



Personal Rapid Transit

Applicability to Sustainability

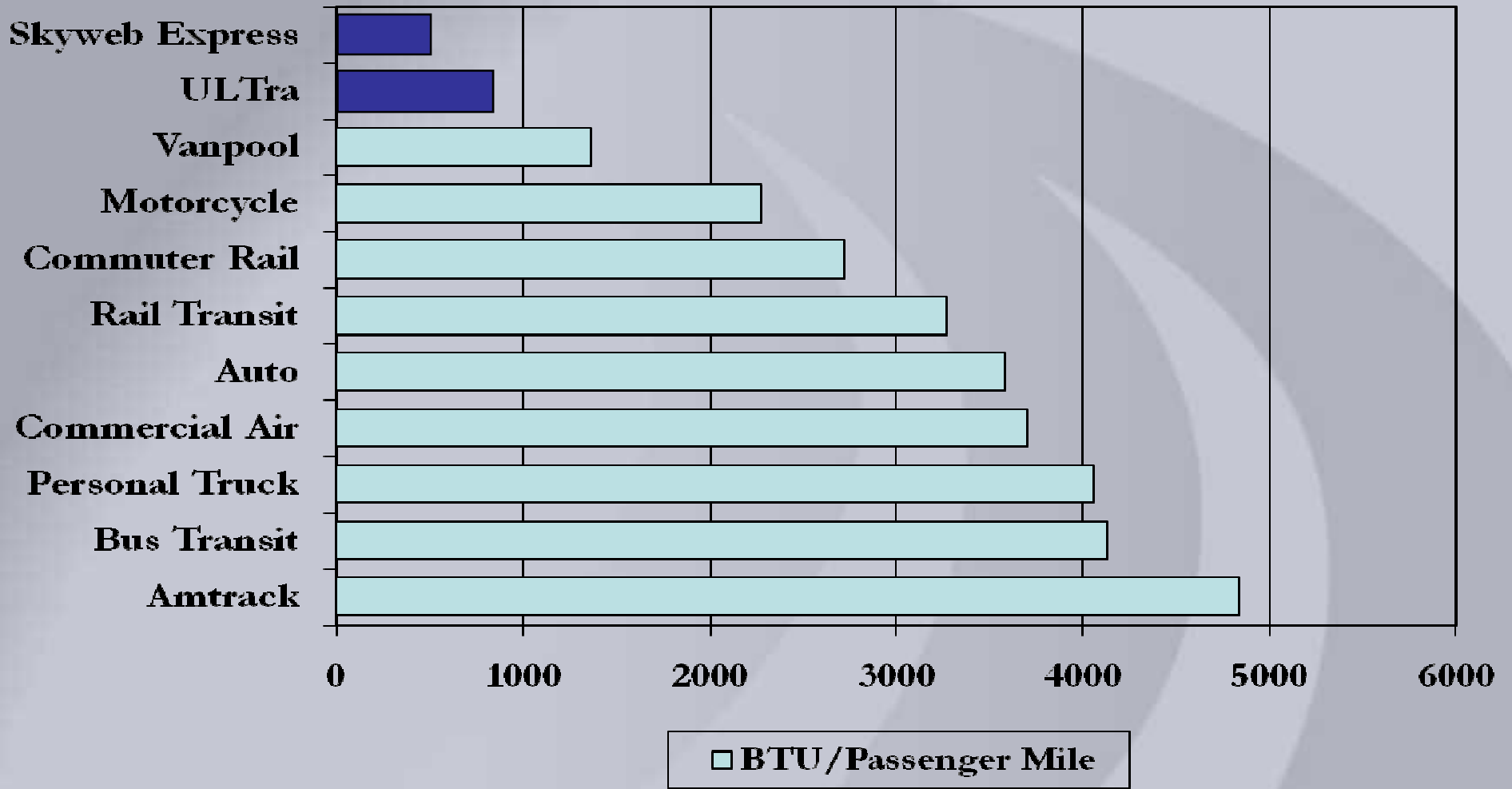
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A horizontal banner at the top of the slide containing several circular images: a bridge at sunset, a train, two men in suits talking, a road construction site, and a yellow excavator.

Sustainability Issues

- Energy Use
- Emissions
- Capital Costs/Resource Use
- Operating Costs
- Safety and Security
- Ridership

Energy Use



Source: USDOT, Skyweb Express, ULTra

Emissions

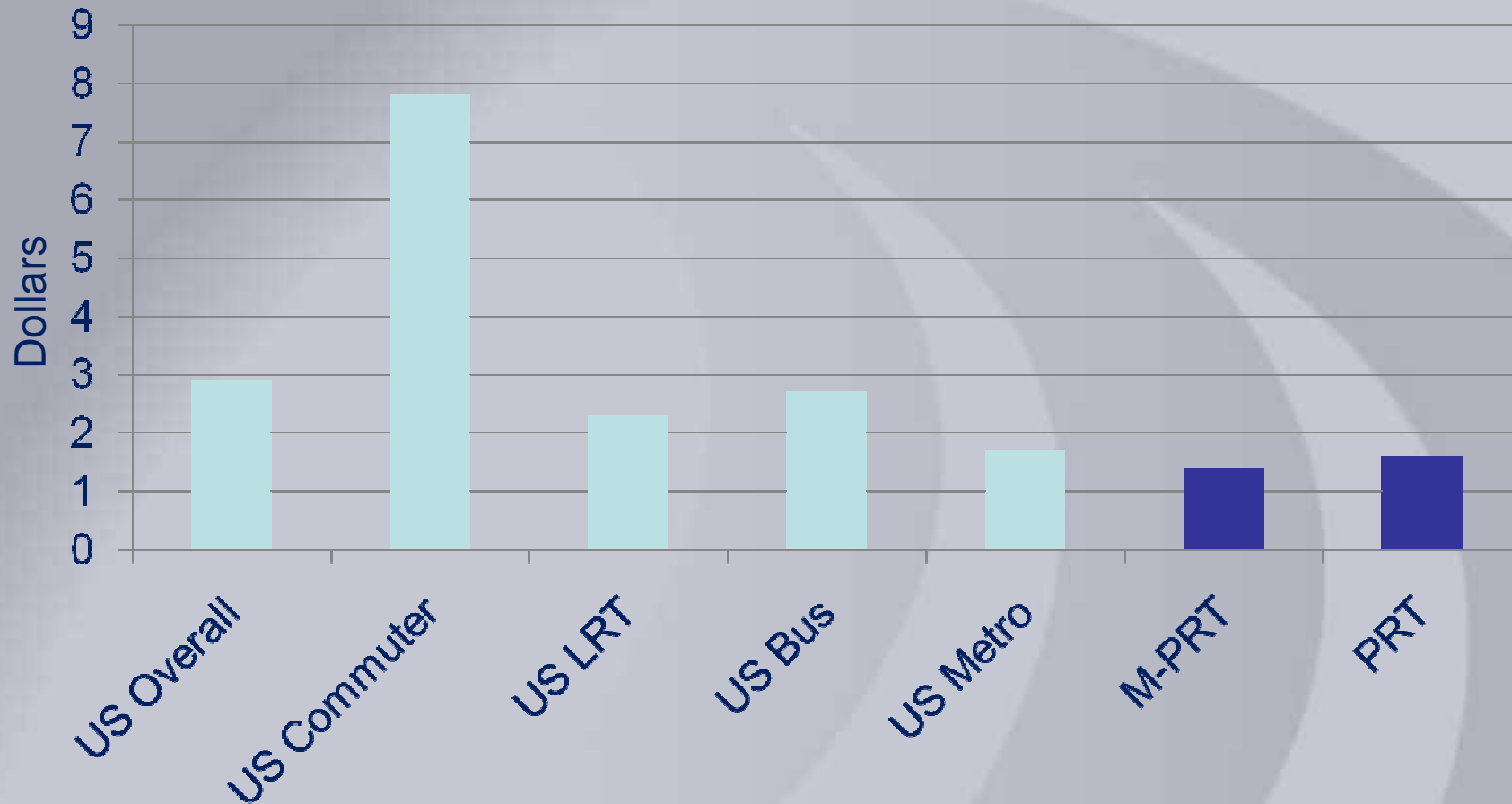
- No point-of-use emissions
- Power from the grid

Capital Cost per Mile (\$M)

Mode	Low	Average	High
Metro Rail	\$110	\$200	\$2,000
Light Rail	\$25	\$50-\$70	\$195
APM – Urban	\$30	\$100-\$120	\$145
APM - Airport	\$49	\$100-\$150	\$237
BRT Busway	\$7	\$14-\$25	\$50
BRT Tunnel	\$200	\$250	\$300
PRT One Way	\$15	\$20-\$35	\$50
PRT Two Way	\$25	\$30- \$50	\$75

Source: Booz Allen Hamilton

Operating Cost Per Passenger



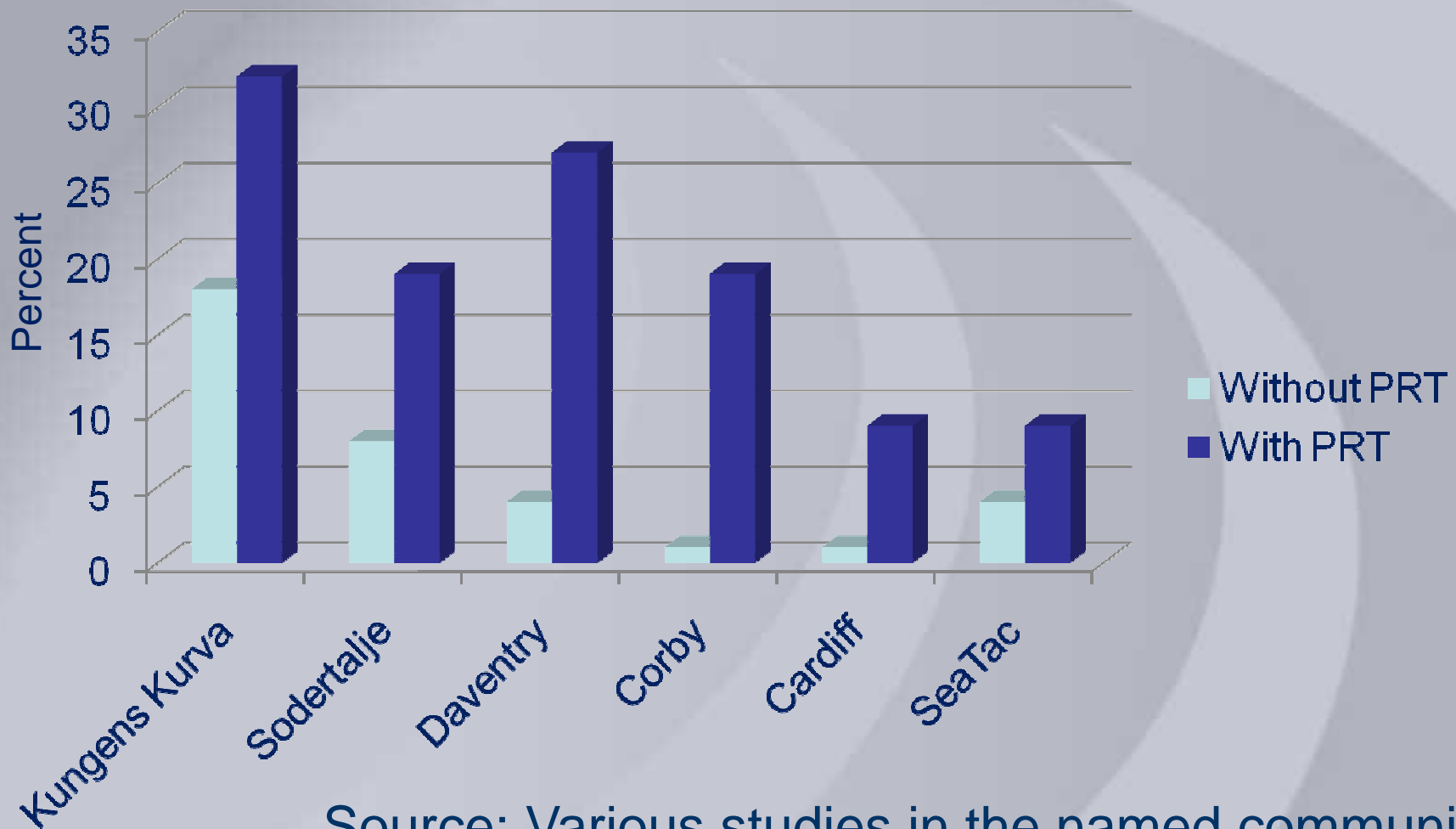
Source: Booz Allen Hamilton

A horizontal collage of five circular images: a bridge at sunset, two men in suits talking, a train, a highway interchange, and a construction site with a yellow excavator.

Safety and Security

- Lower maximum speeds
- One way traffic
- Separated from other traffic and pedestrians
- Crowding is avoided
- 140 million injury-free passenger miles at Morgantown

Transit Mode Share




Source: Various studies in the named communities

Reasons for High Mode Share

- High level of service
 - Little or no waiting (<1 minute at LHR)
 - Short trip times (non-stop)
 - Seated travel
 - Private
 - ADA compliant
 - Expected to match APM 99.7% availability
- Comparison with other modes



Comparison Study

- Compared PRT with
 - Conventional Transit (Light Rail, Bus)
 - Automobile
- Good 
- OK 
- Bad 

	Transit	Car	PRT
New technology	Green	Green	Yellow
Trip Time	Red	Yellow	Yellow
Cost per passenger	Yellow	Yellow	Green
On-demand 24/7	Red	Green	Green
Transfers	Red	Green	Green
Seated travel	Yellow	Green	Green
Private	Red	Green	Green
Non-stop	Red	Yellow	Green
Vehicle waits for passenger	Red	Green	Green

More like a car than a bus



	Transit	Car	PRT
ADA compliant	Yellow	Red	Green
Safe and secure	Yellow	Yellow	Green
User friendly	Yellow	Yellow	Green
Snow & ice	Yellow	Red	Yellow
Minimal walking	Red	Green	Yellow
Environmentally friendly	Yellow	Red	Green
Energy efficient	Yellow	Yellow	Green
Visually appealing	Yellow	Yellow	Yellow
Operate inside buildings	Red	Red	Yellow

First class transit

A collage of four circular images: a bridge at sunset, two men in suits talking, a train, and a yellow excavator.

Conclusion

- PRT promises to be significantly more sustainable than most other modes of transportation



Improving Transportation Through
Innovative Engineering



Contact Information

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