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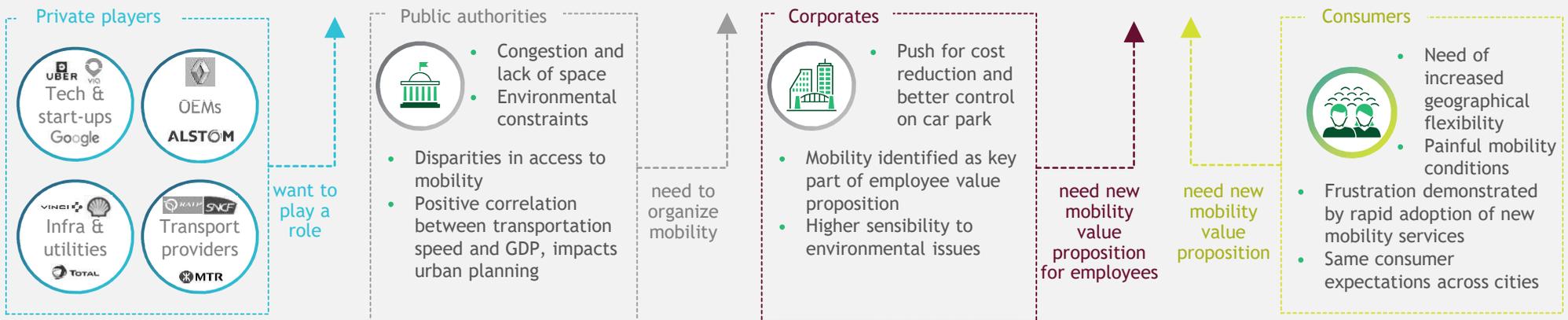
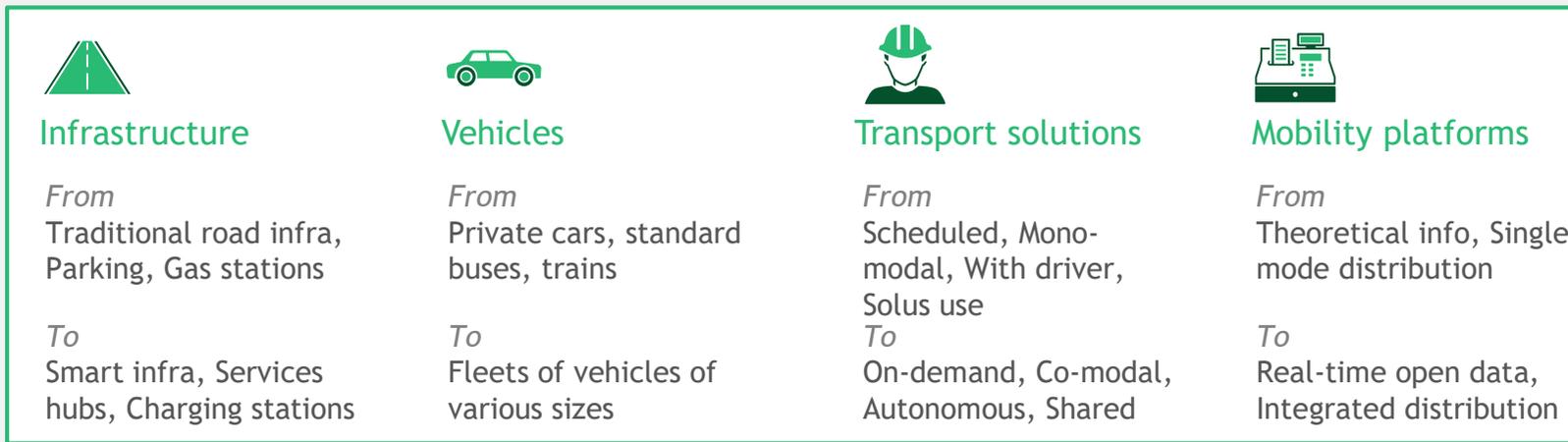


What's happening in mobility today?

Presentation to BNPP

JANUARY 2020

Context | New mobility transforms the whole value chain





Prior to Covid-19, a cooldown was observed in the transformation of the mobility market

-\$8.5Bn

Uber loss in 2019 following IPO introduction, leading to lay-off of ~1,000 employees in self-driving and marketing teams

-100%

Shutdown of various shared mobility operations, especially from OEMs refocusing investments on EVs



20xx?
~~2022~~
2020

Increasing industry skepticism about near-term AV arrival

"We overestimated the arrival of autonomous vehicles"
-Jim Hackett, Ford CEO

"Alphabet's Waymo valuation cut 40% by Morgan Stanley [...] amid challenges in self-driving car market"



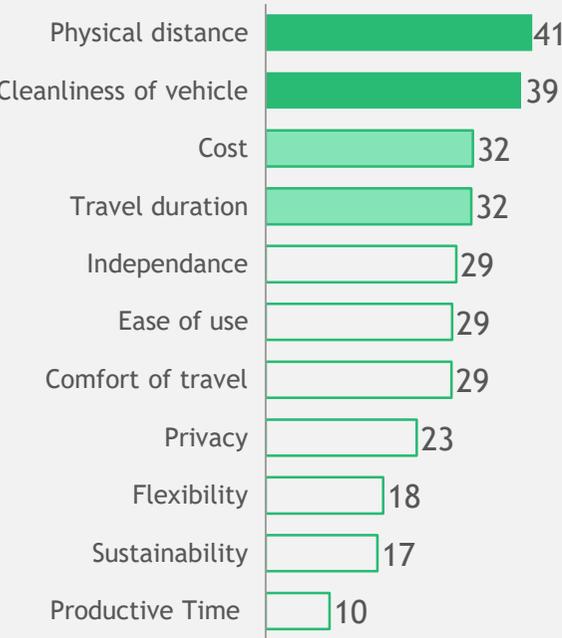
15,000

Maximum number of e-scooters allowed in Paris following tender aiming at regaining control over what was perceived as an "anarchic" development

COVID-19 crisis has impacted the whole service mobility and more heavily Public Transport

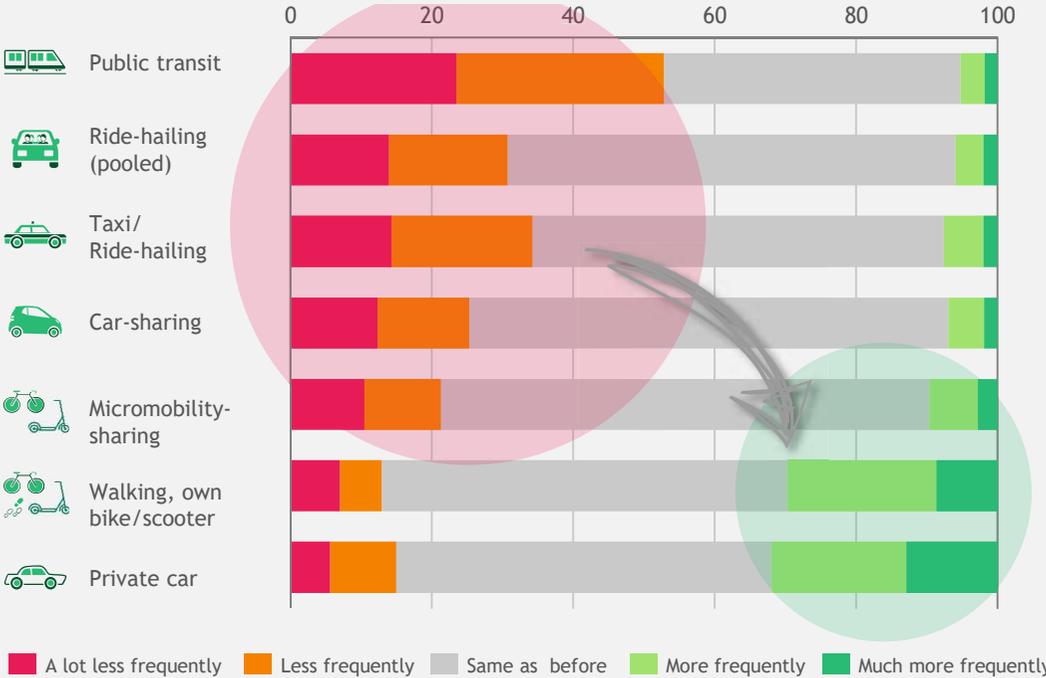
Physical distance and cleanliness are #1 criteria for choosing transportation

Percentage of people ranking the criterion among top 3



Switch toward private modes are stressing PT as well as new mobility actors post lockdown

How often will you use the following transport modes compared to pre-crisis?

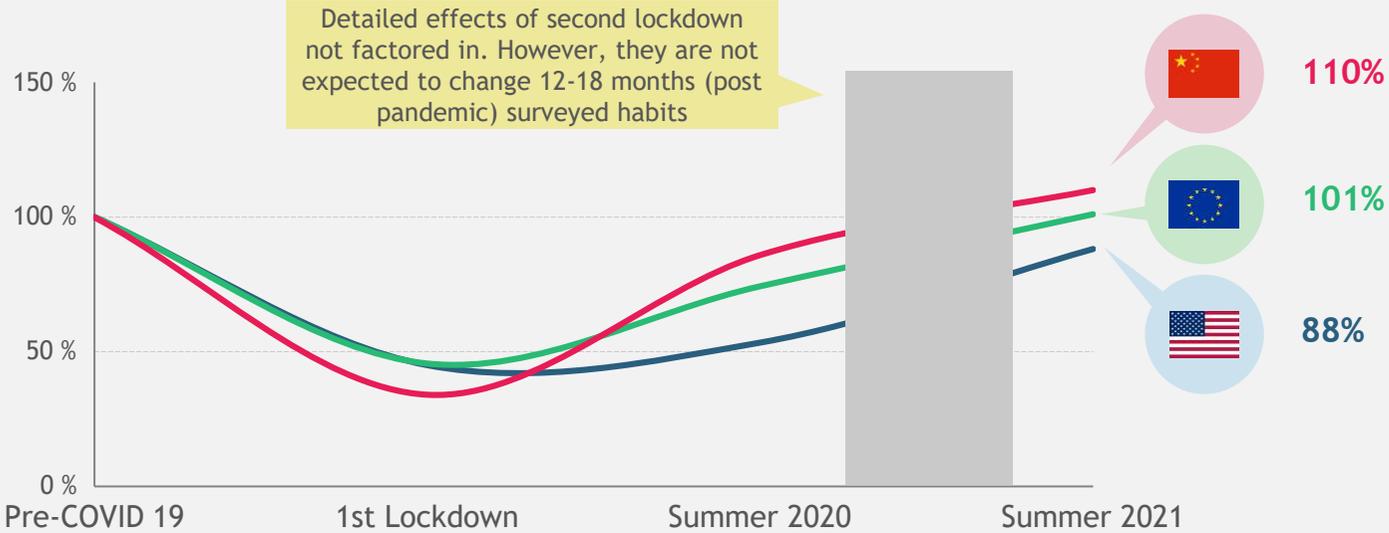


Note: Answers to the question "Please rank the following factors in order of importance when considering which mode of transport to use immediately after the COVID-19 lockdown is lifted" and "How often will you use the following transport modes compared to pre-crisis?"

Source: BCG Consumer Survey, Covid-19 impact on urban mobility

New normal | Mobility will progressively, yet not entirely, recover - significant differences expected between regions

Number of trips per week (indexed to 2019 pre-COVID-19 levels)



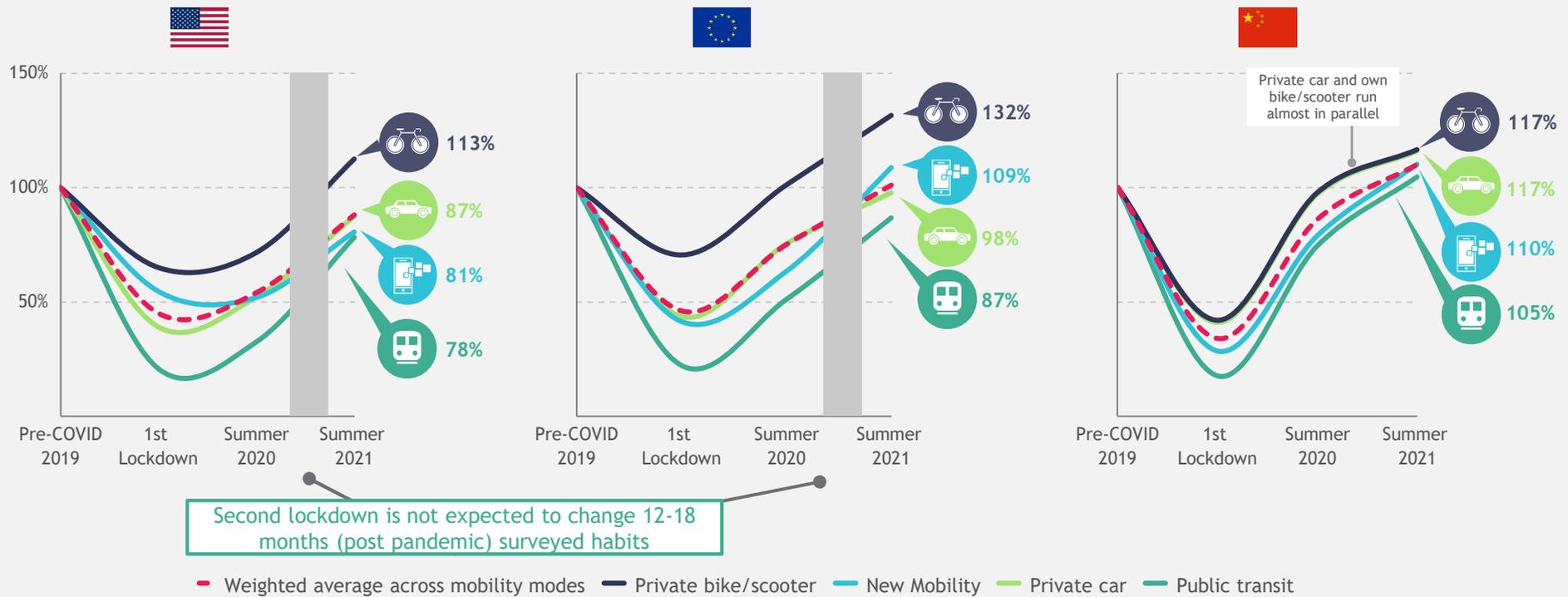
New trends will impact "new normal" mobility levels, more or less depending on geographies

- Work from home (impact in the US in particular) with an impact on overall mobility amplified on peak hours
- Decreasing willingness to pay impacting all modes
- Local work relocation/ coworking
- Acceleration of e-commerce
- De-urbanization (to be verified)

BCG Urban Mobility Survey (n = 4,713 urban residents the US, EU and China)

New normal | However, in one-year time, all modes won't recover the same way

Number of trips per week (indexed to 2019 pre-COVID-19 levels)



Note: Shared mobility includes taxi/ride hailing, pooled ride hailing, car sharing, bike sharing, and scooter sharing.
 Source: BCG Urban Mobility Survey (n = 4,713 urban residents in the US, Europe, and China).

Looking forward | **key convictions**

Within 12 to 18 months, **mobility will progressively, yet not entirely, recover and switches in mobility modes will likely become lasting trends, mainly handicapping PT**, especially in Europe and the US

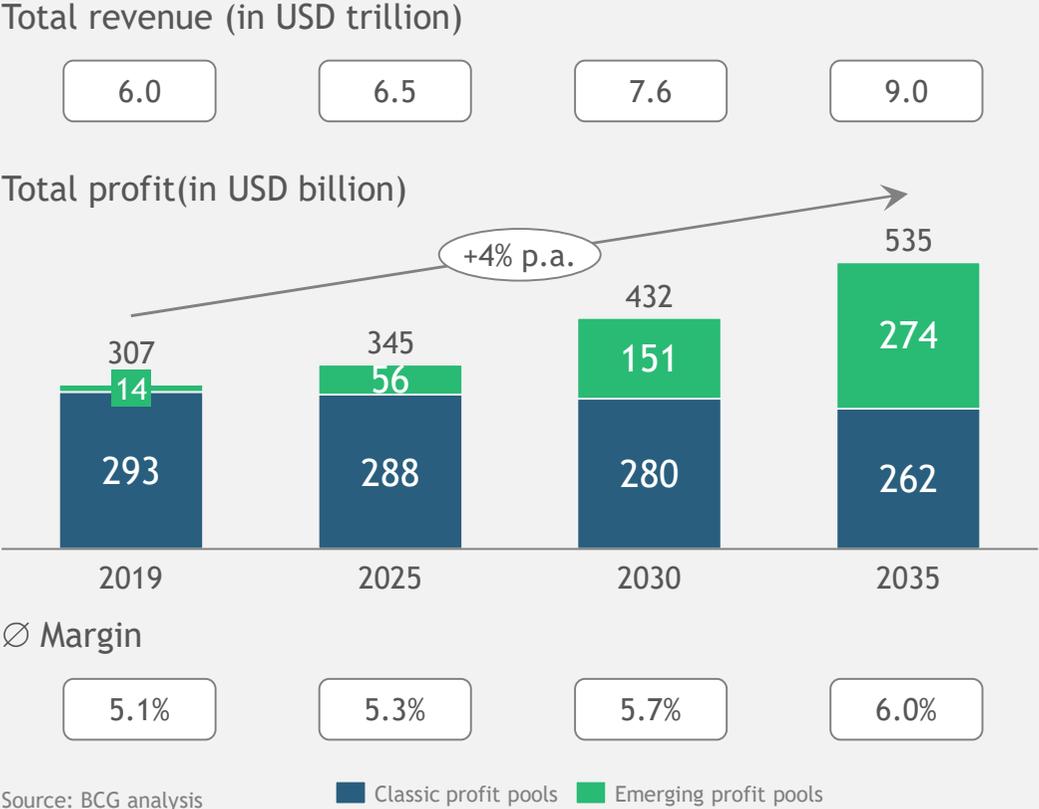
- User mobility overall possibly decreasing in some geography (work from home, willingness to pay) and switching away from crowded modes of transportation
- Regulators likely to maintain PT while securing sanitary requirements and to promote active and new mobilities (partnerships, infrastructure) in order to build resilient cities and prevent modal shift toward private car
- Strong acceleration of bike modal share especially in bike-friendly cities, mainly driven by private bikes (vs. shared)
- Among new mobility offers, micro-mobility likely to win from COVID-19

Despite cooldown and Covid-19, **mobility transformation will come true, but later and differently than initially expected** (from "big money" and "maverick" driven to public authorities working closely with private players)

PT and private mobility will remain the primary modes of urban transportation (in modal share, revenue and profit), **yet future market growth** (in modal share, profit and revenue) **will be entirely captured by new mobility offers**

- Private mobility will remain the main mode of transportation, yet with a growing part of electric vehicles and an access to private mobility more and more through flexible offers (e.g., leasing, subscriptions)
- PT demand, at ~20% modal share today globally, will stagnate and start to lose modal share from 2030 (-1pp to -3pp in 2035) resulting in stagnating revenues (around \$1T) and profit (around \$40B)
- Globally, new mobility offers could reach 15% modal share by 2035 (+8pp), highly driven by shared AVs democratization (reaching 6% modal share in 2035) and create a \$1T revenue opportunity across the value chain (fleet management, fleet operations, etc.)
- New mobility adoption rates will continue to **highly depend on countries and cities archetypes** (e.g., AV penetration expected to be higher in the US)

Emerging profit pools drive overall growth & margin



Until 2035, we will see...

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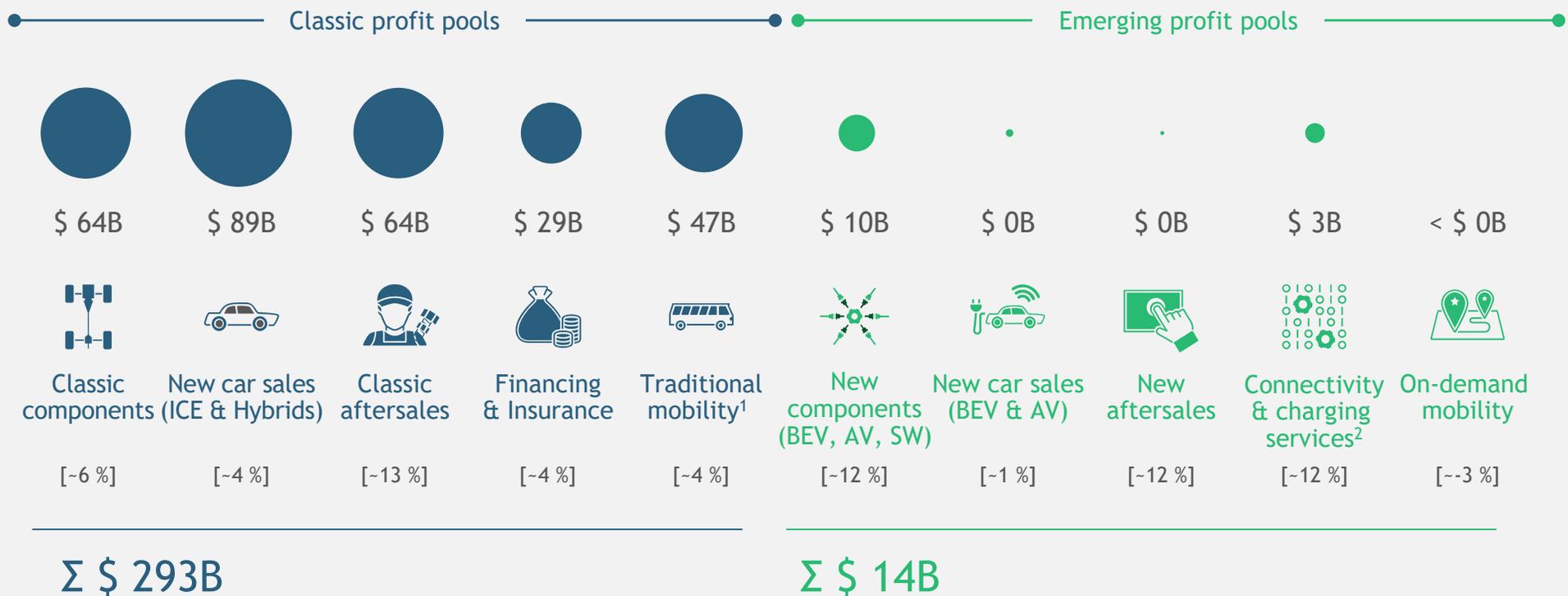
>35% BEV share on new car sales, becoming the dominant powertrain globally
- 

>15% on-demand mobility share on urban trips, and up to 30% in metropolises of key regions
- 

10% L4 autonomous vehicles share on new car sales, and 65% of new cars equipped with L2 or higher



Classic pools capture almost all profits in 2019



Note: Values in "[%]" represent average profit margins; rounding differences might occur

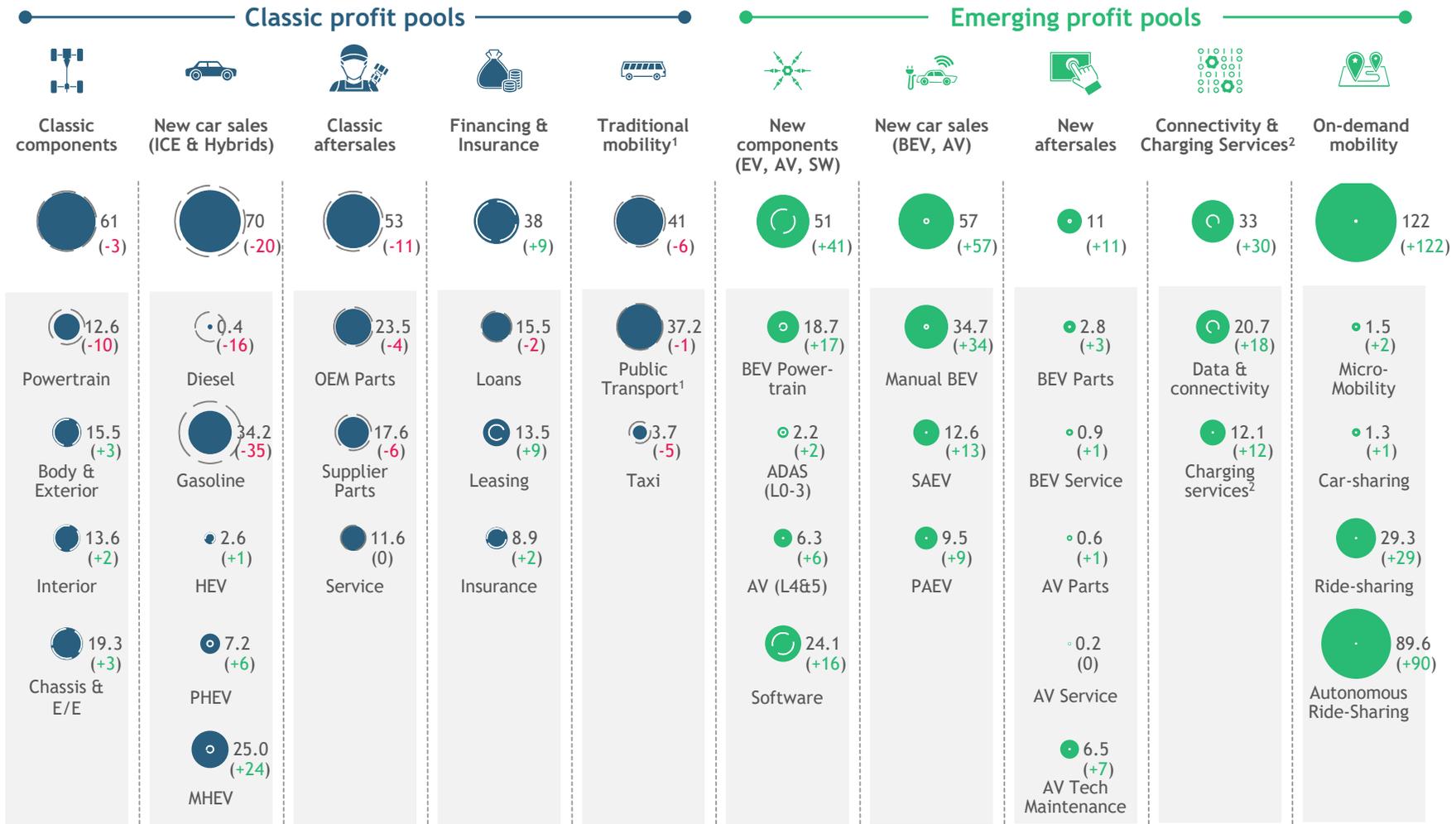
¹ Includes subsidies for public transport ² Includes public charging only (no private wall-boxes, incl. hardware, excl. electricity costs and private wall-boxes)

Source: BCG analysis

By 2035, emerging pools capture over half of profits



Note: Values in "[%]" represent average profit margins; Values in "(x)" represent change vs. 2019 values; rounding differences might occur
 1 Includes subsidies for public transport 2 Includes public charging only (no private wall-boxes, incl. hardware, excl. electricity costs and private wall-boxes)
 Source: BCG analysis



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