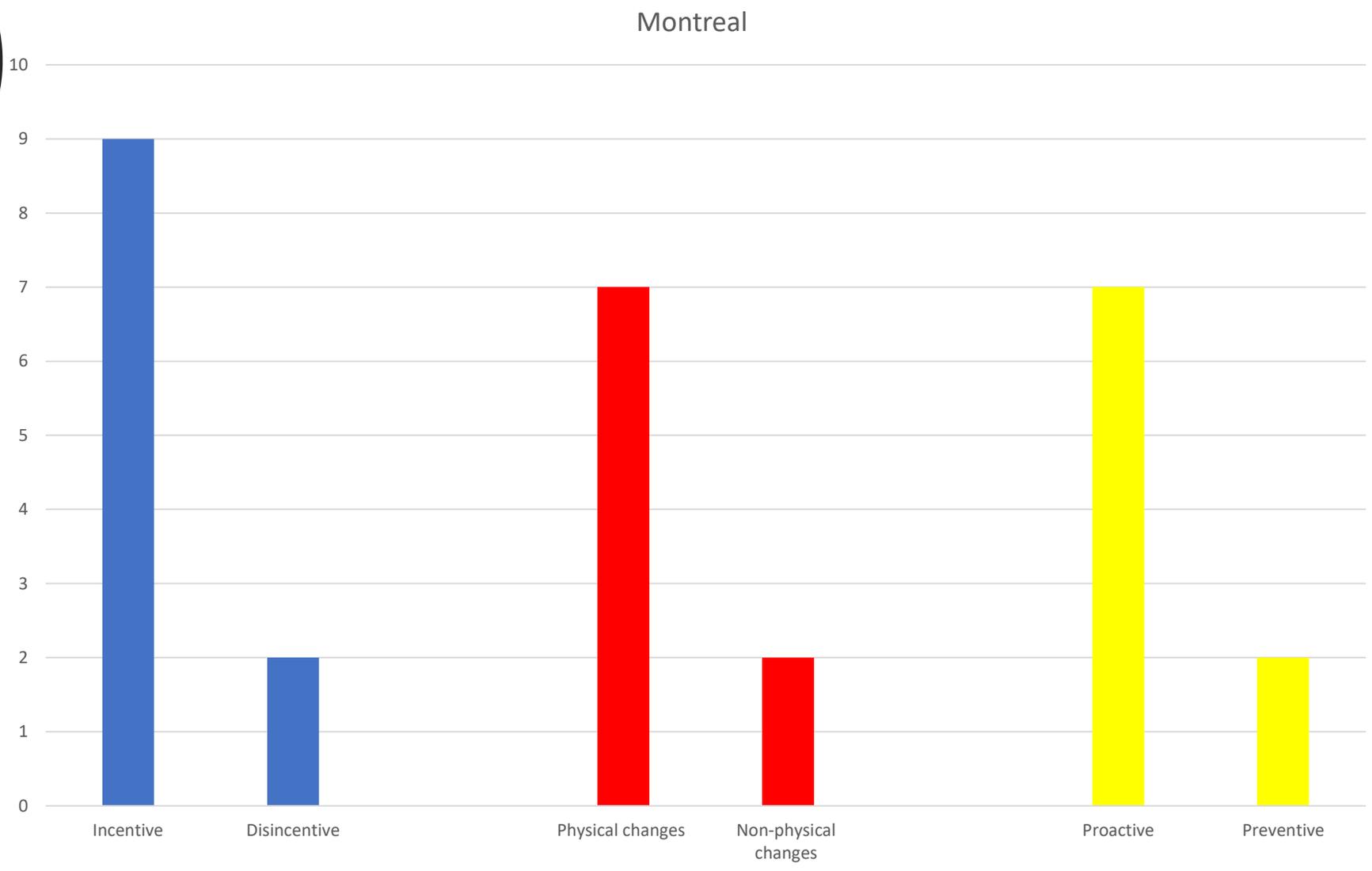
[*] Montreal Information extracted from Amélie Tremblay file.



Governance: (Laws)



Overall Assessment





Berlin



Vision :



- The Federal Government has set itself the objective of making Germany a lead market for and a lead provider of electric mobility. [1]



- maintain and expand cycling and public transport use [2]
- reduce car use and ownership further [3]
- Providing equal mobility opportunities by taking into account different needs [5].



- Strengthening the polycentric city structure through improved accessibility to urban neighborhoods and between districts and the main downtown center [6].
- In 2040, Berlin is more than just a city, it will be a well- connected metropolitan region[4]



The Co2 emissions in the main road network can be significantly reduced by 2025 [7].



[1][2][3] Towards New Urban Mobility The case of London and Berlin

[4][5][6][7] Urban transportation Development Plan 2025, sustainable mobility



Strategies:



	Strategies	Incentive	Disincen tive	Physical changes	Non-physical changes	Proa ctive	Prev enti ve
	Providing one million electric vehicles operating on Germany's road by 2020 [1]	✓		✓		✓	
	Digitalization, to enable every citizen benefits from it [2]	✓			✓	✓	
	free testing of electric cars and car sharing schemes [3]	✓		✓		✓	
	promote flexible car sharing schemes [4]	✓			✓	✓	
	tax benefits upon purchase of electric cars [5]	✓			✓	✓	
	congestion charging [6]		✓		✓		✓
	regular information on local travel and mobility options [7]	✓			✓		✓

[1][2][3] [4][5][6][7] Towards New Urban Mobility The case of London and Berlin



Strategies:



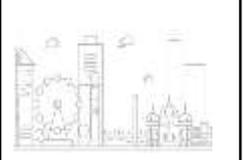
	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	highlight autonomy and fun aspects of alternatives [1]	✓			✓	✓	
	target through technology channels, smartphone travel apps and electronic services [2]	✓			✓	✓	
	encourage cycling through campaigns highlighting personal benefits (health, fitness, fun) [3]	✓			✓	✓	
	promote mobility services to improve travel experience, particularly online services [4]	✓		✓	✓	✓	

[1][2][3] [4]Towards New Urban Mobility The case of London and Berlin

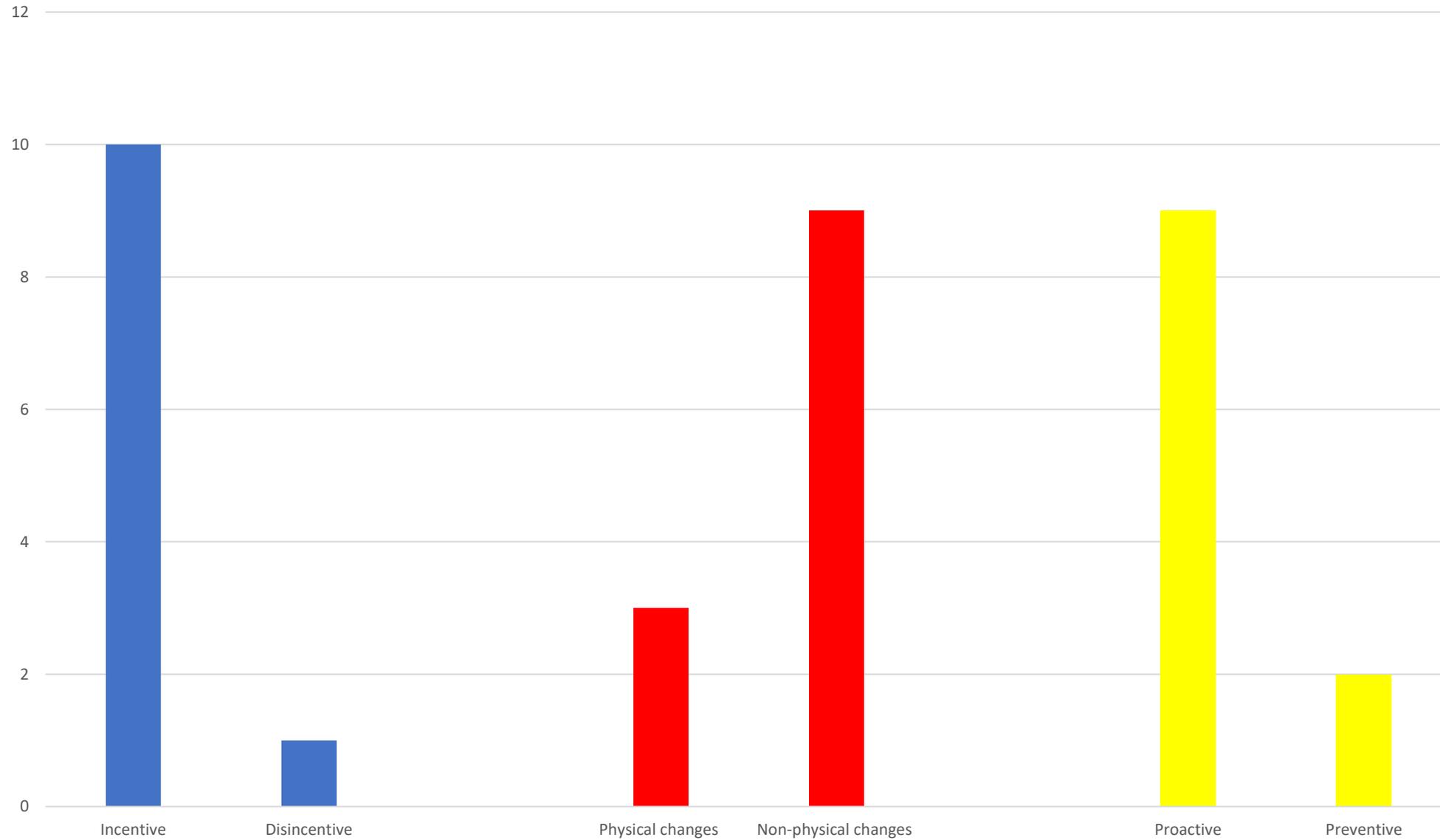


Governance: (Laws)

- The approval of self-driving vehicles law in 2017 will clear the way for the development and testing of autonomous vehicles and make road traffic safer and more efficient [1]
- A national mandate: By 2030, all new cars made in Germany will be electric. Berlin already has a large number of operational charging points, wirelessly charged electric buses, and has developed an Action Plan for Electromobility 2020 [2].



Berlin





Oslo



Vision :



- By 2025, the city aims to have 25 per cent of daily journeys by bike[1].



- “The main challenge for us going forward now, is to reduce the number of private cars”[2]
- Densification and development of city shall occur along the railway, tram and metro networks as well as public transport nodes to ensure sustainable modes of transport.



- cut emissions by 95 percent by 2030[3].
- By 2020, public transport in the Oslo metropolitan area will exclusively use renewable energy.
- By 2028, public transport in the Oslo metropolitan area will be zero-emissions.



[1][2][3] <https://www.dw.com/en/oslo-starts-2019-as-europes-eco-capital/a-46786866>



Strategies:

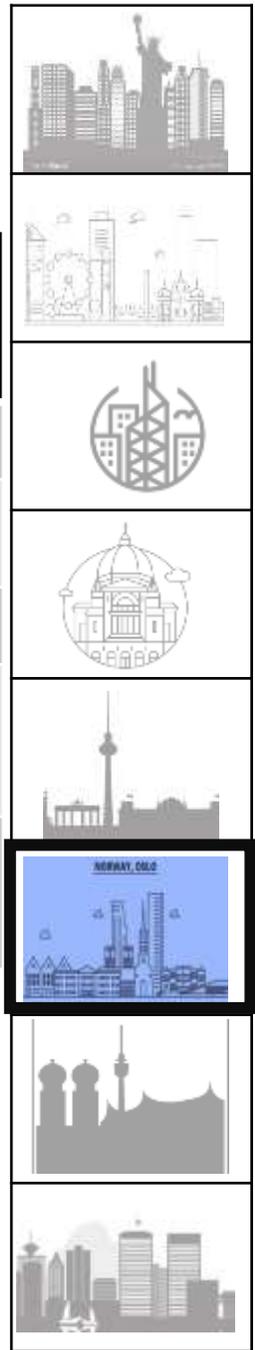
	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	Increasing road tolls From €3.2 (\$3.60) in 2016 to €5.6 in 2019 [1]		✓		✓		✓
	Fully electric vehicles are exempt from the tolls [2]	✓			✓	✓	
	The country uses tax breaks for electric cars as part of its plan to end the sale of fossil-fueled vehicles by 2025 [3].	✓			✓		✓
	In 2017, 56 % of public transport was powered by renewable energy	✓			✓	✓	
	Motivate the users of the city to take part on, and contribute to, increased city life	✓		✓	✓	✓	
	A car-free city center (inner city)	✓	✓		✓	✓	
	Residential parking zones with free parking for EVs (greater Oslo)	✓		✓		✓	



[1][2][3] <https://www.dw.com/en/oslo-starts-2019-as-europes-eco-capital/a-46786866>



Strategies:

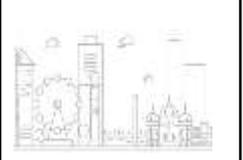


	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	Congestion tax (non for EVs) (the whole city)[1]		✓		✓		✓
	increased numbers of toll gates/road throughout the city, with free passage for EV [2]	✓	✓	✓			✓
	Only zero emission taxis from 2022 (the whole city) [3]		✓	✓	✓	✓	
	bicycle line marked by proper signage, painted with a bright contrasting color, and whenever possible, fully separated from traffic.[4]	✓		✓			✓
	Oslo dished out €500 and €1,000 rebates to citizens purchasing e-bike and cargo bikes, in a bid to discourage families from buying new cars.	✓	✓	✓	✓	✓	

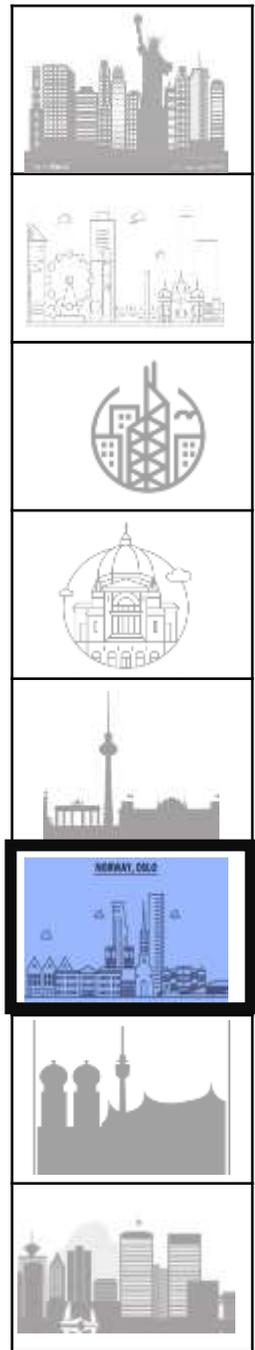
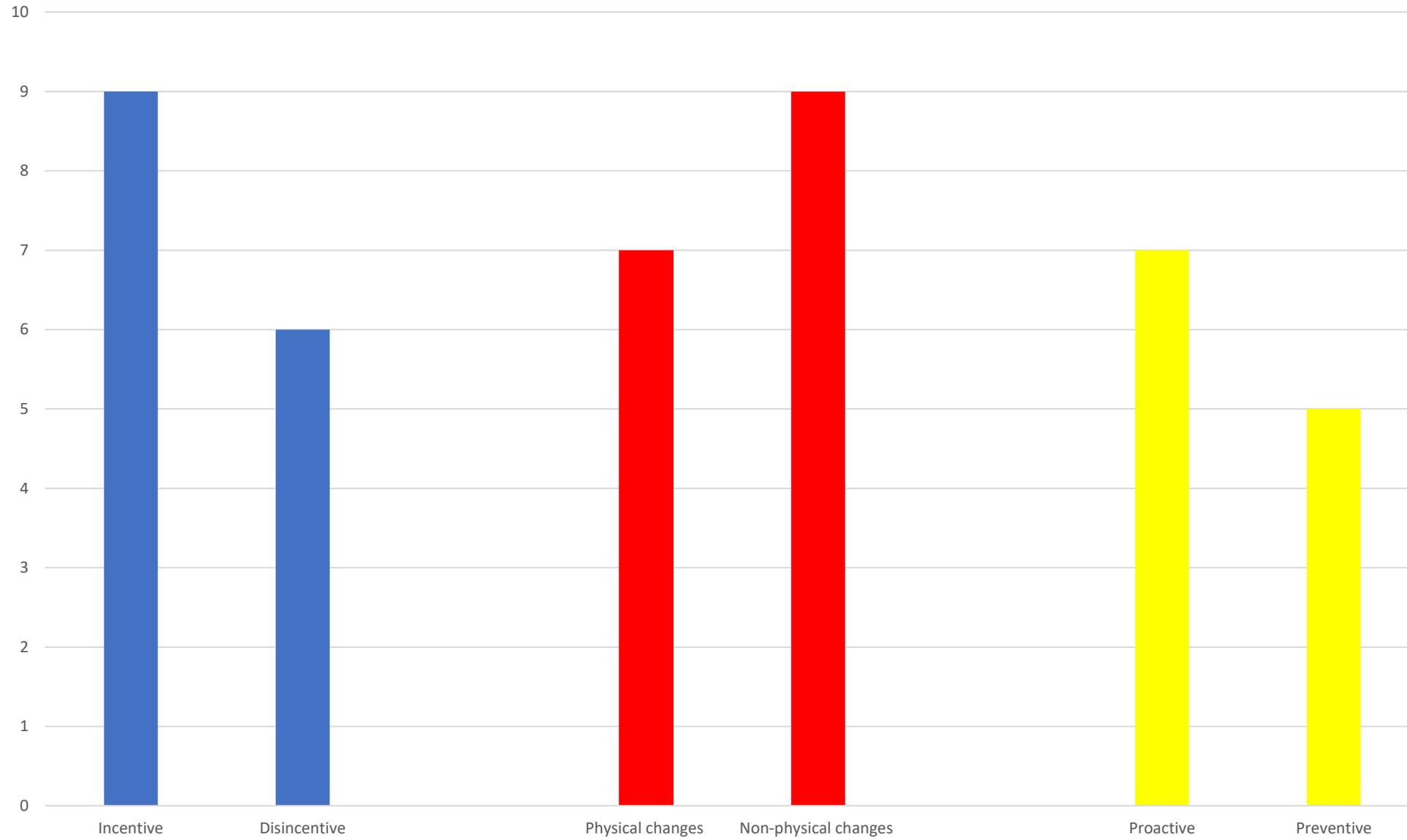
[1][2][3] [4] <https://www.citylab.com/transportation/2018/05/oslos-race-to-become-a-major-bike-haven/559358>



Governance: (Laws)



Oslo





Munich



Vision :



- Cut Co2 emission by 20 percent by 2020 [1].
- Install smart energy-efficient street lighting [3]



- Promote e-mobility [2]

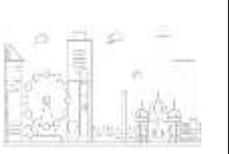


- The closer to the city center, the lower the proportion of automobile traffic should be [4]
- A parking-space management concept must be drawn up for the city [6].



- The park-and-ride system as a means of networking different modes of transport needs to be improved [5].

- Increase of knowledge on customer expectations[7].



[1][2][3] <https://www.smarter-together.eu/cities/munich#/>

[4][5] [6][7] Mobility 2050. Region of Munich – Creating a common vision for sustainable development in an unique Public Private Cooperation



Strategies:

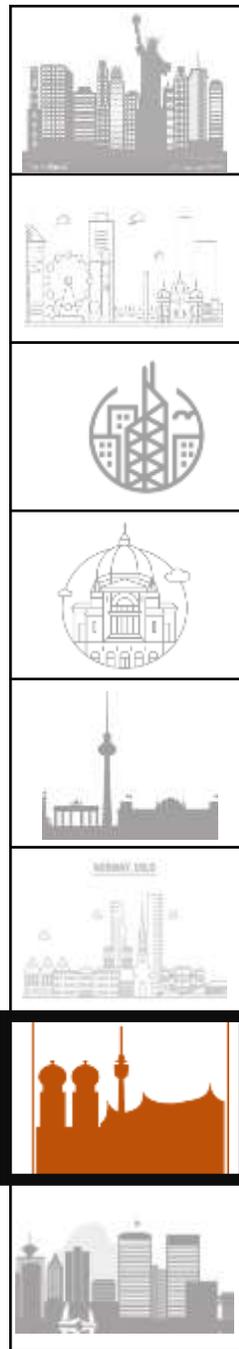
	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	There are no control point gates anywhere in the whole public transit system including in buses. This improves fluidity greatly by saving time at every entry point. Surprise checkpoint [1]	✓			✓		✓
	CallBikes are the ideal form of transport. For added convenience, you can simply drop your bike off at any street corner in the scheme's central zone [2]	✓			✓	✓	
	Circulate a SmartCity app that creates intelligent links between all service [3]	✓			✓	✓	
	Install a smart urban data platform as the technological backbone of all smart city measures [4]	✓			✓	✓	
	Improve E-car sharing vehicle [5]	✓		✓	✓		✓
	Improve the public bike rental system "MVGRad" [6]	✓		✓			✓

[1] <https://www.ledevoir.com/societe/transports-urbanisme/557381/munich-et-ses-exemples-a-suivre-en-matiere-de-transport-et-de-mobilite>

[2] <https://www.callabike-interaktiv.de/en/cities/muenchen>

[3] [4] <https://www.smarter-together.eu/cities/munich#/>

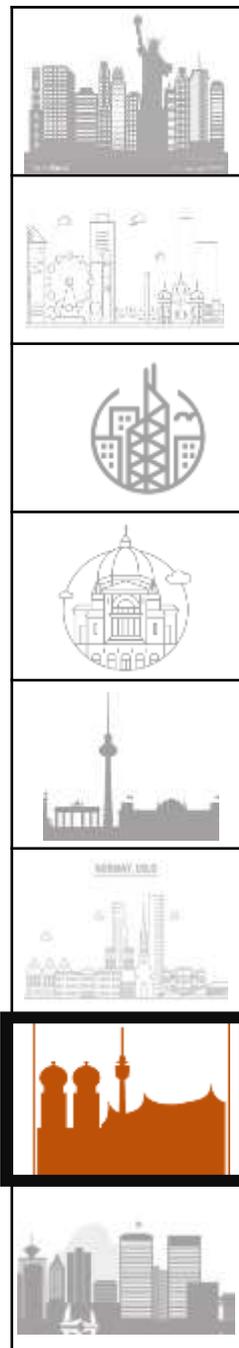
[5] [6][7] <https://www.smarter-together.eu/cities/munich#/>





Strategies:

	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	District sharing boxes (The boxes consist of cooling, refrigeration and room temperature compartments for companies and private) [1]	✓		✓		✓	
	Sensors installed in the road space can detect free parking spaces, which can be displayed via an app and then be approached specifically [2]	✓		✓		✓	
	Increase Charging station [3]	✓		✓			✓
	BMW had initiated the cooperative traffic management and felt responsible to participate in the upcoming traffic issues [4]	✓		✓		✓	
	Traffic is to be avoided by encouraging car owners to carry more people in their vehicles [5].	✓	✓	✓	✓		✓
	Close cooperation between spatial development and mobility planning	✓	✓	✓	✓		✓



[1][2] <http://www.city2share.de/city2share.html>

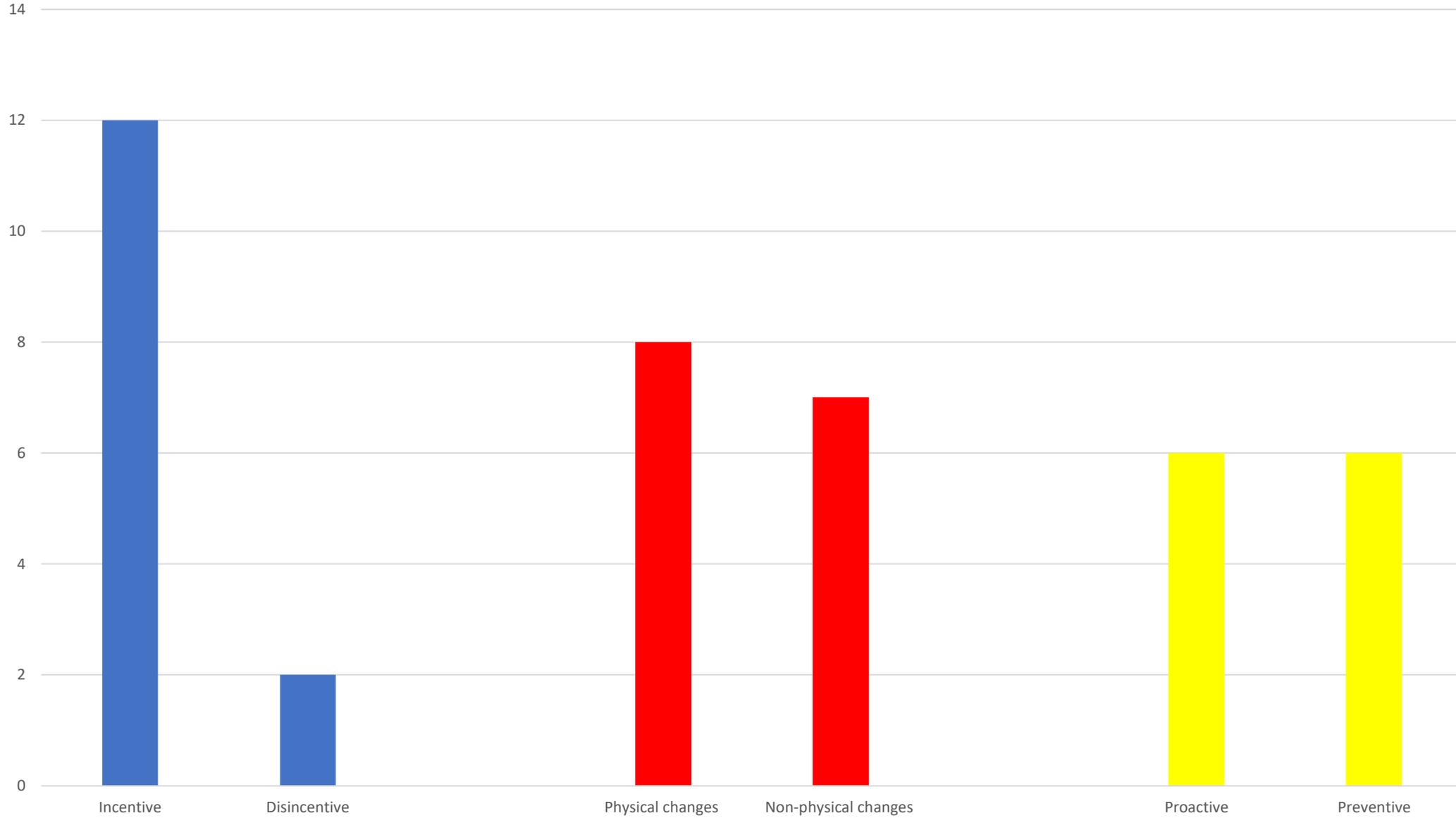
[4] [5] Mobility 2050. Region of Munich – Creating a common vision for sustainable development in an unique Public Private Cooperation



Governance: (Laws)



Munich





Vancouver



Vision :



- The 10-Year Vision identified 12 new B-Line or Better routes for the region [1]



- A smart and efficient transportation system that supports a thriving economy while increasing affordability. [2]
- Support strategies that reduce the need for parking [7]
- Support increased water-based transit [7]



- Make the majority of trips on foot, bike, and transit. Eliminate dependence on fossil fuels. Breathe the cleanest air of any major city in the world [3]
- Healthy citizens who are mobile in a safe, accessible, and vibrant city. [4]
- By 2040, at least two-thirds of all trips will be made by foot, bike, and transit. [5]



- Manage traffic to improve safety and neighbourhood livability [6]



[1] <https://www.translink.ca/Plans-and-Projects/B-Line-Consultation.asp>

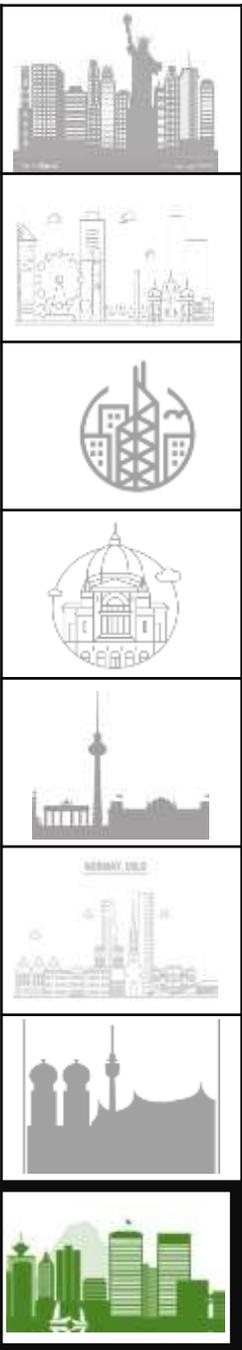
[2] [3][4] [5] [Transportation 2040 - City of Vancouver](#)



Strategies:

	Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
	Support insurance options that reward drivers for driving less [8]	✓			✓	✓	
	A total of 650 park and ride spaces will be made available at three new Evergreen extension stations [1]	✓		✓			✓
	Together, Phase One and Phase Two of the 10-Year better line Vision will provide new fleet and operating costs of seven new B-Line or Better bus services. [2]	✓		✓		✓	
	Provide inexpensive transportation options that make it easier for households to go car-lite or car-free [3]	✓			✓		✓
	Support vibrant public spaces that foster a culture of walking, cycling, and social interaction [4]	✓		✓	✓	✓	
	Provide generous, unobstructed sidewalks on all streets [5]	✓		✓			✓
	Make streets and public spaces rain-friendly [6]	✓		✓			✓
	Address gaps in the pedestrian network [7]	✓		✓			✓

[1] <https://dailyhive.com/vancouver/skytrain-evergreen-extension>
 [2] <https://www.translink.ca/Plans-and-Projects/B-Line-Consultation.asp>
 [3] [4] [5] [6] [7] [8] [Transportation 2040 - City of Vancouver](#)





Strategies:

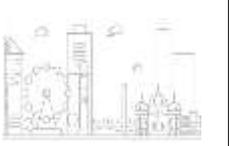
Strategies	Incentive	Disincentive	Physical changes	Non-physical changes	Proactive	Preventive
Enable and encourage creative uses of the street [1]	✓		✓		✓	
Create public plazas and gathering spaces throughout the city [2]	✓		✓		✓	
Wider Sidewalks in Commercial Areas and Near Transit [3]	✓		✓		✓	
Maintain bikeways in a state of good repair[4]	✓		✓			✓
Provide abundant and convenient bicycle parking and end-of-trip facilities [5]	✓		✓			✓
Make it easy to combine cycling with other forms of transportation [6]	✓		✓		✓	
Improve transit reliability and speed using transit priority measures[7]	✓			✓		✓
Support increased water-based transit [8]	✓		✓		✓	
Make it easier for drivers to find available parking spaces[9]	✓		✓	✓		✓
Support cycling skills training to improve cyclist safety and confidence[10]	✓		✓	✓	✓	
Consider impacts to transit, commercial vehicles, and general traffic flow prior to reallocating road space [11]	✓	✓	✓	✓	✓	



[1] [11] [Transportation 2040 - City of Vancouver](#)



Governance: (Laws)



Overall Assessment

