

A large, multi-story hotel building with a prominent sign in the foreground. The building is light-colored with many windows. The sign in the foreground is red and white, and appears to be for a Marriott hotel. The text is overlaid on the image.

“A significant loss of [franchise] agreements due to premature terminations could hurt our financial performance and ability to grow our business.” (Marriott International Inc., 2012)

Strategic Program

Revolving Green Fund

Meet Marriott
Goals

Provide access
to capital

Competitive
Brand
advantage

Green many
hotels

Best Practice Guide

Educate
franchisees

No cost
measures

Green some
hotels

Achieve ECMs

Meet PIP requirements

Improve efficiency in one
hotel

“Great companies are built by people who never stop thinking of ways to improve the business.”

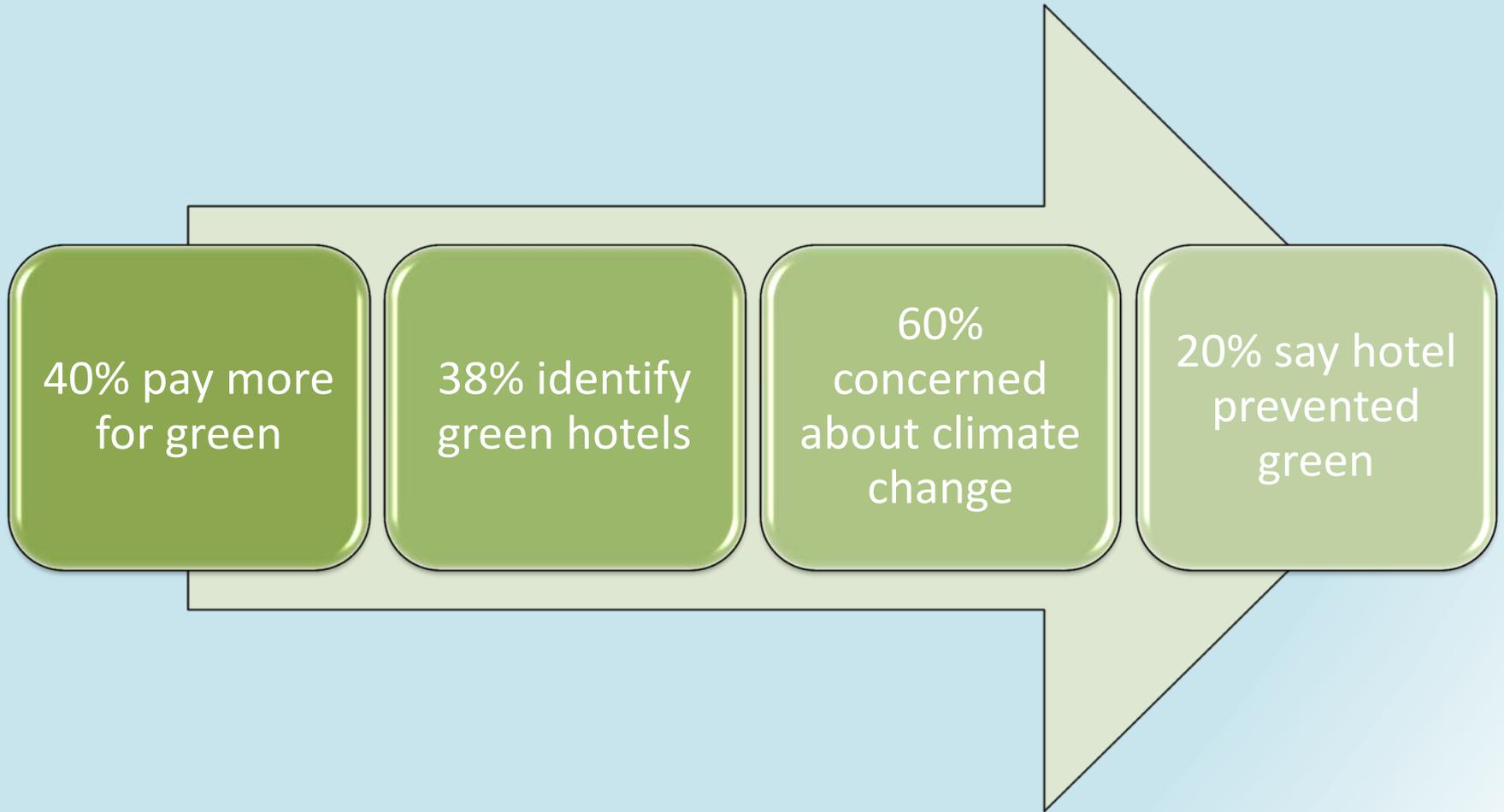
– J.W. Marriott

Scenario 1	Cash Flow (Jan.)	Expense	Annual Savings	Incentives	Projects
Year 1	\$ -	\$ -	\$ 72,000	\$ 23,000	ERP & Behavior
Year 2	\$ 95,000	\$ 50,000	\$ 95,000	\$ 11,000	Lights, kitchen
Year 3	\$ 151,000	\$ 60,000	\$ 115,000	\$ -	Motors & Var. Volume
Year 4	\$ 206,000	\$ 160,000	\$ 160,000	\$ 7,060	Thermostats
Year 5	\$ 213,060	\$ 188,000	\$ 182,000	\$ 10,260	Chiller

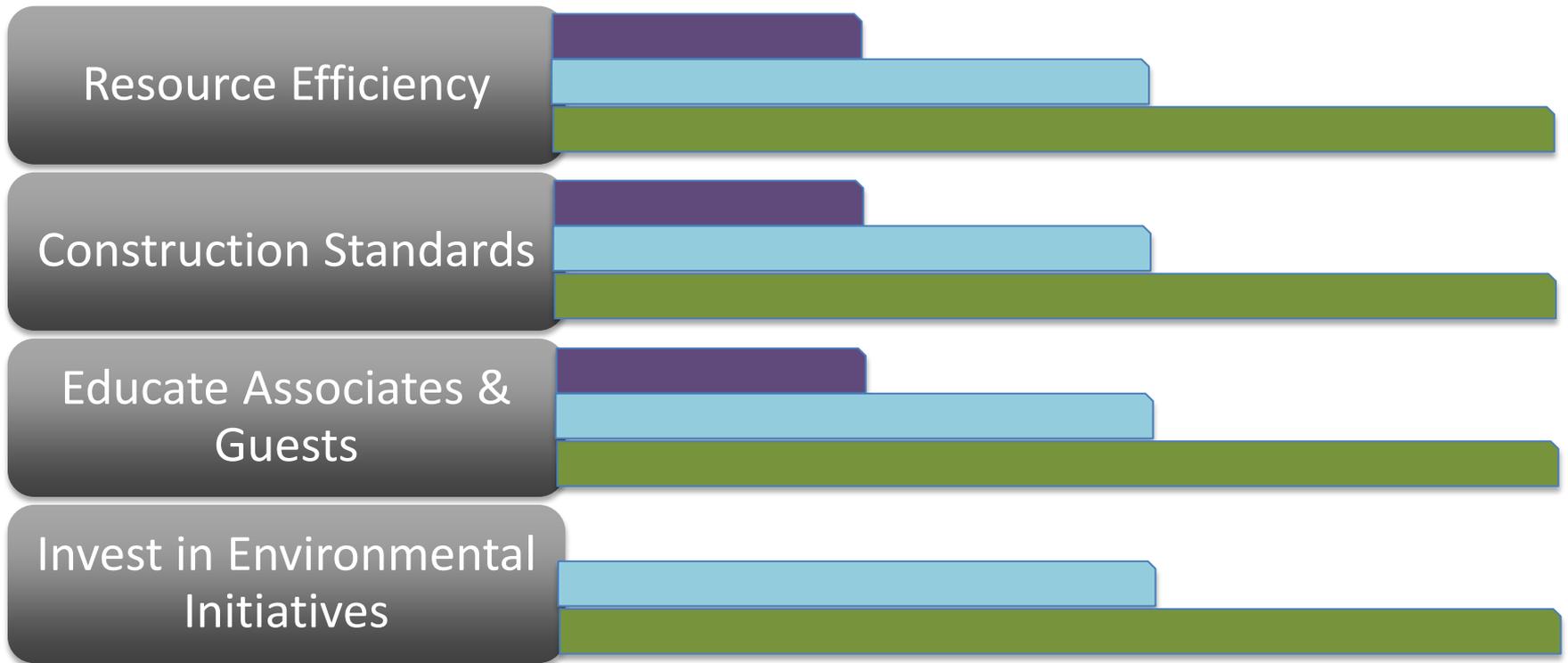
PIP Compliance Measures

- Cover pools and hot tubs after hours
- Top floors, corners, and west (summer) or north (winter) facing rooms can be the most energy-intensive, book these last
- Stagger start-up times for meal preparation to reduce peak demand

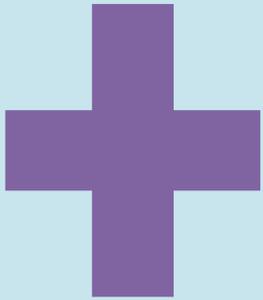
Green Hotels are In-Demand



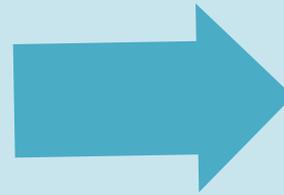
“As demands of customers change, successful companies adapt.” (J.W. Marriott)



Morris
County



Marriott



Franchisees

“The availability of funds for new investments and improvement of existing hotels... depends in large measure on capital markets and liquidity factors, over which we can exert little control.”
(Marriott International Inc, 2012)

Marriott's Revolving Green Fund

Institution	Established	Fund Size	Projects	ROI
Western Michigan University	1980	\$ 365,000	101	47%
Harvard University	2001	\$ 12,000,000	185	30%
University of Utah	2007	\$ 220,000	47	30%
Iowa State University	2008	\$ 3,000,000	11	29%
Oberlin College	2008	\$ 40,000	9	31%
Cal-Tech	2009	\$ 8,000,000	13	33%
University of Denver	2009	\$ 1,900,000	19	63%

*“We encounter strong competition both as a lodging operator and as a franchisor.”
(Marriott, 2012)*

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“Success is Never Final.” (J.W. Marriott)



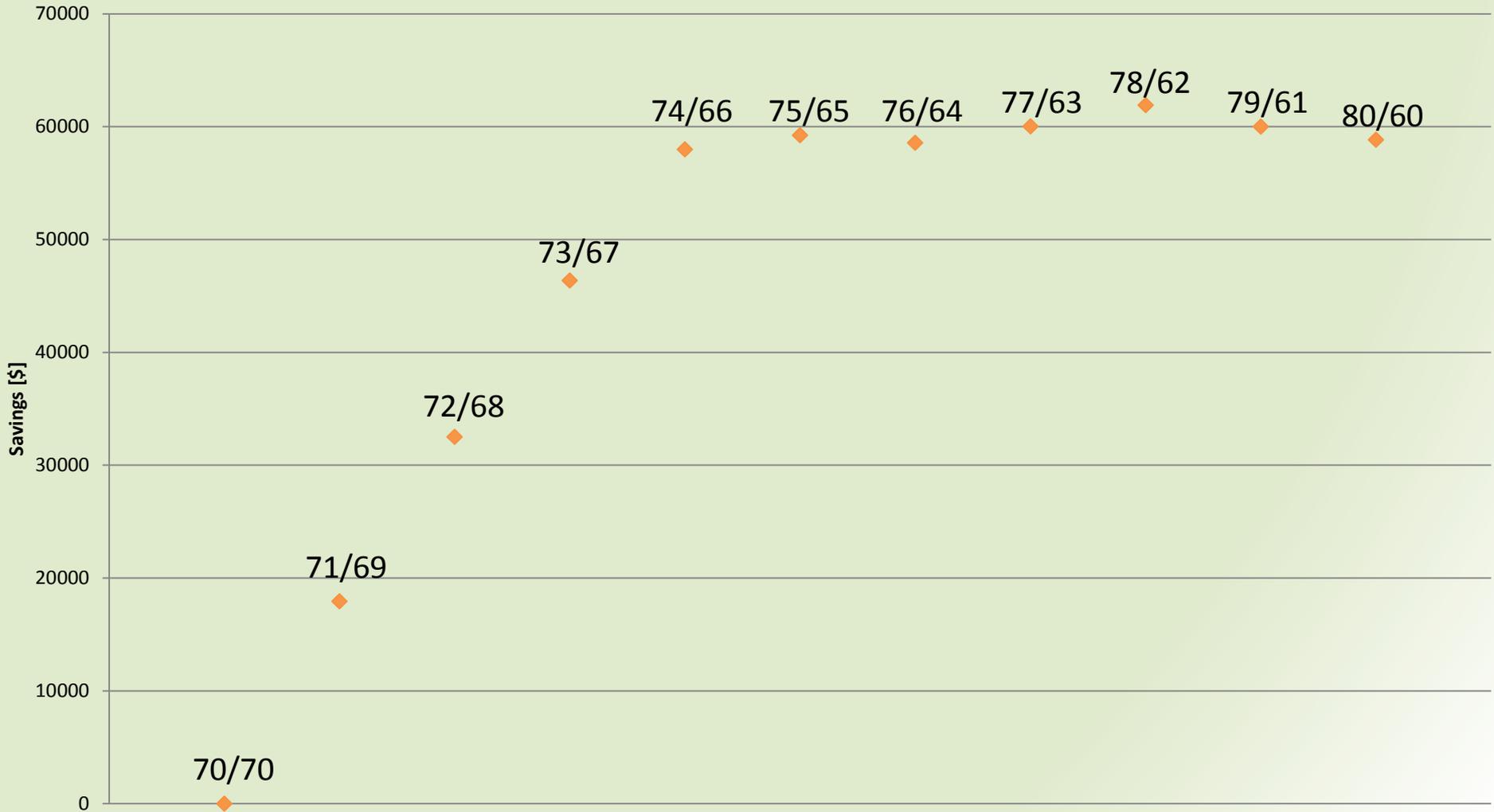


Questions?

Thank You, Team Satori

Aux: Simulation Results

Energy Savings vs Setpoint



Aux: Hotel Simulation

- DOE Commercial Reference Building (~120k square feet, 6 stories)
- DOE Energy Plus v5.0
- Typical Meteorological Year (3) for Newark, NJ
- ASHRAE zone 5A

Aux: Green Fund Investment

Scenario 1	Year 0	Year 5	IRR
Green Fund	\$ (420,000)		
Accumulated Savings (Repayment)		\$ 550,000	9.7%

Scenario 2	Year 0	Year 4	IRR
Green Fund	\$ (270,000)		
Accumulated Savings (Repayment)		\$ 392,000	17%

Aux: Weber's Law

- The minimum amount stimulus intensity must be changed in order to produce a noticeable variation in sensory experience.

$$\frac{\Delta T}{T} = k$$