The Tipping Point for Electric Vehicles

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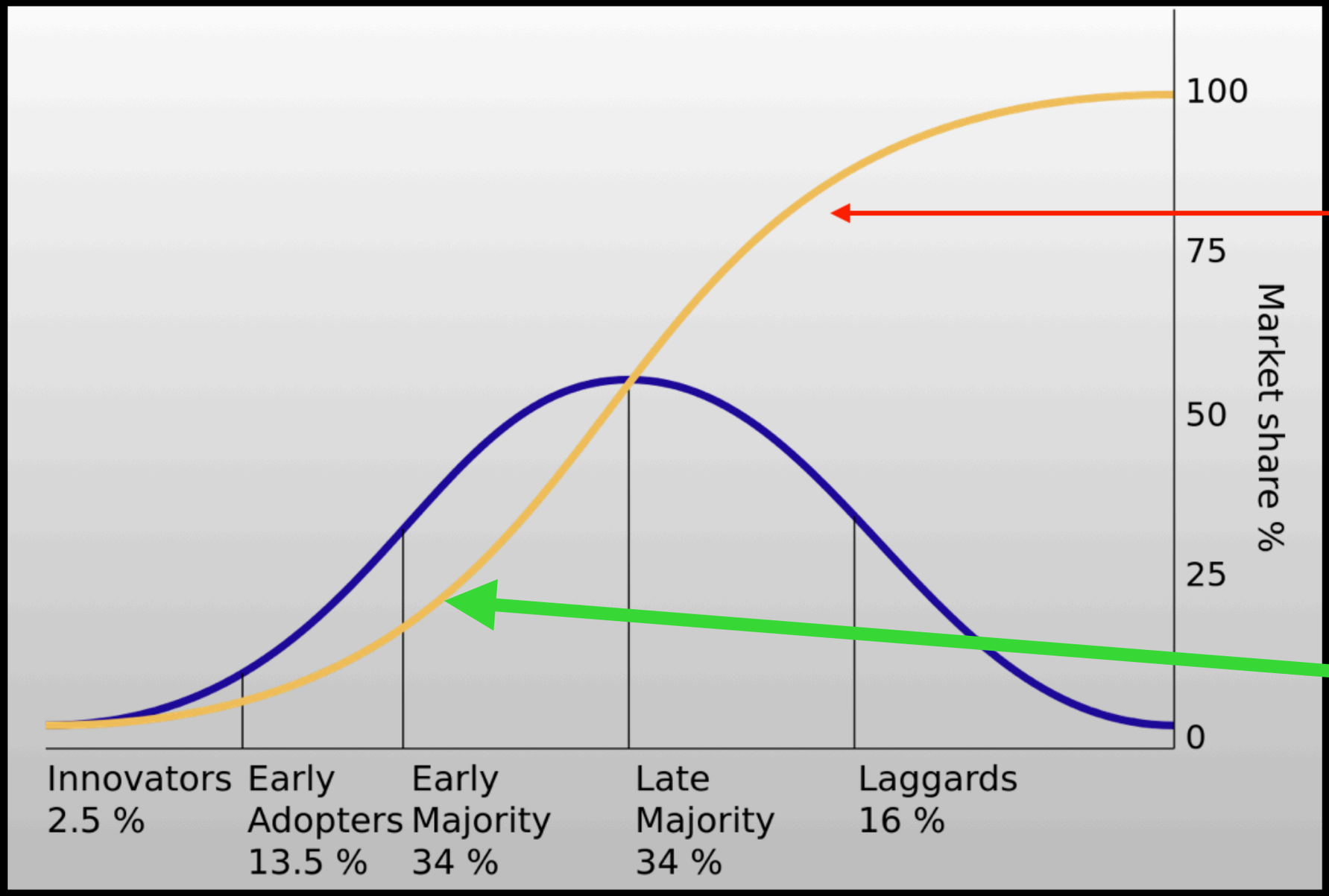
Adoption (“Diffusion”) of Innovation



The “S” Curve

“The Tipping Point”

Source: Rogers, E. (1962) Diffusion of innovations. Free Press, London, NY, USA.

Attributes of a Compelling Vehicle

- Styling & Brand Image
- Utility: number of passengers, towing, etc.
- Purchase Price or Total Cost of Ownership (TCO)
- Performance & Fun to Drive
- Leading Edge Technology
- Refueling time, location, convenience
- New Functions: e.g. V2H (vehicle to home), ePTO

- Lower Emissions
- Energy Security

Rate of Diffusion of an Innovation

- Relative Advantage: How much better is the new product than the existing one?
- Complexity: How hard is the new product to use or deploy?
- Compatibility: How well does the new product fit with existing attitudes and practices?
- Communicability: How readily will buyers grasp the advantages?
- Divisibility: Can the buyer test drive, pilot, or try in a small quantity the new product?
- Perceived Risk: Are there small or large possible negative consequences of trying the new product

Source: William L. Wilkie, Consumer Behavior, 1986, pp 119-120, Wiley & Sons

How Far Away is the “Tipping Point”?

- Will the tipping point only occur by regulations or environmental concerns?
- Can manufacturers “Make a better vehicle, that happens to be electric/H2”?
- What are the prerequisites for a Tipping Point?
  - Technologies, infrastructure, new competitors