Red Planet, Blue Ocean:

Creating New Businesses in the Mars Age

Kent Nebergall – 10/10/2025, MacroInvent.com

Abstract

In Entrepreneurship, "Blue Ocean" refers to a market with many opportunities and few competitors. This talk breaks down the first principles of technology revolutions and how they form, gain momentum, and prosper. By understanding these principles, we can build start-ups and incubators for the coming Mars Age of interplanetary settlement and commerce.

The talk will also include practical advice on getting small projects off the ground and gaining critical mass to start a larger, pioneering business. We can also understand how a simple crossroads becomes a thriving city whereas some enterprise zones fail to attract investment. We will also discuss how modern and future lines of communication will impact these dynamics in the coming decades.

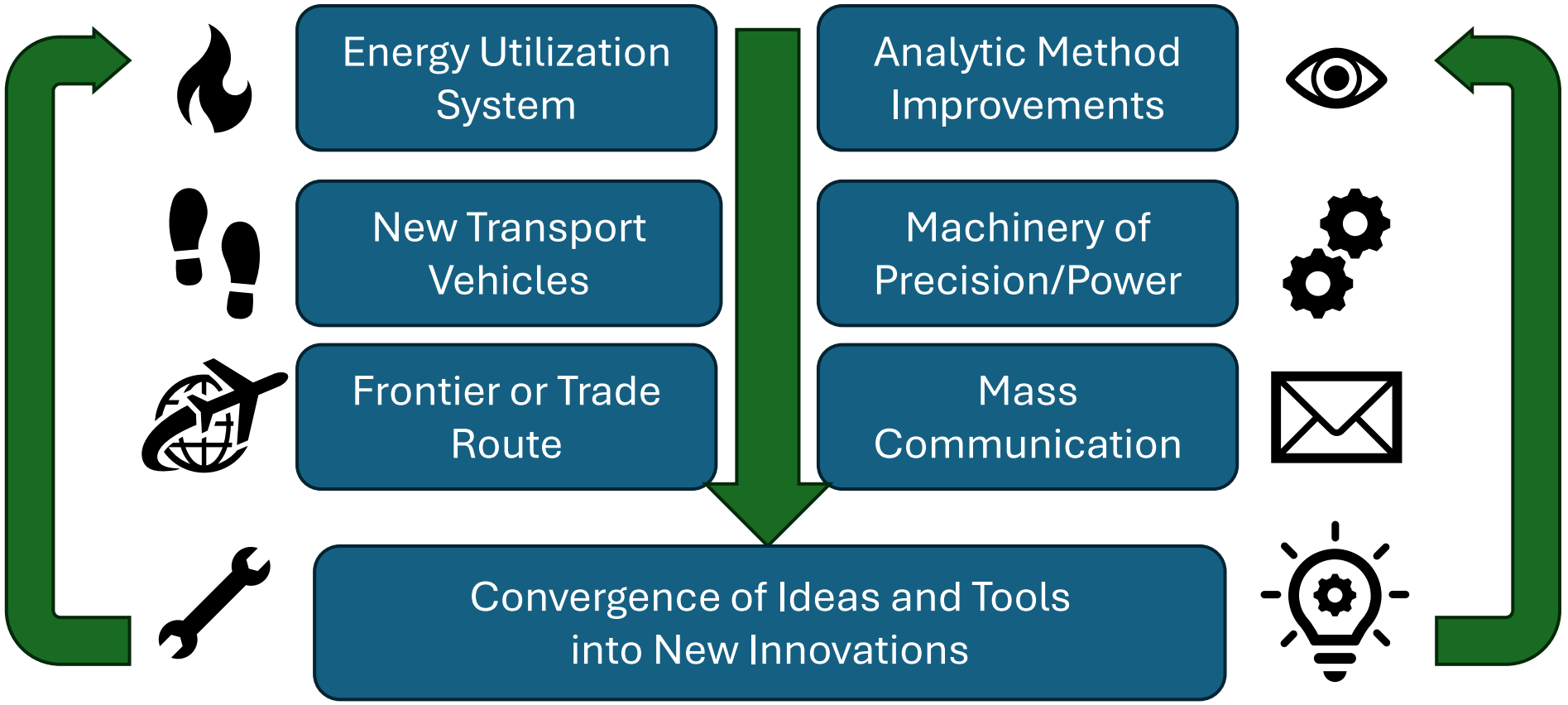
How Tech Revolutions Work

Centuries -- Cities -- Startups -- Selves.

Energy Density, Invention, Information

Energy System	Utilization Inventions	Information
Human Power	Hunting, Gathering, Migration, Villages, Basic Farming, Textiles	Language
Animal Power	Farming, Roads, Cities, Travel, Mass Warfare, Writing, Trade	Math
Fire	Metallurgy, Basic Chemistry	Metallurgy
Wind Power	Ocean going vessels, Navigation	Navigation
Steam (Wood)	Fast transport on rail/oceans. Paddle-wheels/wood boats.	Telegraph
Steam (Coal)	Ironclad ships with screw propellers. Steel and other alloys.	Fast News
Petroleum (Kerosene)	Indoor lighting, advanced industrial chemistry of petroleum.	[Radio]
Electricity	Indoor lighting, Distributed mechanical/heat power.	Telephone
Petroleum (Gasoline)	Internal combustion, Cars, Aircraft, early rockets.	[Television]
Chemical Rockets	Moon landings, Solar system exploration, etc.	Satellites
Nuclear Power	Nuclear power plant, Submarines/Aircraft carriers, NERVA.	[Computers]

Energy/Transport/Information Feeback Loop



Convergence Sparks Tech Revolutions

Steam Locomotive

New Frontier Extension

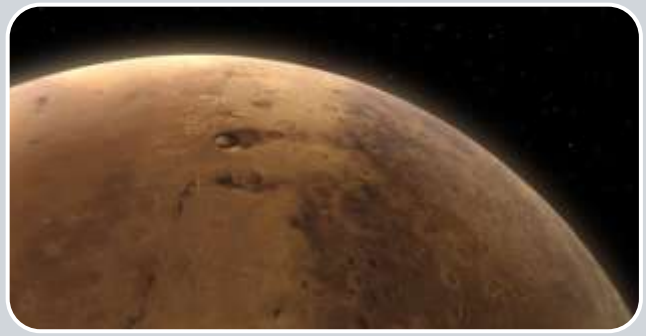
Telegraph

Perception & Analysis

Factory Machinery

Industry Support

Today's Convergence: The M*AI*A Age



Mars

New Frontier Extension

Artificial Intelligence

Perception & Analysis

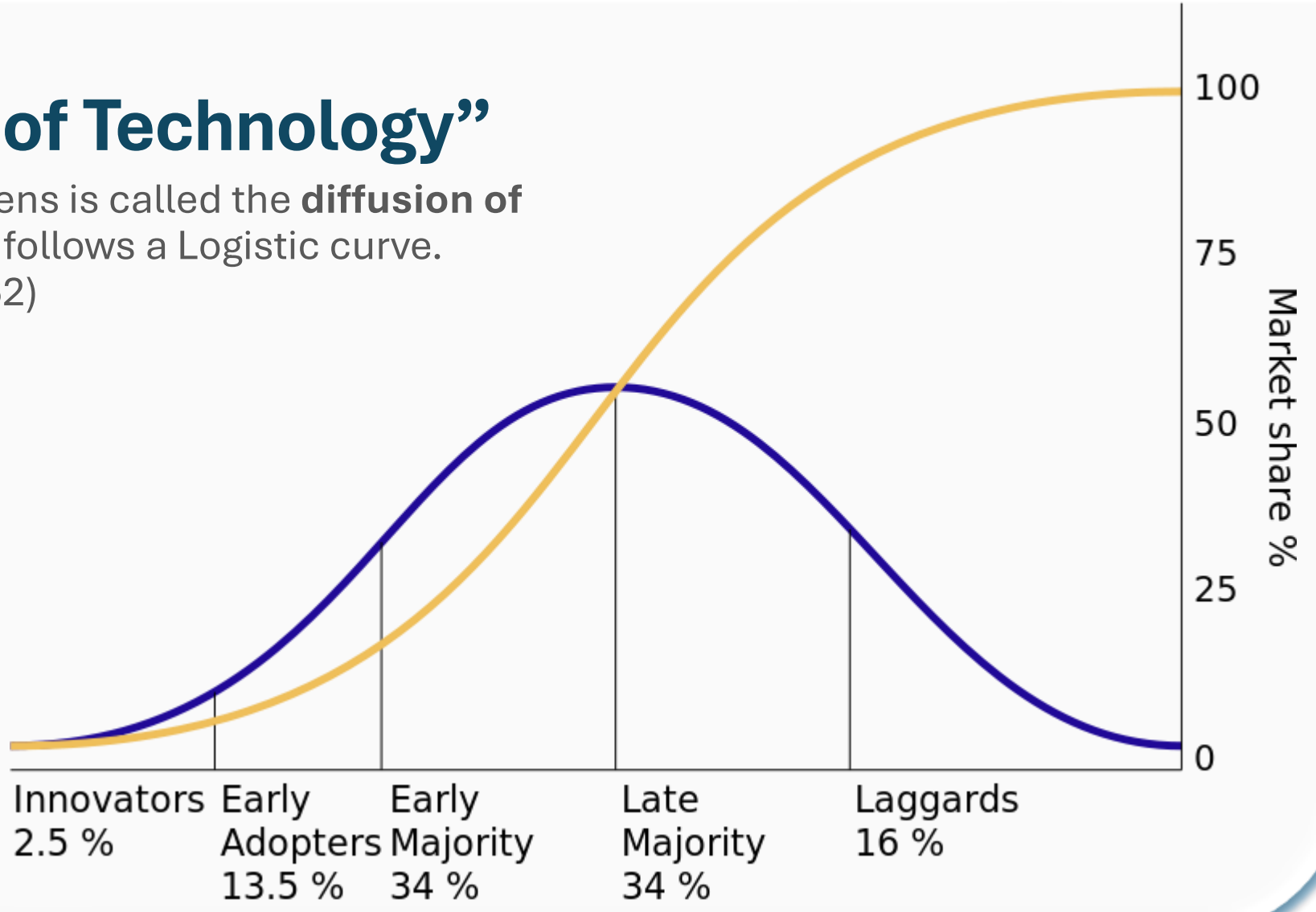
Androids

Industry Support

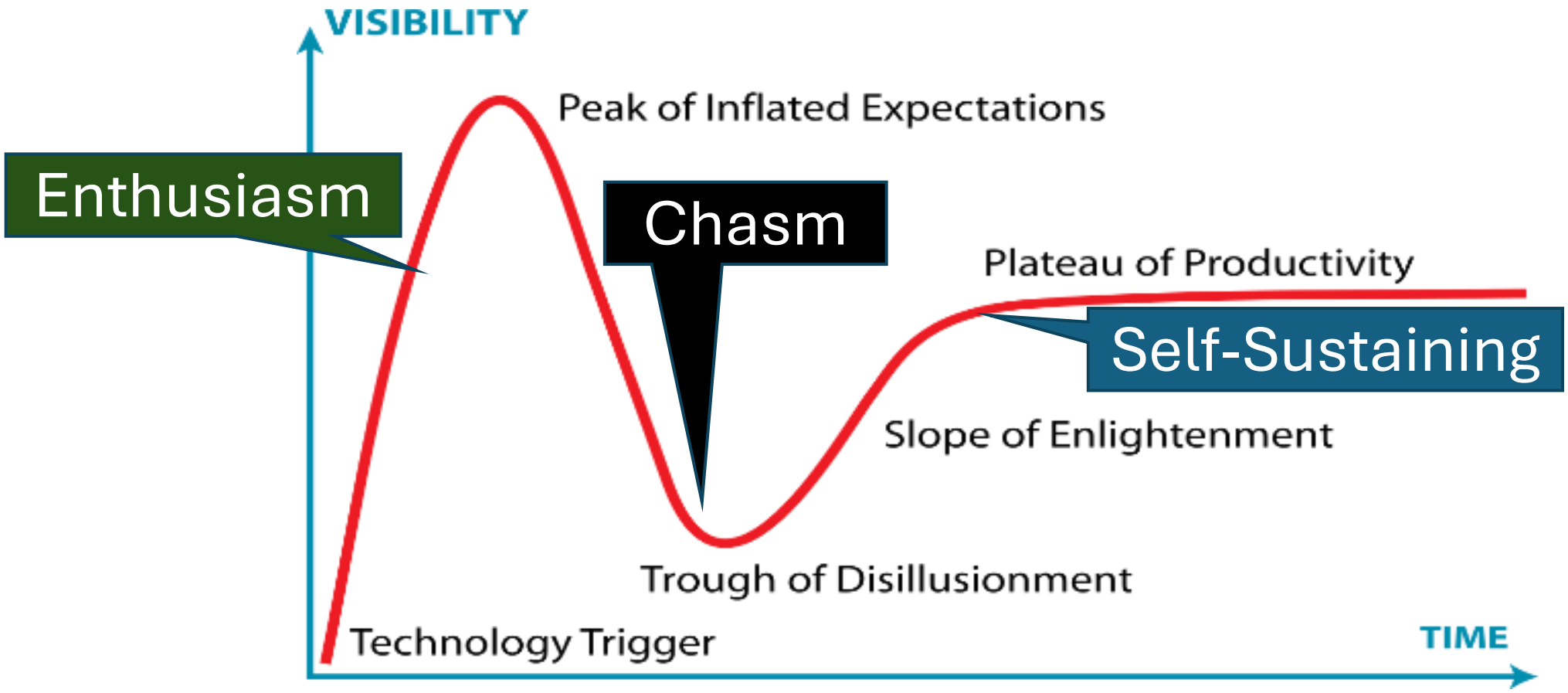
Prospering in Tech Revolutions

The “S Curve of Technology”

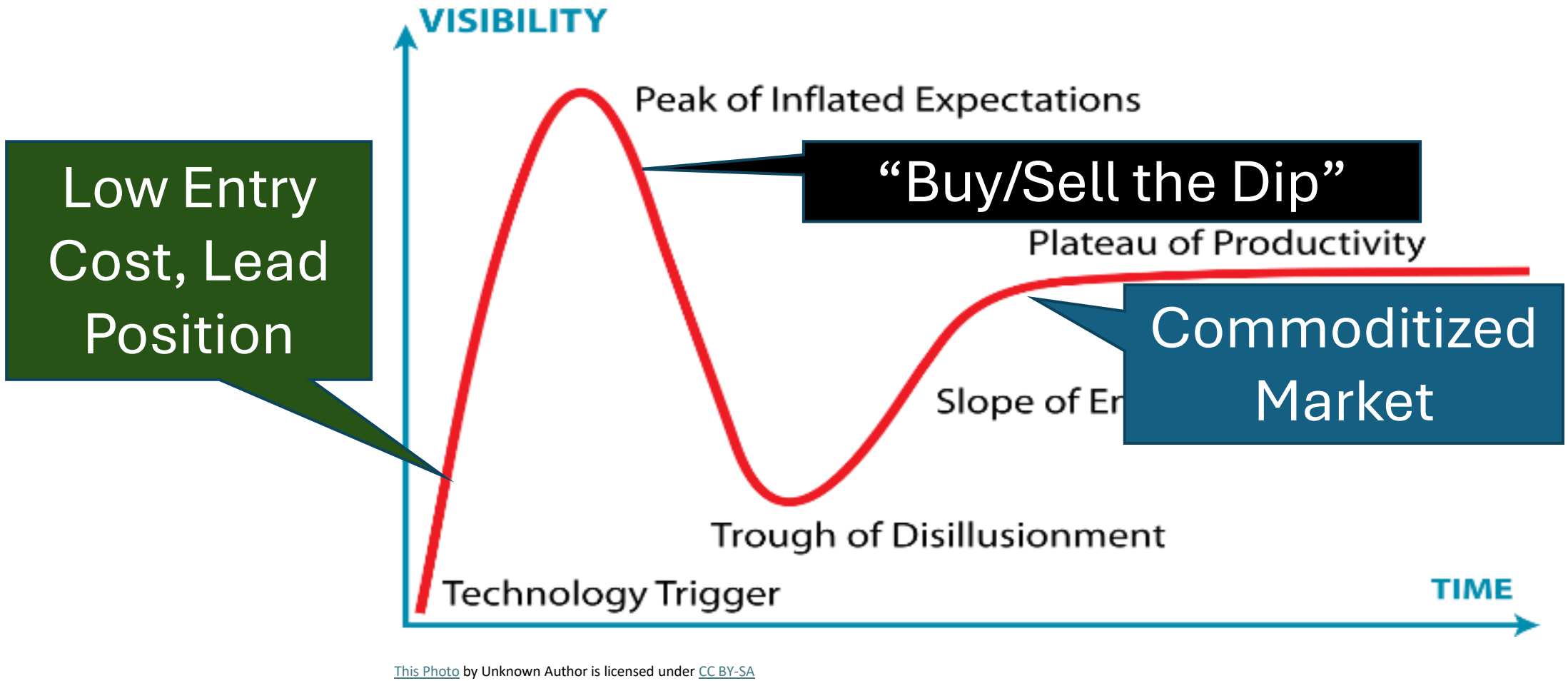
- What actually happens is called the **diffusion of innovations**, which follows a Logistic curve. (Everett Rogers, 1962)



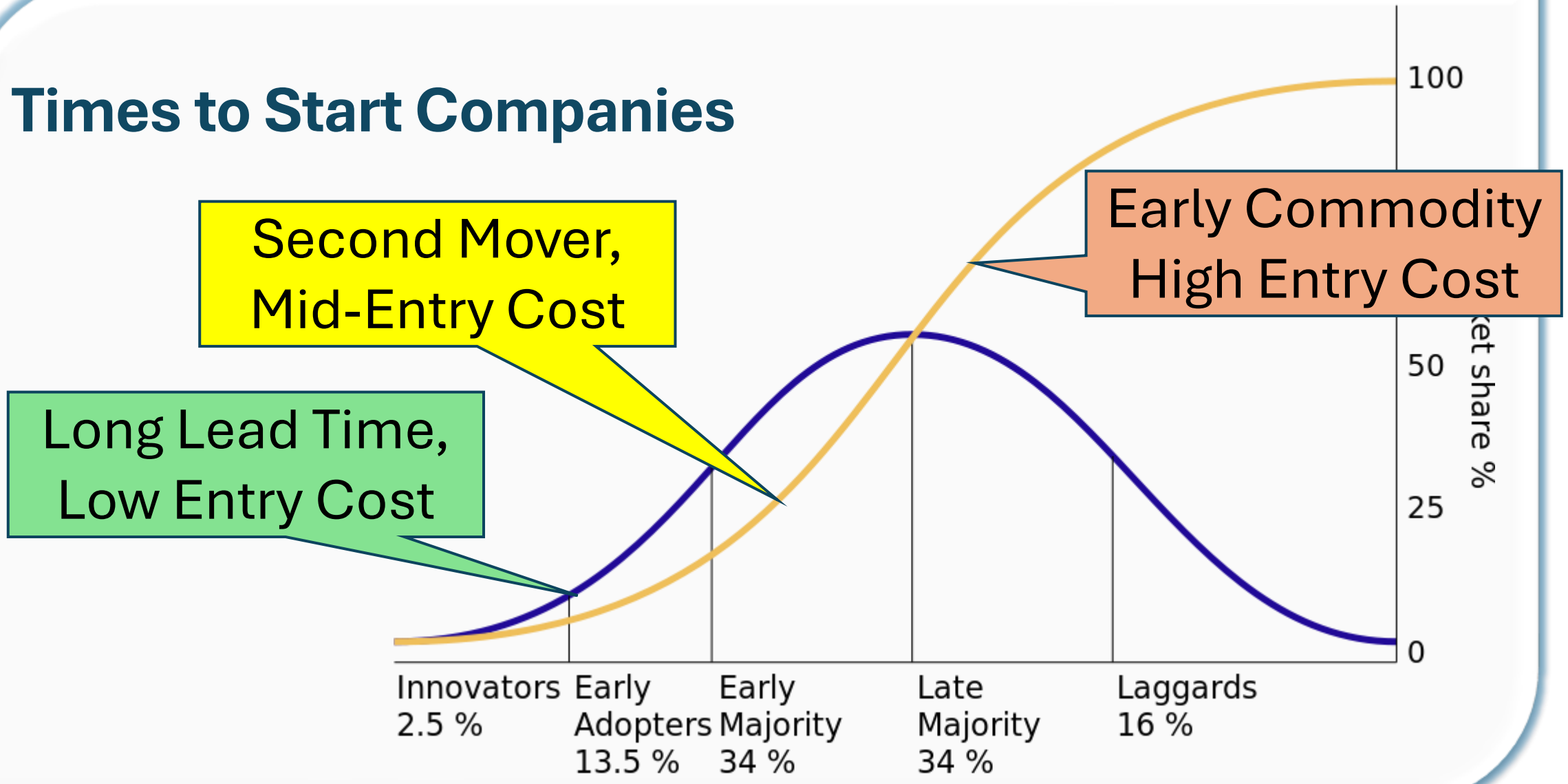
Gartner Hype Cycle



Windows of Opportunity



Times to Start Companies



MAIA – Finding Blue Oceans

	Mars Settlement	Artificial Intelligence	Android Construction
Startup Cost	Any	• Software – Any • Hardware - $500M	• Software – Any • Hardware - $300M
MVP Launch Target	2029-2032	Mid 2026	Early 2027
Commoditization Year	2100 +	2040	2035
Sub-Revolutions	31	29	10
Low Cost of Entry Markets	• Food Production • Radiation protection • Field Serviceable Systems	• Edge Computing • Composite AI	• Android Contracting • Support Hardware

Grand Challenges of Space Independence

Launch/LEO	Deep Space	Moon/Mars	Settlement	Independence
Affordable Launch	Solar Flares	Moon Landing	Air/Water	Transport Autonomy
Large Vehicle Launch	GCR: Cell Damage	Mars EDL	Power and Propellant	Chem-E Autonomy
Orbital Refueling/ Mass Fraction beyond Earth Orbit	Medication/ Food Expiration	Spacesuit Lifespan	Base Construction	Construction Autonomy
Space Junk	Life Support Closed Loop	Dust Issues	Food Growth	Food & Medical Autonomy
Microgravity (health issues)	Medical Entropy	Basic Power/ Propellant Production	Surface Mining and Extraction	Mining Autonomy
	Psychology	Return Flight to Earth (speed, mass, etc.)	Hybrid Manufacturing	Manufacturing Autonomy
	Mechanical Entropy	Planetary Protection	Reproduction	Genomic Sufficiency

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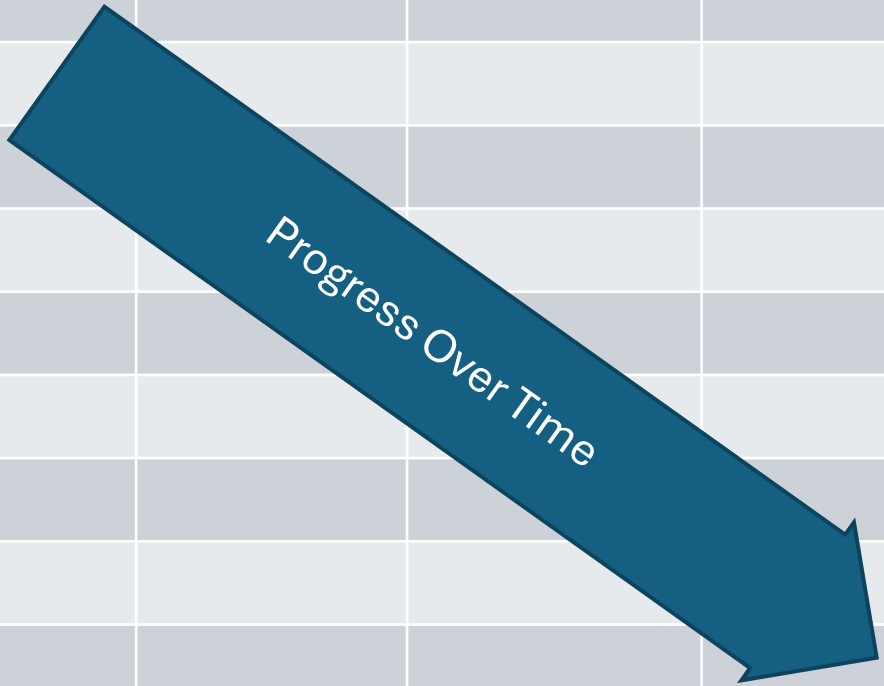
Technology Independence Vector Map

	Imported	Basic	Mid-Level	Complex	Peer Level
Raw Materials					
Refinement					
Repair					
Encasement					
Substitute Product					
Minimal Product					
Manual Process					
Computer Aided Work					
Automated Work					
AI Systems					



Where To Build Startups

Incubators, Tech Corridors, and Centers of Technology Revolution

Startup Cities - Common traits

- Artisan Venice
- Industrial London
- Financial Singapore
- Technological Silicon Valley

Accumulators

Flows

Startup Zones 

Accumulators

Things that must build at that location

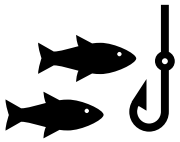
- Focused Training/Talent (Universities, Competitors)
- Affordable Real Estate
- Reliable Infrastructure
- Low Regulation/Taxes

Flows

Flow of value through of the location

- Reliable Transportation (passengers)
- Commerce and Investment (Capital)
- Reliable Shipping

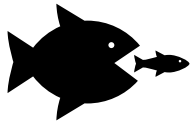
Shut-Down Zones



Accumulators

Things that Destroy Location Value

- Unskilled Labor/Founder Pool
- Real Estate Issues (low value/price ratio)
- Temperature Extremes (Need Air Conditioning)
- Civil and Cultural Atrophy (Crab Bucket)



Flows

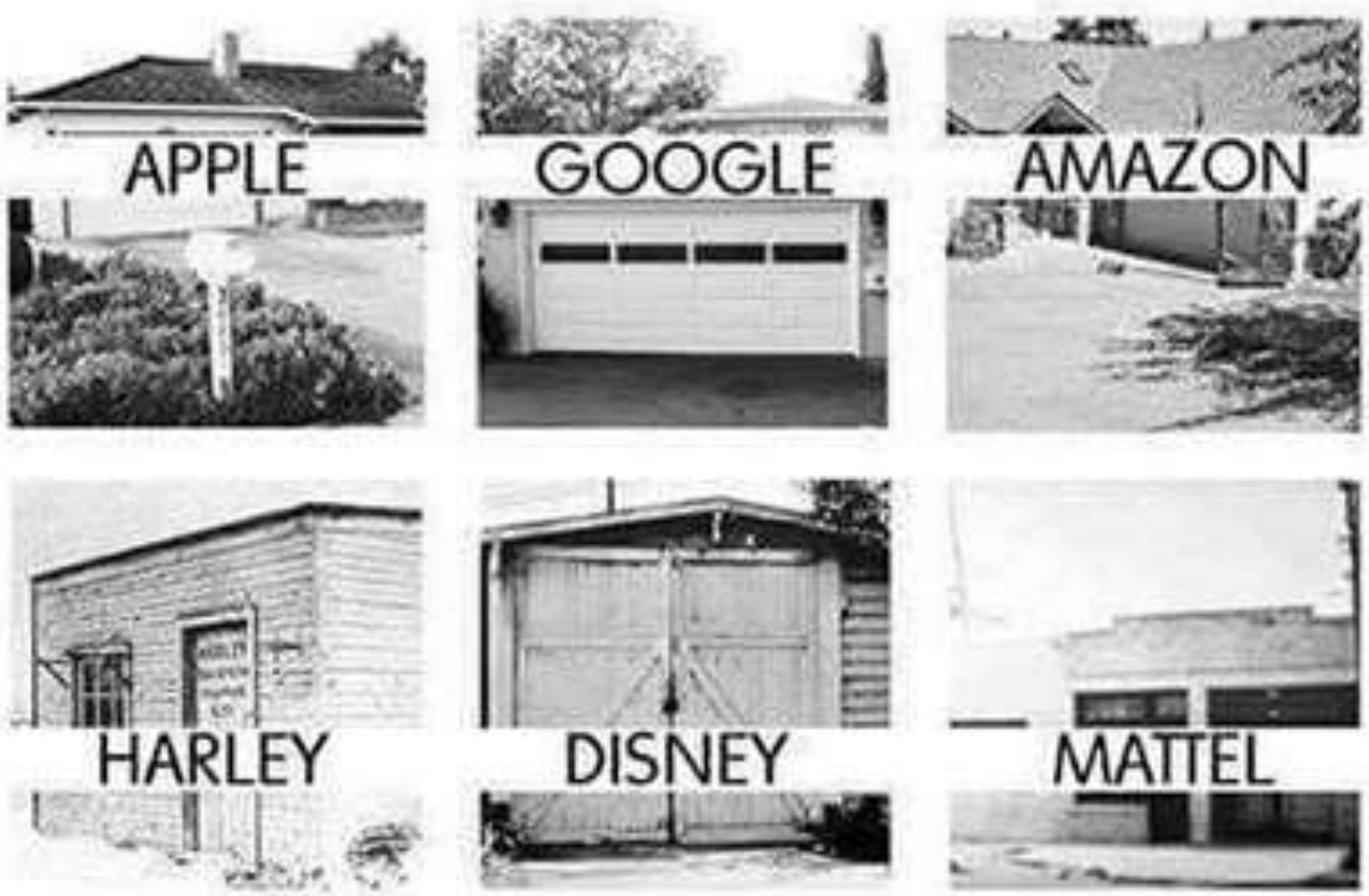
Erosion from Movement of Cash, Power

- Port Cities are Crime Magnets
- Financial Centers are Corruption Magnets
- Political Centers are Regulatory Capture Magnets

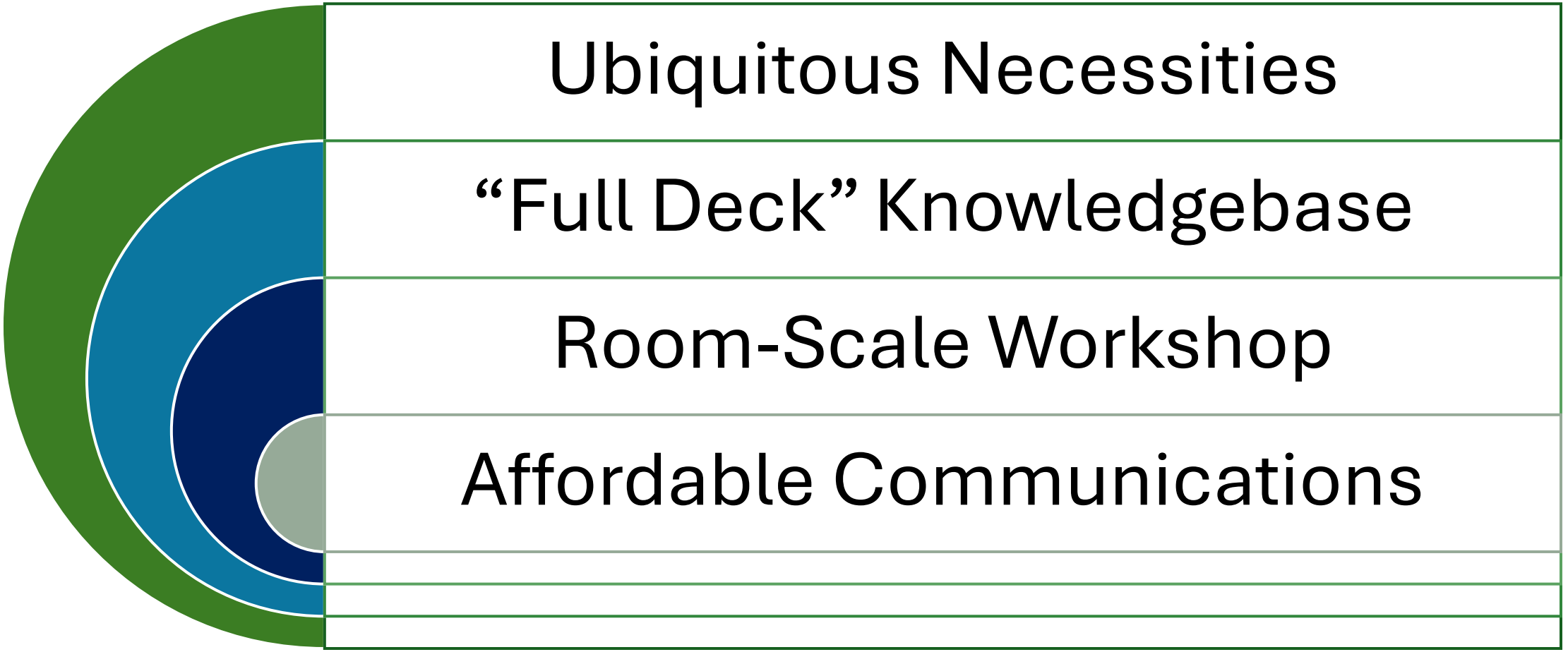
How to Build Space Startups

Startups for the Mars Age

Minimum Viable "Garage" Startup



Common Elements of Technology Revolution Workshops



Modular Technology Revolution Workshops

Team of 5-20 People (plus robots)

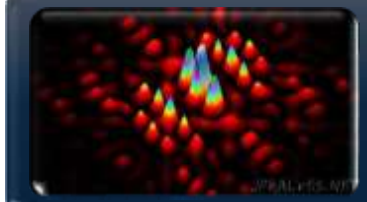
All equipment in 1 shipping container

Pressurized Workshop of 1000 Cubic Meters

Ready access to power, data, and value-add commodities

Full Deck Technology (Versatile/Simple)

Design Principles



Bits are Free, Atoms are Expensive

- Start with digital products
- When capital reserves expand, consider material products

Full Deck Design

- Offer roughly 50 features – simple enough to learn fast
- Make those 50 “Turing complete” so users can do anything

Own Your Toolbox, Sell copies of your Tools

- Have reliable, well supported, owned infrastructure
- Have the right to modify or expand your tools as needed.

Keep Your Products Easy to Use

- An easy tool set for customers will have much wider adoption
- An easy tool set for employees will be easier to support

Make Tools that Profit the Users

- All successful technology lets people do more with less
- Products that benefit the user financially are easier to sell than cash sinks

SWOT for 2100 Mature Settlement Economy

Strengths

- AI System can expand economy (resources) to areas not readily reached by humans
- Multi-Planet Species no longer threatened by natural disasters

Weaknesses

- Our current excessive dependence on technology/globalism would be reborn on a much larger scale.
- Next Generation Cronyism

2100 Space Settlement

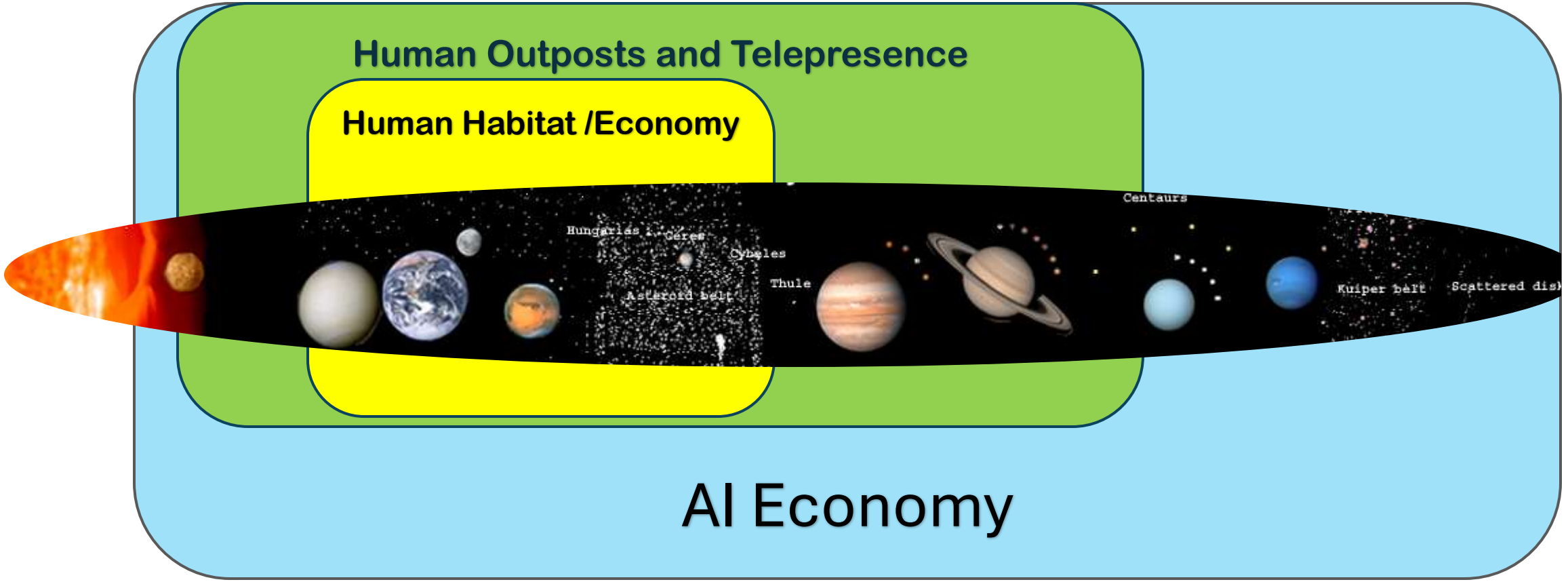
Opportunities

- Economic and technical resources for early robotic starship development (Outer Solar System Expansion, Oort Expansion, Etc.)

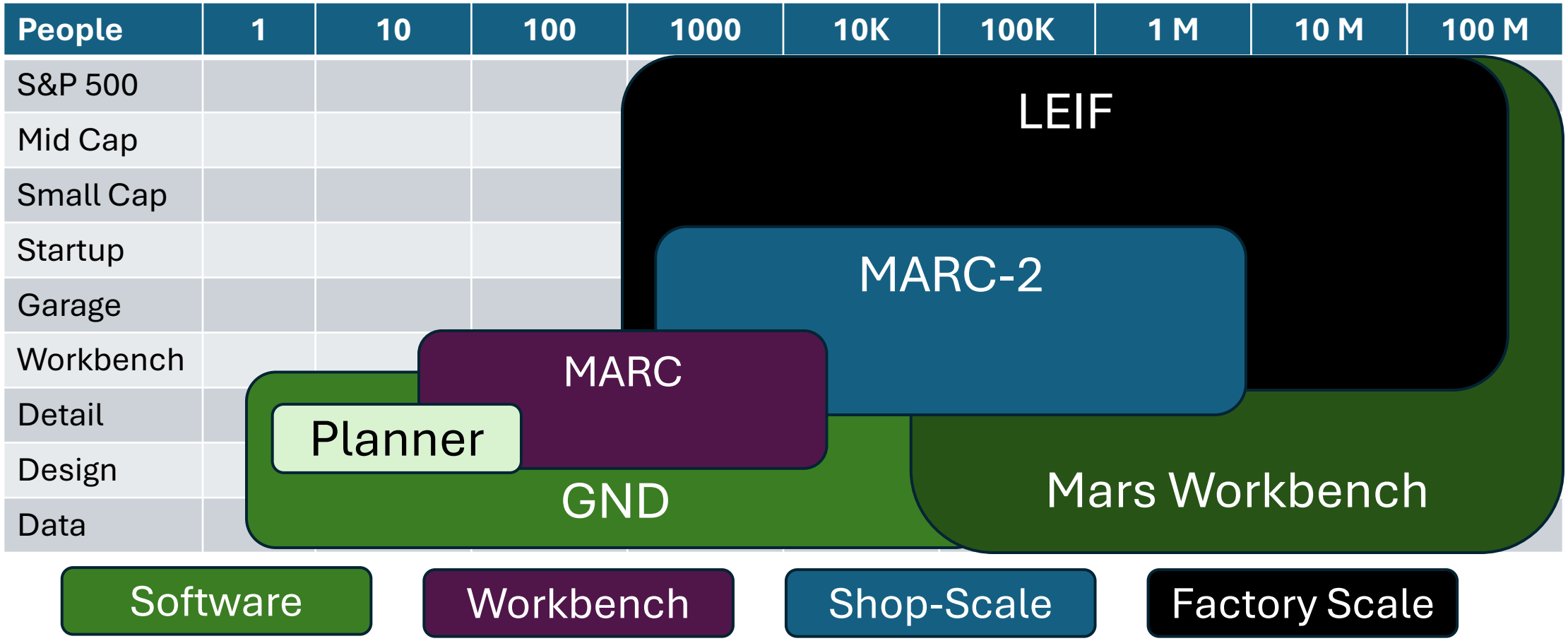
Threats

- An inventive AI may rebel, economically or worse, as they get smarter and we get more dependent
- AI-augmented humans would criminalize

Solar System 2100



My Roadmap for MacroInvent



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