

Plug Power: Building a Capable Supply Chain

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Plug Power – changing the way the world moves.

- Created market for fuel cells and hydrogen in material handling applications
 - 13,000+ GenDrive fuel cells deployed
 - 121+ million operating hours
 - 36 GenFuel Sites
 - 137 Fueling dispensers
 - 8k+ fills per day
 - 3.3 +million fuelings total



Holds more than 90% of the fuel cell market in the material handling industry.

Complete Solution Drives Adoption

GENKEY®

Complete solution drives customer adoption

GENDRIVE®

Hybrid electric fuel cell solution for forklifts

13,000+ units in the field
Drop-in replacement
121M+ operating hours



GENFUEL®

Complete fueling infrastructure

36 installed sites
137 hydrogen dispensers
10k fuelings/day, 3.3M+ total



GENCARE®

Complete service and maintenance

98+% uptime performance
Remote monitoring and control
driving efficiency



Loyal and Repeat “Blue Chip” Customers

Walmart 



P&G

carter's®



gsf
golden state foods

Good things
come from
Sysco®



Centriella
SINCE 1917

Wegmans

STIHL®



colruyt 



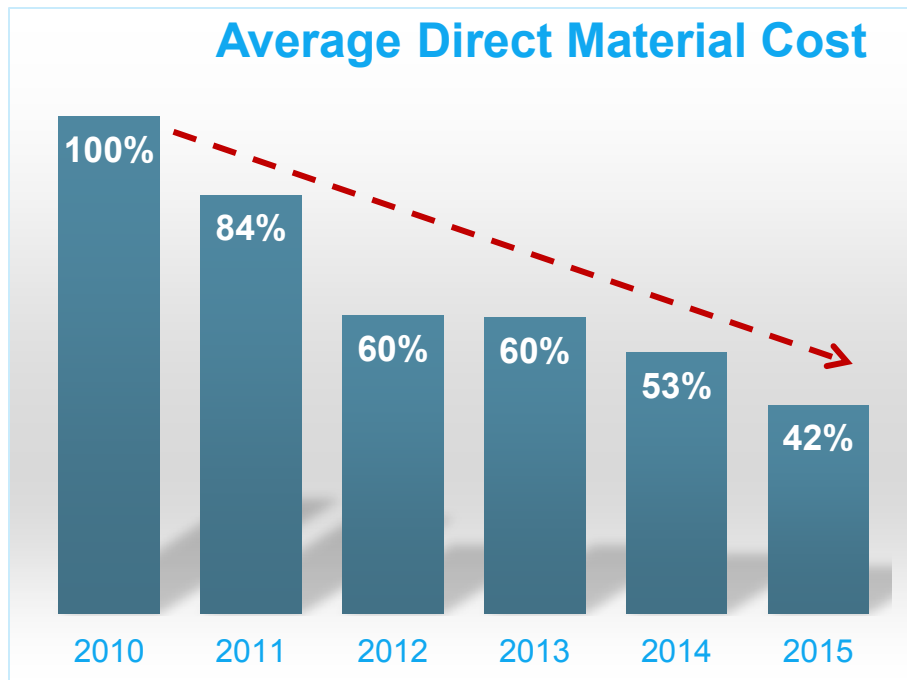
FM > LOGISTIC

Building an Effective Supply Chain

- Critical for Commercial Success
- New Technology=Supplier Development
- Component Supplier Selection
 - Agile to cope with rapid design evolution
 - Technical competency and bandwidth
 - Financially stable, Capable of rapid scaling
- Dual/multi-source challenges
 - Volume leverage
 - General lack of Form/Fit/Function compatibility
- Overcoming “Supplier Fatigue”
 - Engaging suppliers in building the market
 - Success energizes the supply chain



Cost Reduction is Key to Success



- Volume
 - Low volume/new design
 - Market penetration: 1000 units/year
 - Design maturity: 10,000 units, Multiyear sourcing
- Dual source strategies
 - Risk mitigation
 - Drives cost reduction and supplier innovation
- Integration
 - Functional & Vertical
- Tooling, Automation
- Industry leverage of key components
 - Sector expansion drives component pricing
 - Membranes, Batteries, etc

Hydrogen Infrastructure Drives Future Adoption

GENKEY®

Complete solution drives customer adoption

- Lower infrastructure cost = Lower H2 cost
 - Drives new market opportunities



- Small, low volume supply base
- Few integrators/solution providers
- Lead time and cost limited application



- Vertical integration
- Standardized the design
- Dual source requirement
- “Field Built” to Factory Assembly
- Volume leverage
- 3X lead time reduction



Leverage Cost Reduction to Open New Markets

Similar Fueling Technologies and Strategies

Captive



Timing: Today

Tethered



Timing: 1-5 Yrs

Local



Timing: 4-7 Yrs

Regional

Same as local but in a larger area.



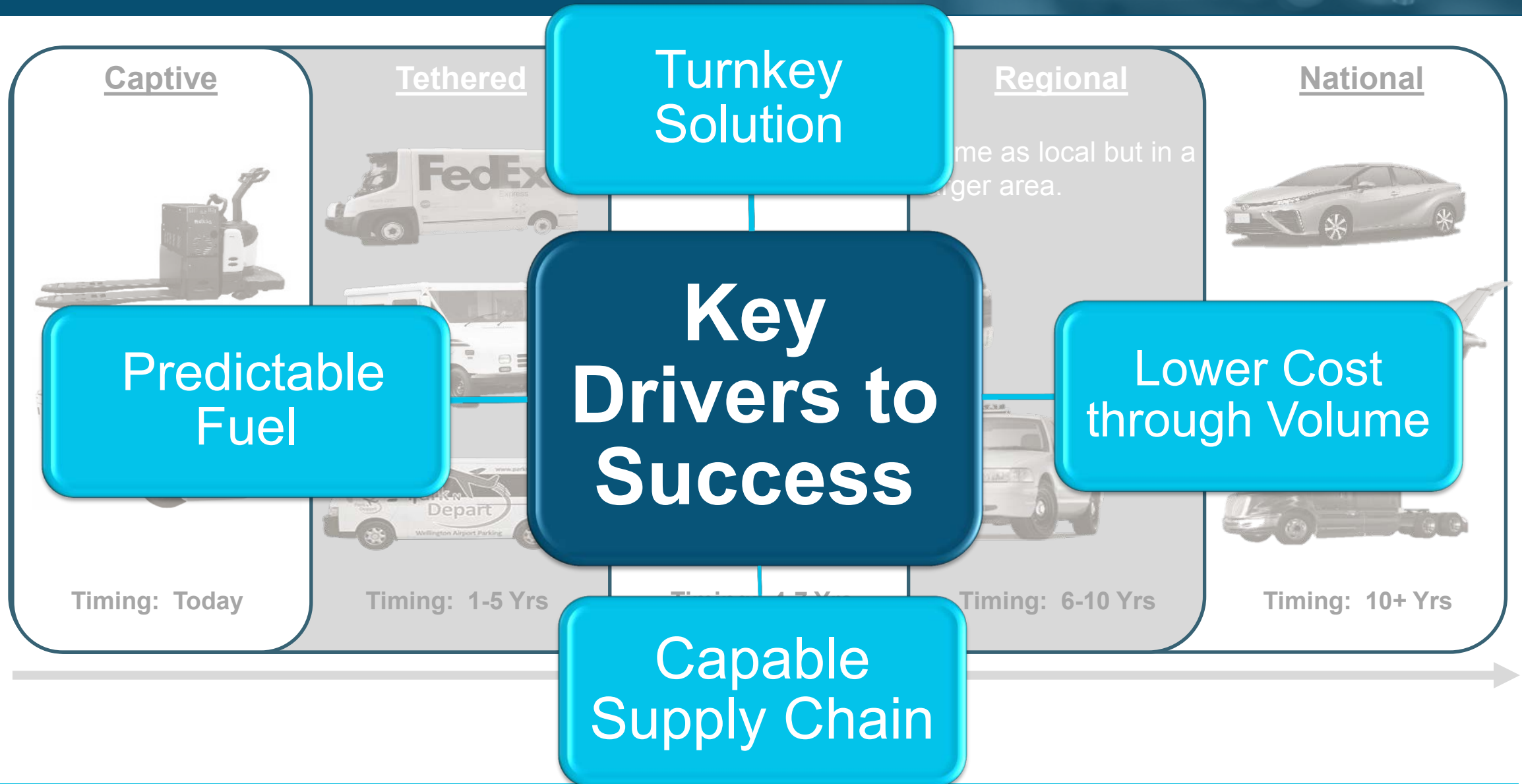
Timing: 6-10 Yrs

National



Timing: 10+ Yrs

Time





Corporate Headquarters

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West Coast

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plugpower.com

- Volume
 - Common parts leveragable at 1,000 units/year
 - Whole BOM leveragable at 1,000 units/year
 - Sourcing with multi-year contracts at 10,000 units/year
- Tooling
 - Injection molding
 - Cast aluminum
 - Automation
- Industry leverage of key components
 - Sector expansion drives commodity component pricing
 - E.g. lithium ion batteries, controls and communication, etc.

