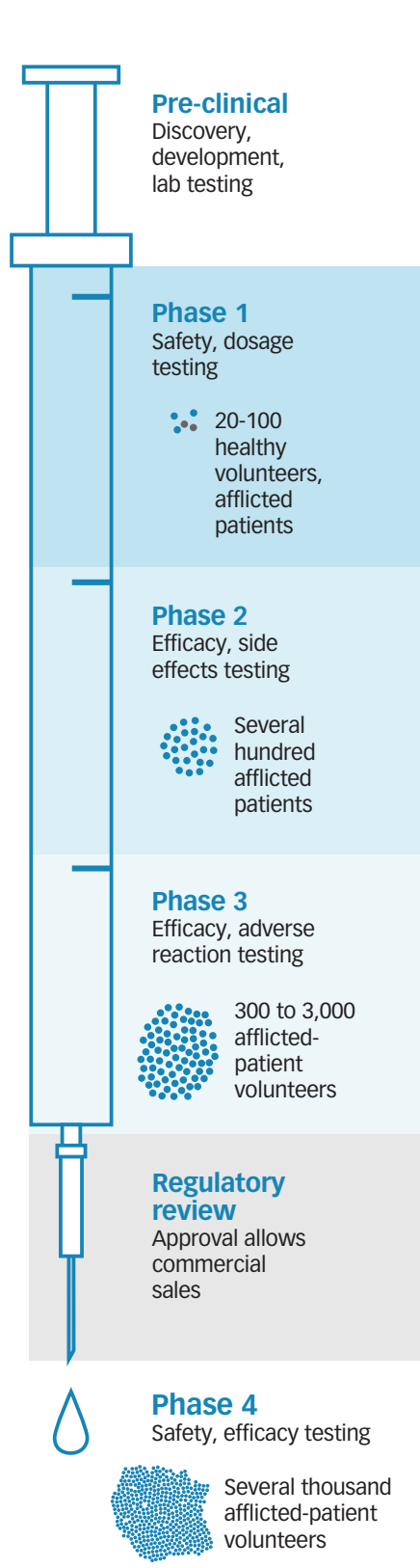


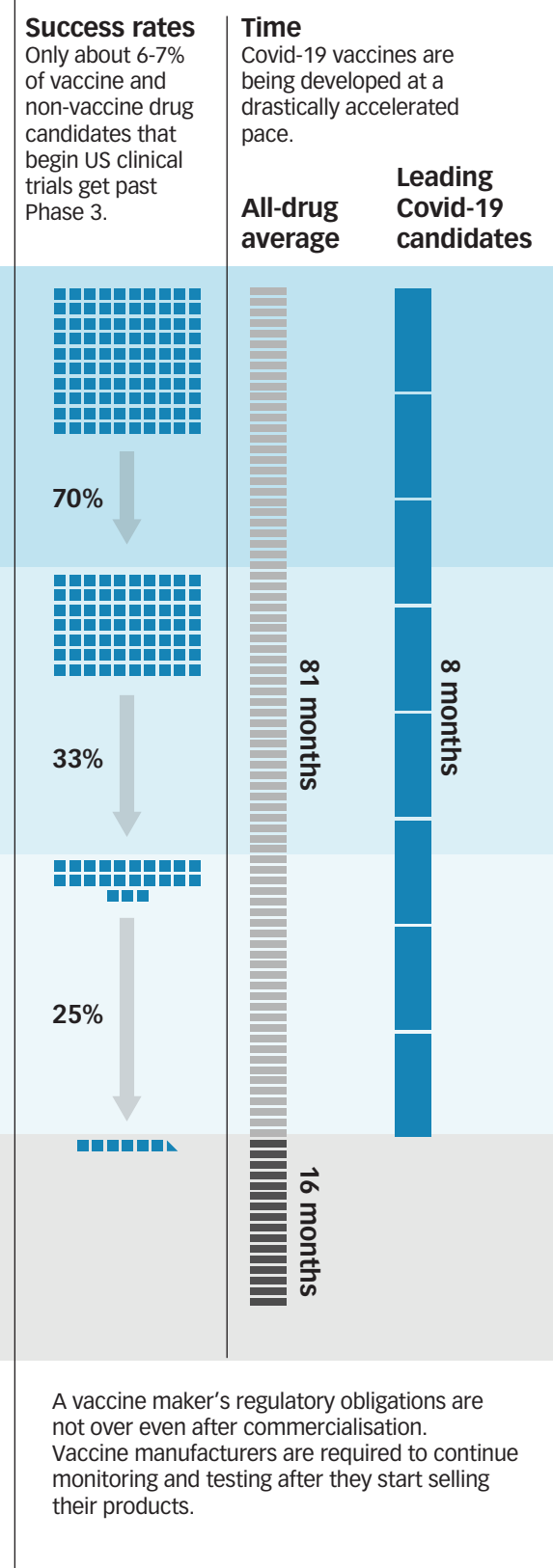
The business of vaccines

Vaccine development is usually an expensive, multi-year odyssey with a high risk of failure. But unprecedented demand and funding could boost returns for successful makers of Covid-19 candidates. **BY KENNETH LIM**

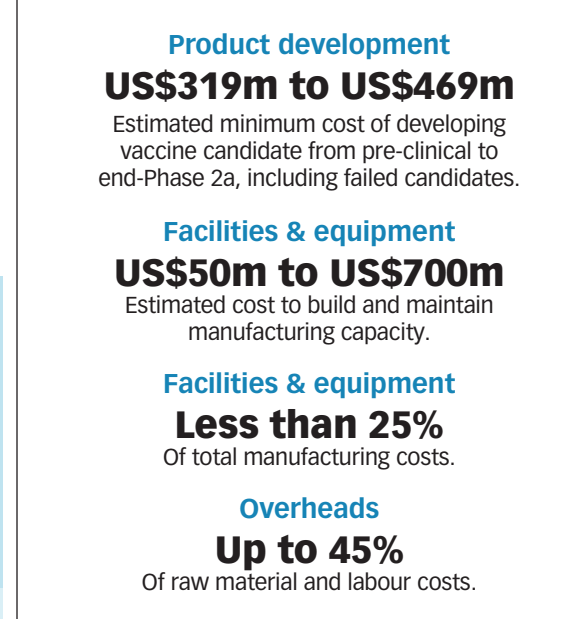
US drug development stages



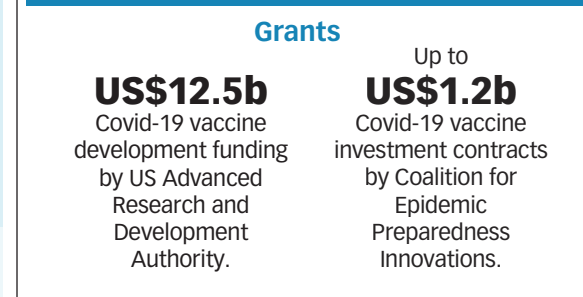
Development & approvals



Costs



Revenues



Supply agreements

Company	Disclosed doses	2021 Covid-19 vaccine revenue (US\$b estimate)
AstraZeneca	2.4b (+0.2b option)	Unavailable
Moderna	255m (+516m option)	13.3
Pfizer	570m (+600m option)	17.0

Other factors



Sources: CEPI, DiMasi et al, Goldman Sachs, Gouglas et al, Milken Institute, Plotkin et al, Public Citizen, US FDA