

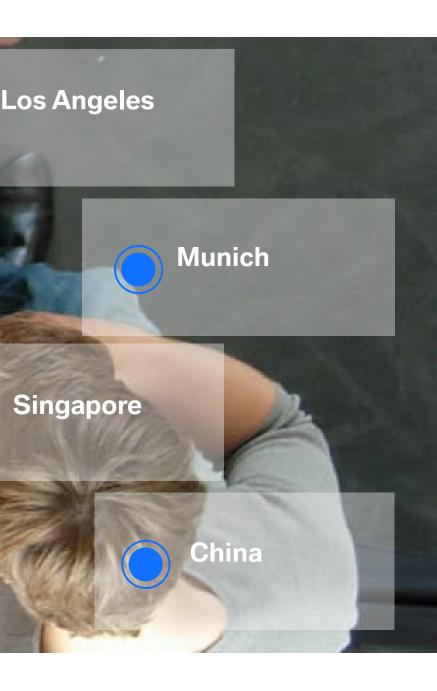
The Transportation - Land Use - Environment Connection UCLA Conference Center at Lake Arrowhead October 16-18, 2011



BMW Group DesignworksUSA Who are we?

1972 – Started by Chuck Pelly in a Malibu garage **1986 – First successful projects with BMW AG** 1995 – BMW AG purchases DesignworksUSA 2000 – DesignworksUSA opens European studio in Munich 2006 – DesignworksUSA launches Asian studio in Singapore 2010 - DesignworksUSA awarded #1 Most Innovative Design firm by Fast Company and #25 of 50 Most **Innovative Companies**

2011- DesignworksUSA Launches China studio in Shanghai

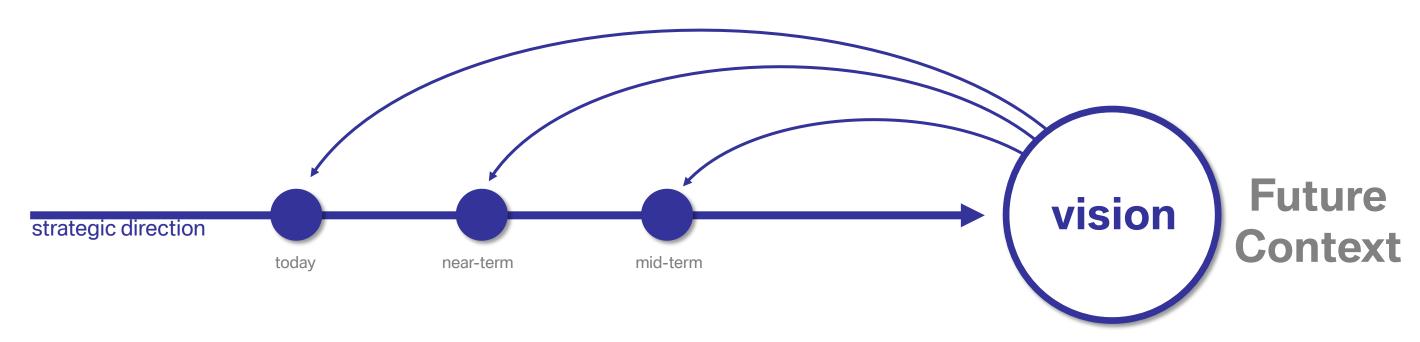


BMW Group DesignworksUSA A unique and innovative business model



Vision and Future Context

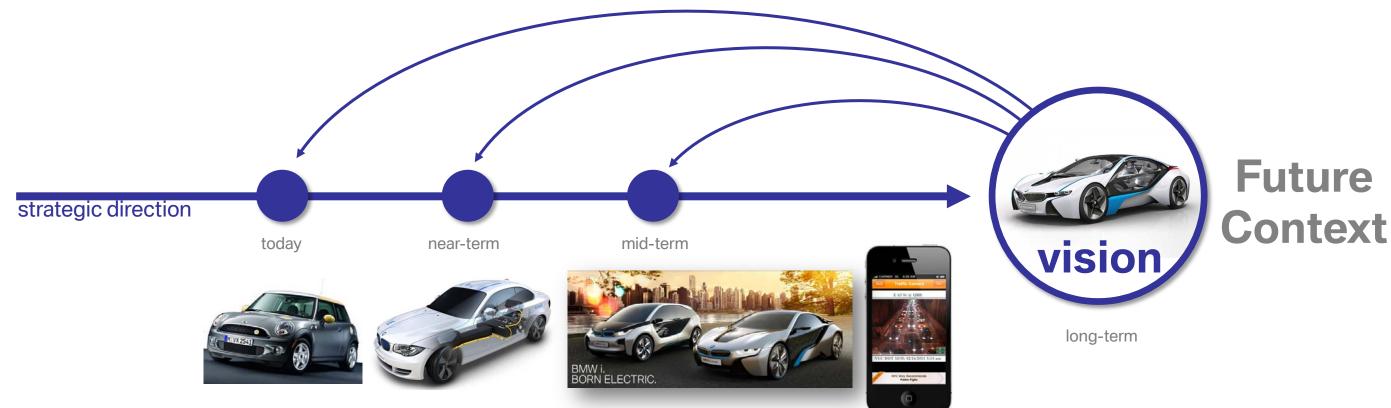
FIXSTERN (German for "Fixed Star")



long-term

Vision and Future Context

FIXSTERN (German for "Fixed Star")



Future Context Insight

MOBILITY CULTURE

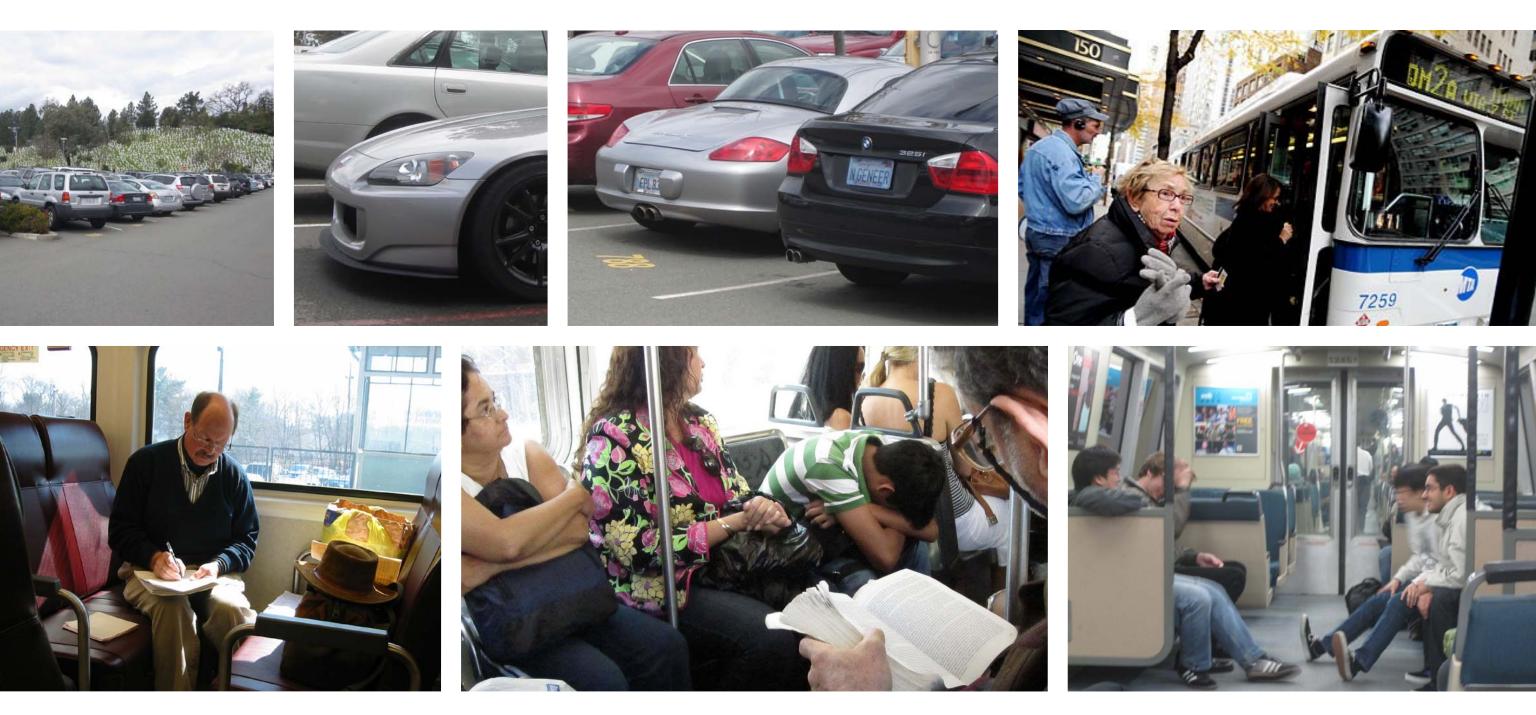
- Future of Premium Individual Mobility
- Shifting outlook from "mobility products" to "mobility products and services"
- Mass Urbanization
- Connectivity
- Shifting Customer Values
- Alt Fuel Infrastructure
- Triple Bottom Line Sustainability
- Material Costs
- Compliance

... to name a few



BMW Group DesignworksUSA We Immerse and Empathize

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BMW Group DesignworksUSA Translate Insights into a Broad Spectrum of Mobility Products



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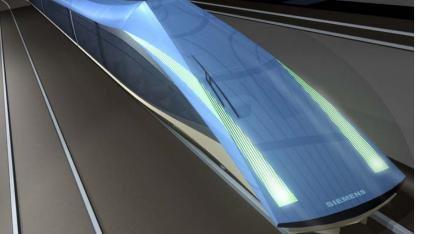
















BMW Group DesignworksUSA We Create Vision for Public Mobility







We Design for Quality Mode Transitions



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Today's Story is About a Vision of Green Parking

CRIOPY

AIRPORT PARKING

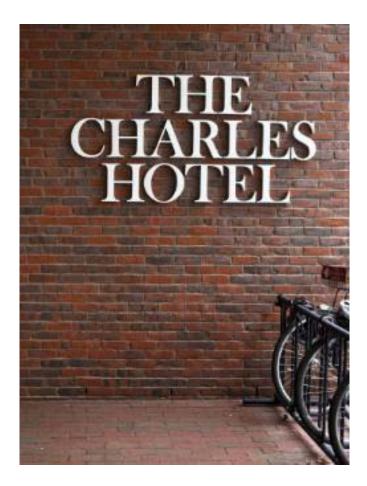
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the JuiceBar free EV charging service



BMW Group DesignworksUSA Chapter 1



The CEO of **ProPark America** wanted to go green *and* be profitable. So we collaborated to design his suite of innovations that work together to make EV charging free:

• JuiceBar EV charger

- LED lights to reduce energy cost (pays for EV charging)
- Nano-Park scanner (parking price varies by vehicle size)

Not LEED certified because parking garages are ineligible.

BMW Group DesignworksUSA Chapter 2



We supported ProPark to develop the **Green Parking Council** to challenge the industry to collaborate and create open sourced, sustainable best practices.

- Transparent
- Certification standards and awards
- Integrated with government incentives
- U.S.G.B.C.: "Parking garages may not pursue LEED certification. More specifically, buildings that dedicate more than 75% of floor area (including areas not covered, enclosed, or conditioned) to the parking and circulation of motor vehicles are ineligible for LEED."
- GPC is now the only body to offer sustainability certification to parking facilities

Chapter 3

CANOPY

AIRPORT PARKING

9%

We collaborated with Green Garage Associates to design a visionary platform for green parking.

- New construction
- GPC Certified Green Garage
- GPC Demonstrator Site
- LED lighting
- Wind, Solar, Geothermal energy
- Zero emission EV Charging service



freeuc

Celebrates and rewards EV drivers

• Best location in the garage

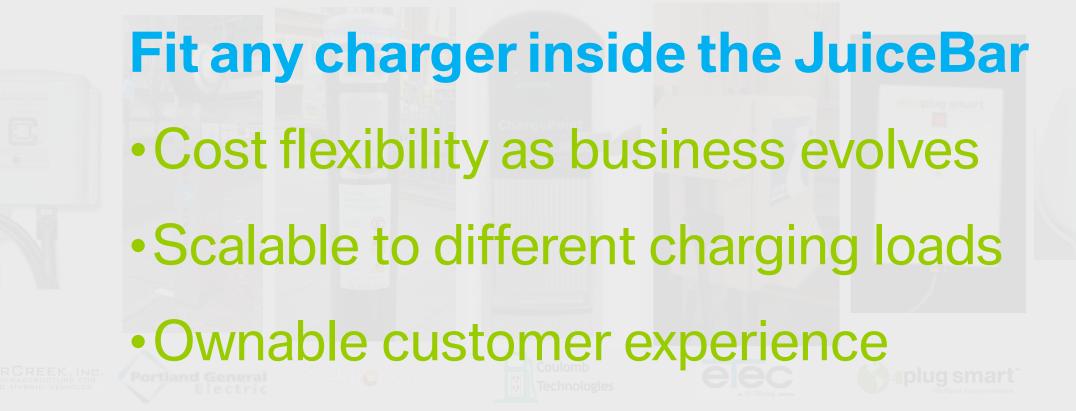
CAL PAREIRS C A D O P Y

- Attended...not self service
- Frontier Airlines Partnership





BMW Group DesignworksUSA Lesson 1: Agility through a Multi-supplier Strategy





JuiceBar Explained

Customer Interface:-

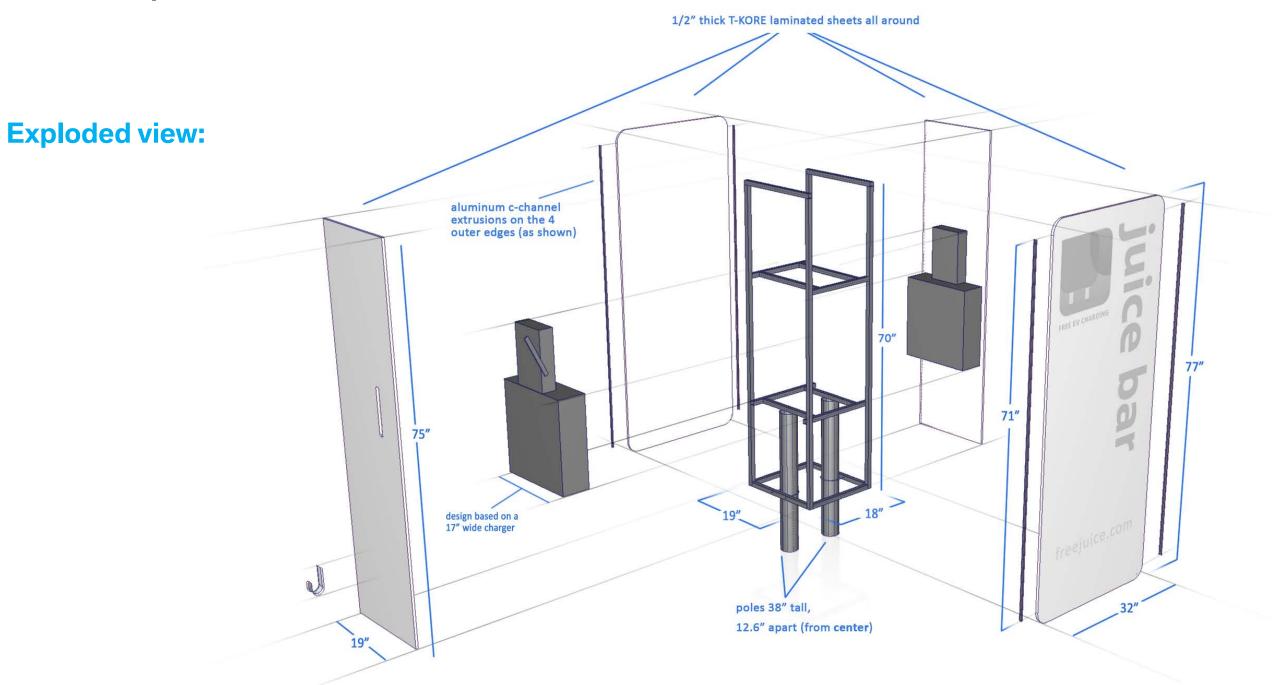
- Design language communicates value proposition: Friendly, Clean, Ethical.
- Panels on each side **"Super-wrap"** the multi-supplier brands within.
- "Sandwich" form factor offers GGC a controlled communication channel to attract self park customers to up-sell.



User Interface:

- Instructions
- Charger status lights
- Cord hanger

BMW Group DesignworksUSA JuiceBar Explained



Lesson 2: Sustainable Business Models by Managing Complexity

Integrate multiple cost levers so it pays for itself

- •Nano-Park
- LED lighting
- Gov. Incentives



Lesson 3: Self Governance through Coopetition



BMW Group DesignworksUSA How do we measure success?



Enabling Massive and Rapid *transformation* to Sustainable Mobility.

Transformation:

Rapid Speed: In the last 12 months ProPark America has deployed 70 JuiceBars.

Massive Scalability: the Green Parking Council partners operate or own the majority of US parking facilities.

Sustainable Mobility:

Environmental: Enabling electrification of cars

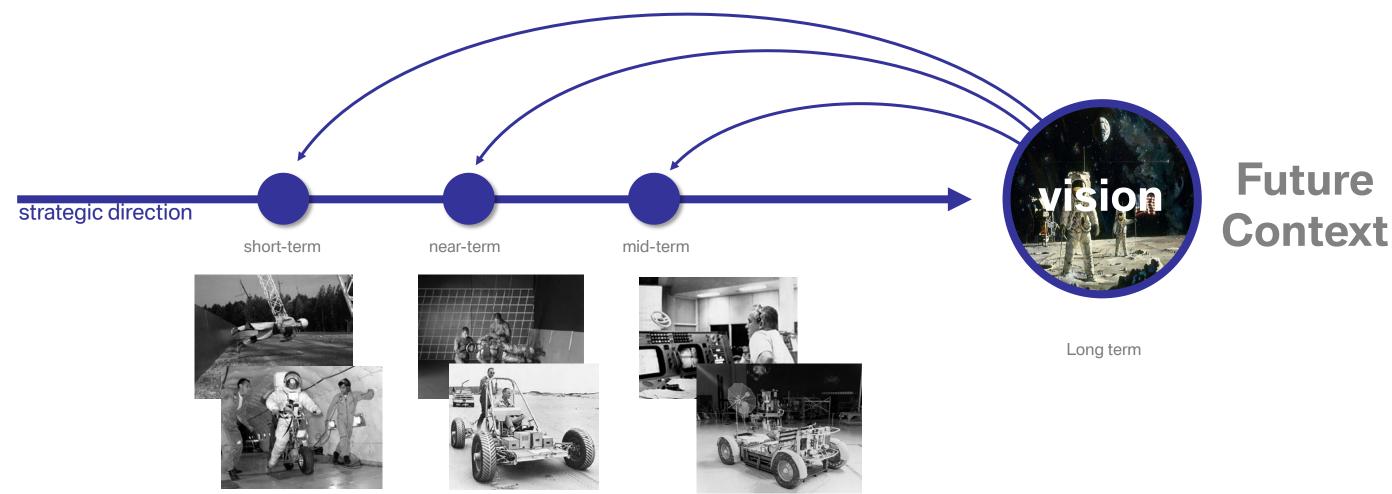
Financial ROI: "...occupancy rates and revenues exceeding budget expectations in June, July, August and September." - Greenscape Capital

Social: Free charging rewards sustainable behavior. On average, more than **2,000** paid customers per day used the [parking] facility throughout the summer months.

BMW Group DesignworksUSA Vision and Future Context

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Moon-Shot (inspired a creative culture of innovation)





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