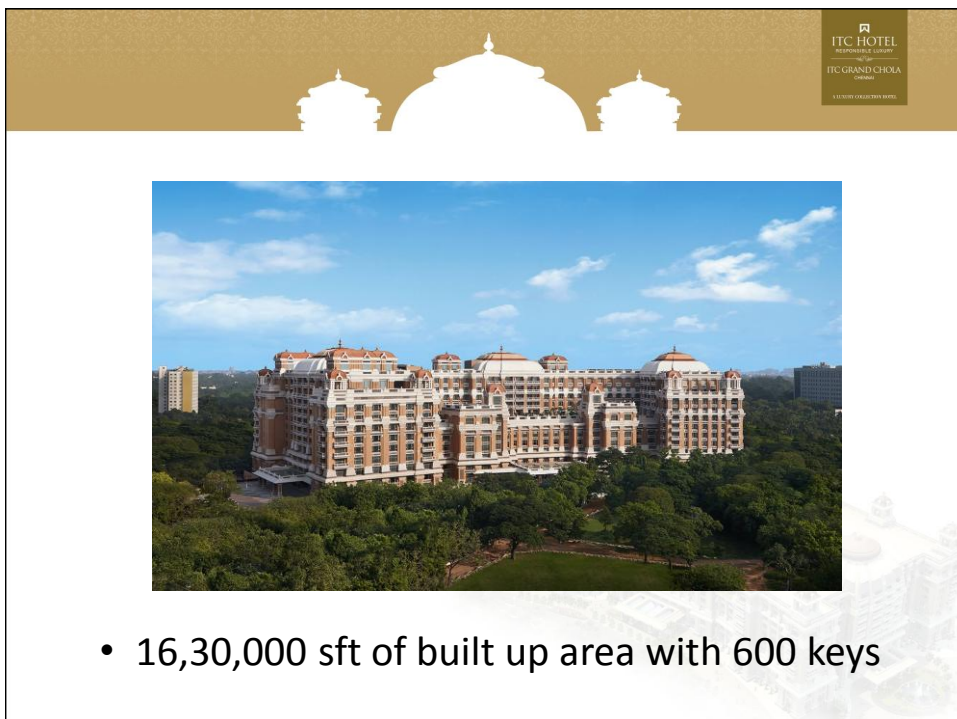


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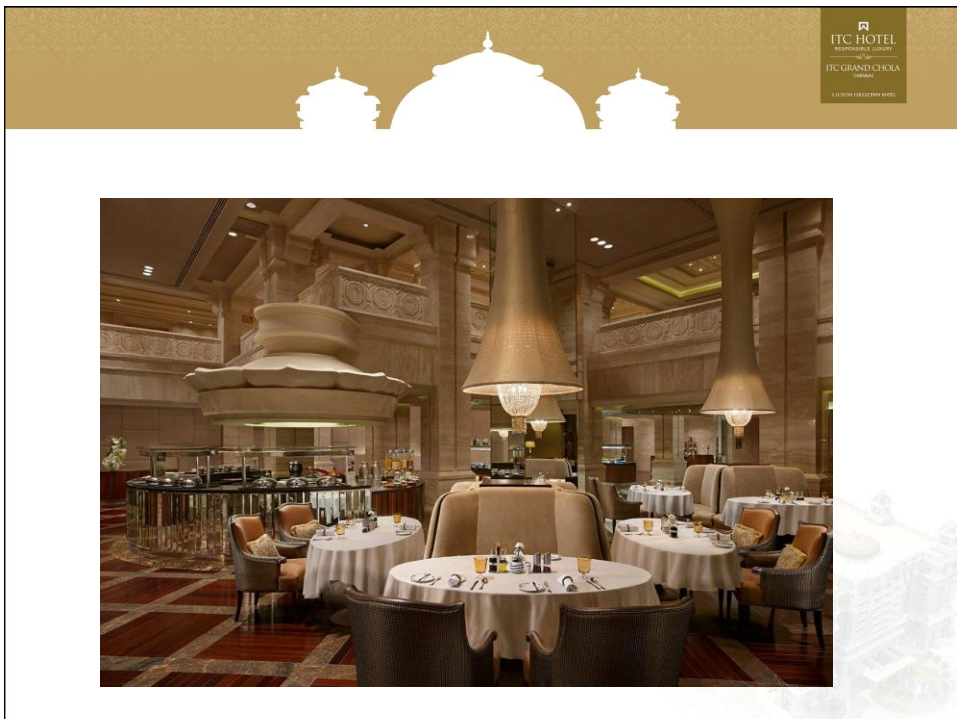


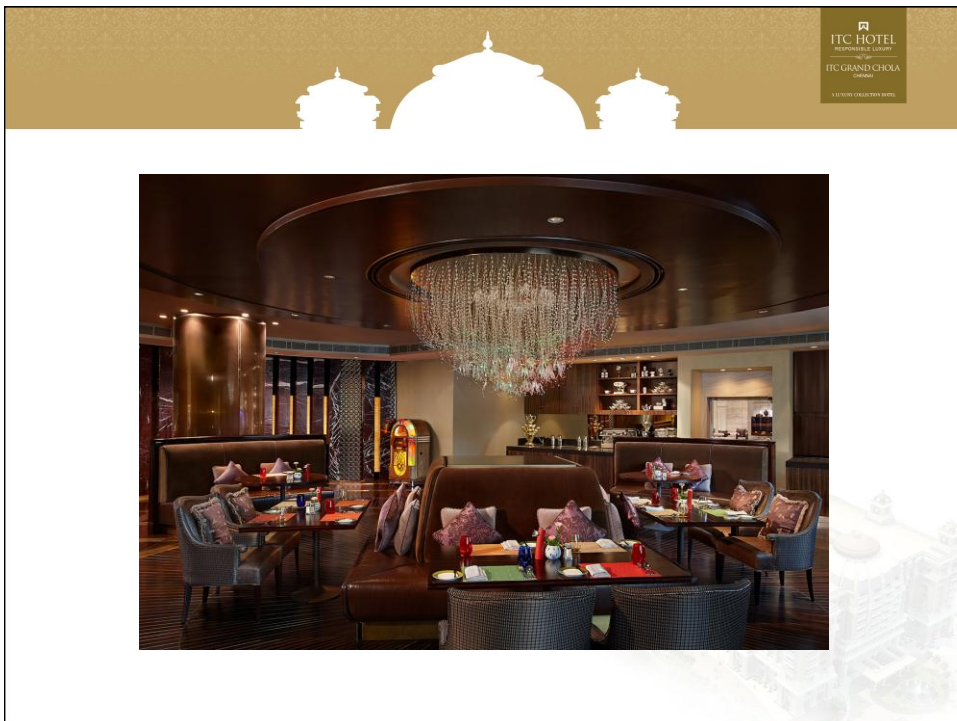
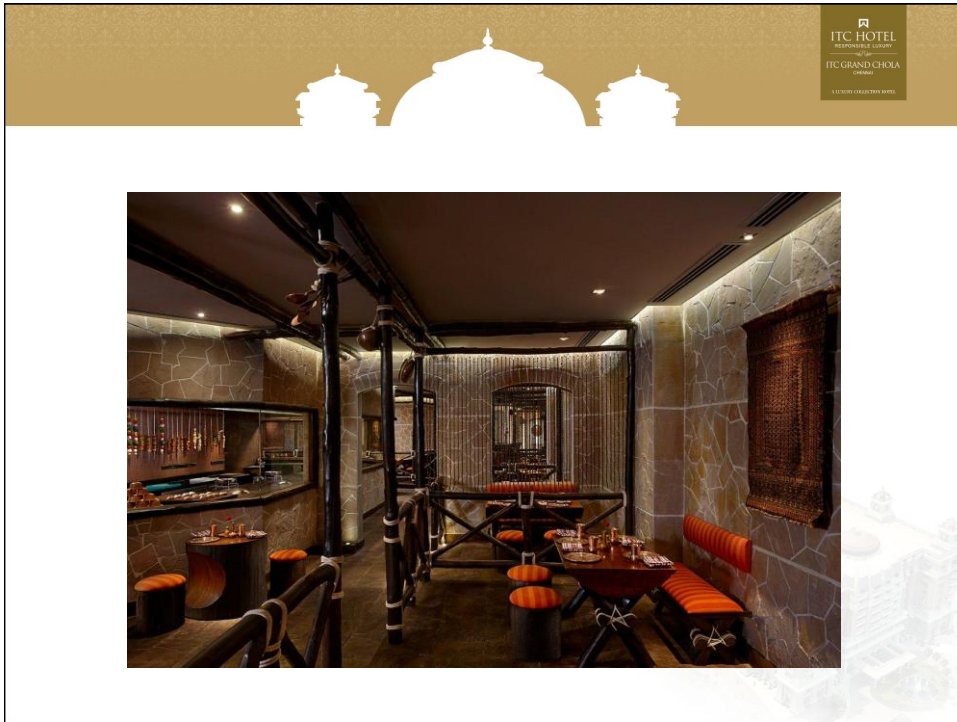
- 16,30,000 sft of built up area with 600 keys

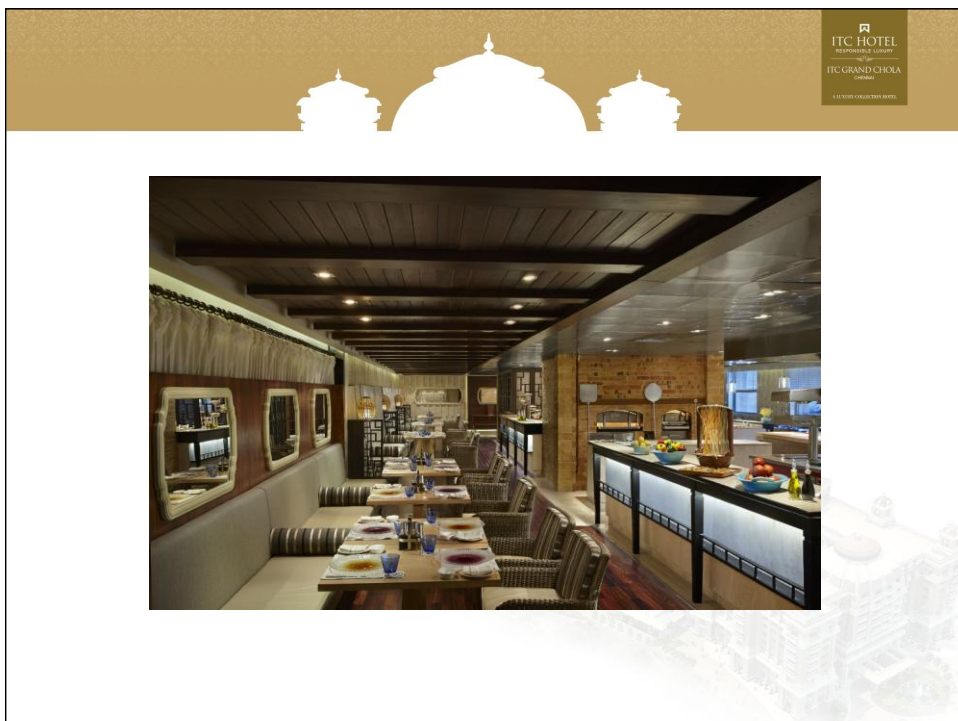
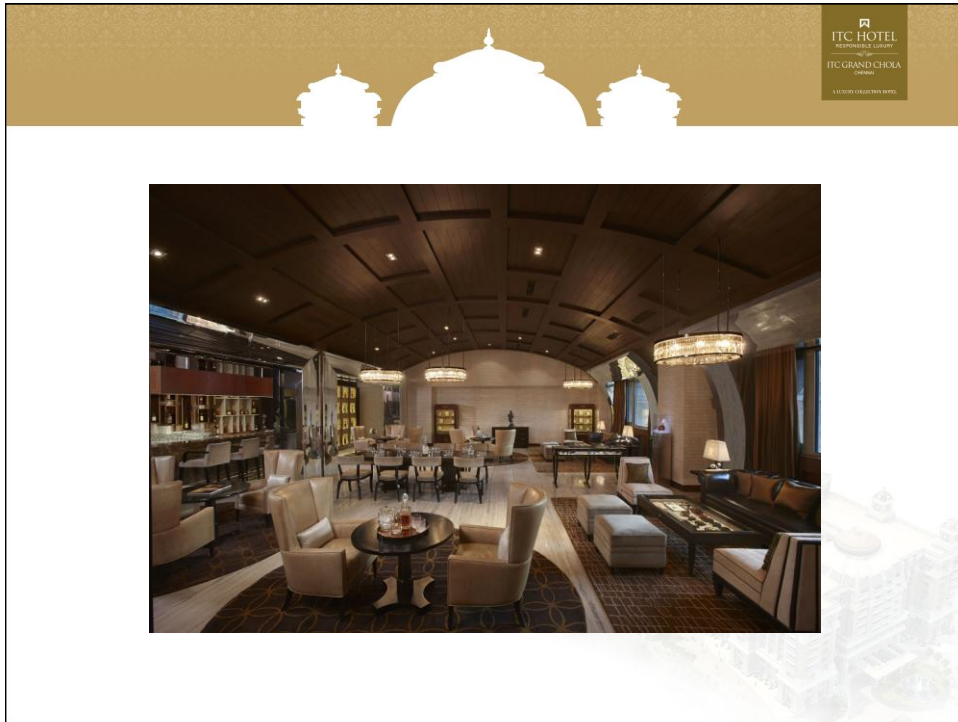


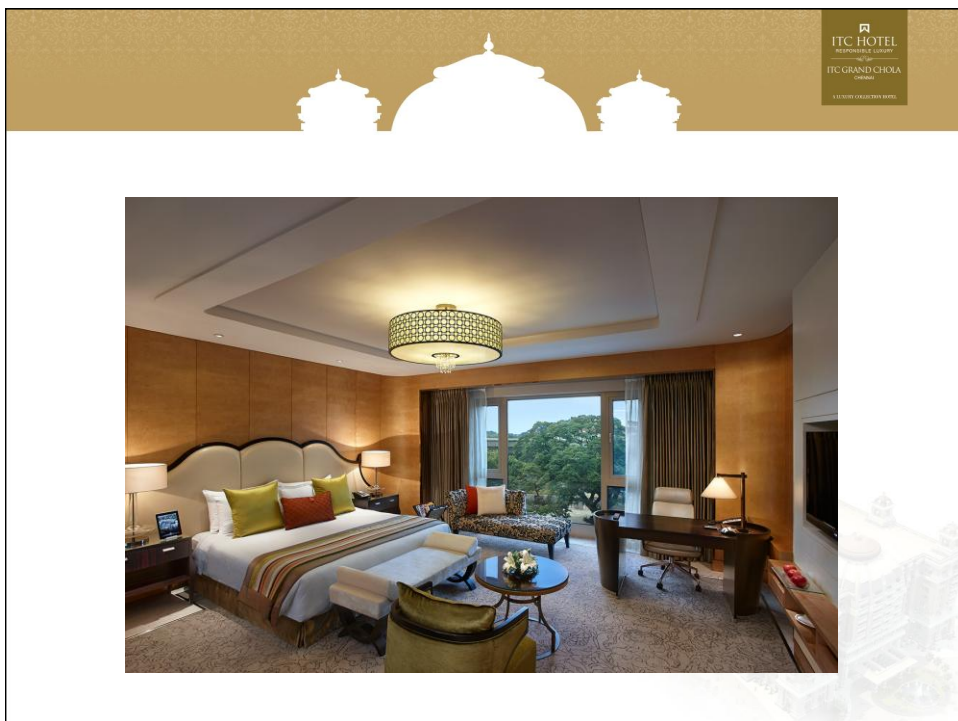
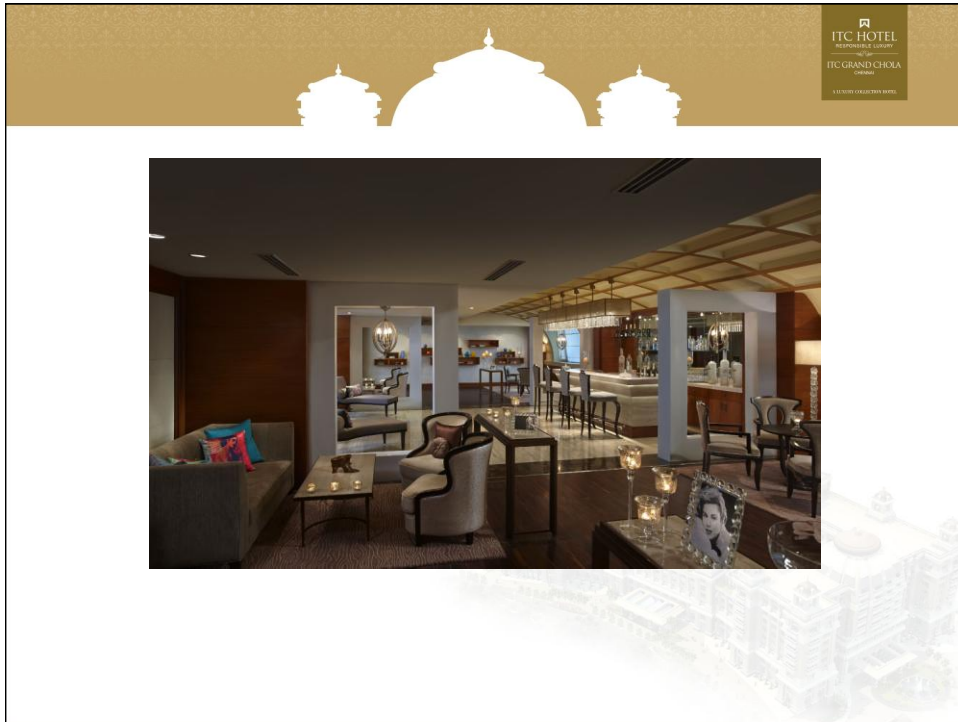


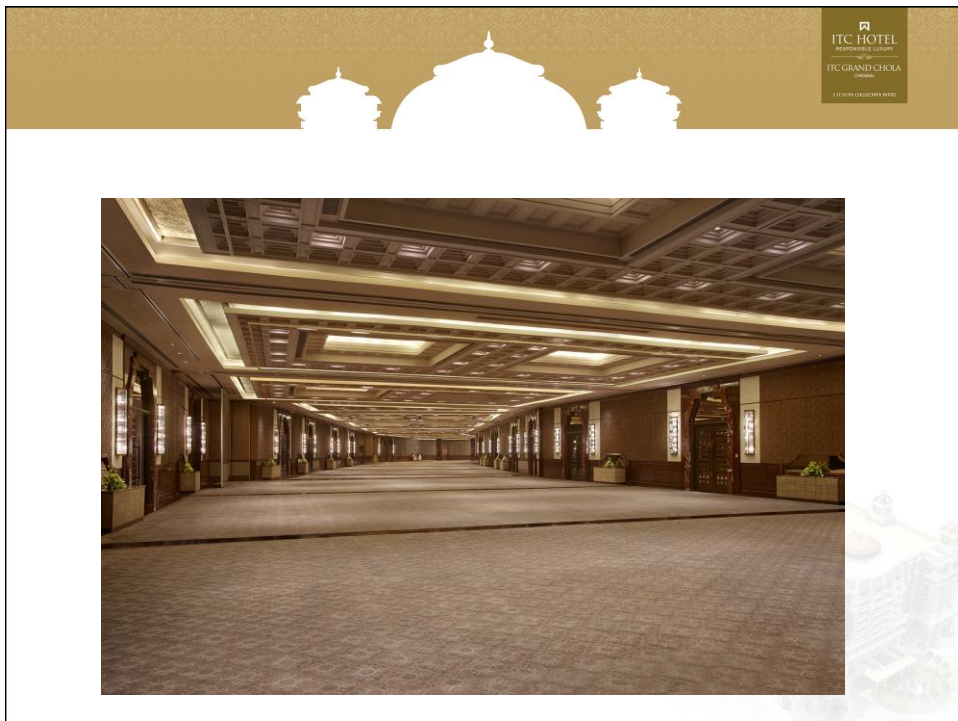
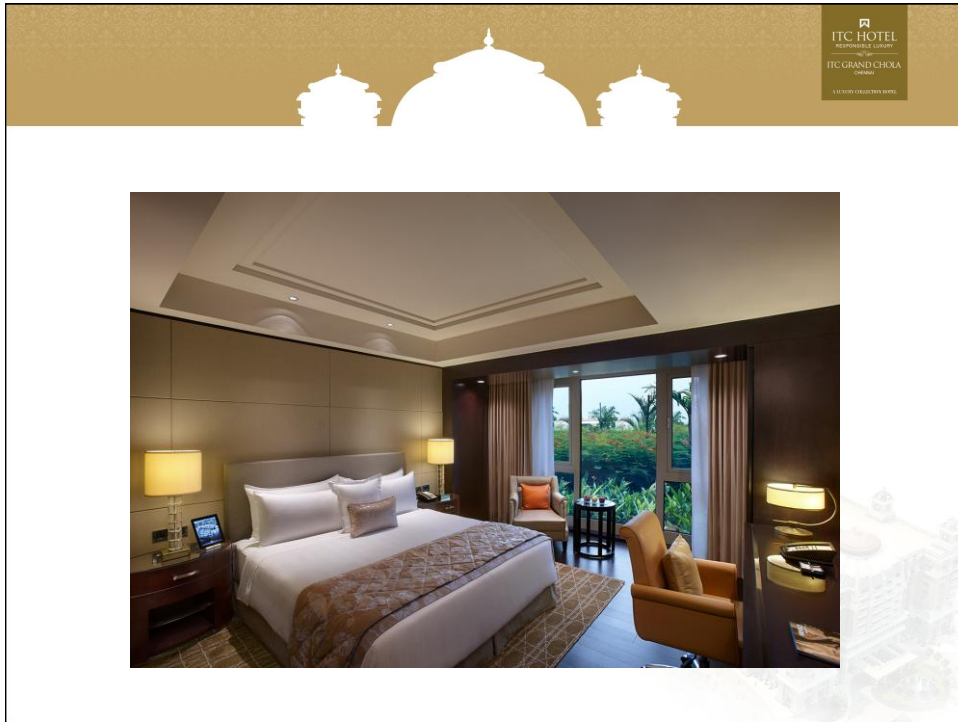
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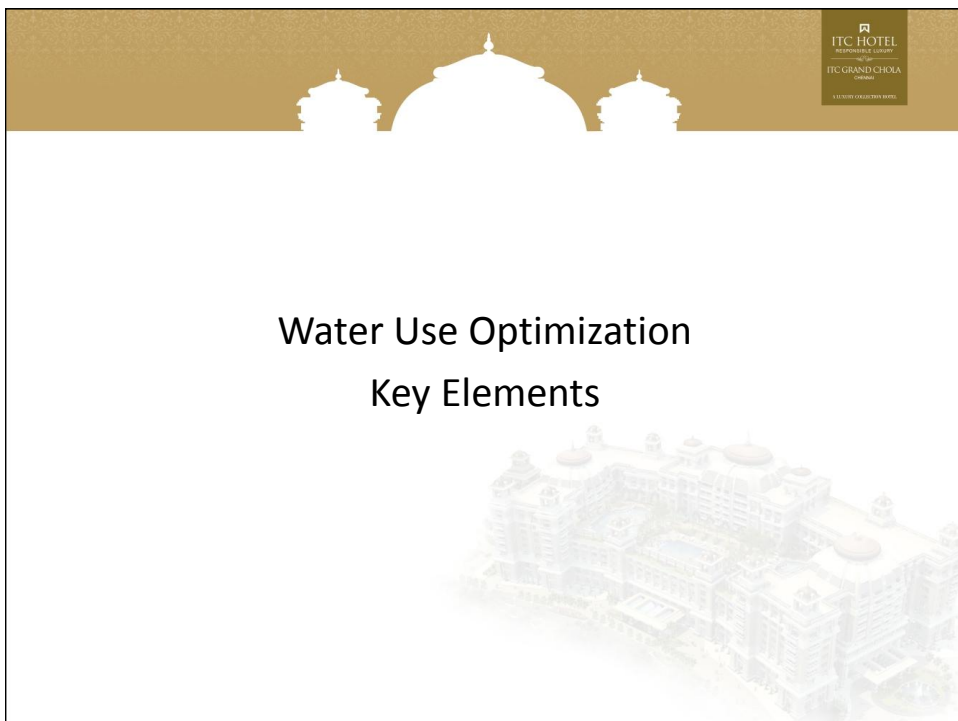












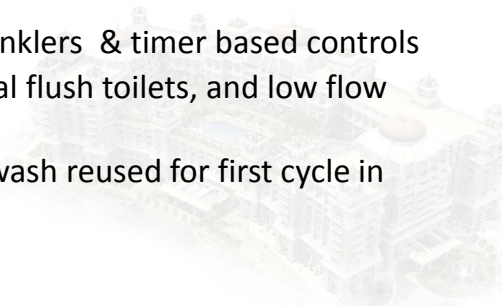




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ITC GRAND CHOLA
CHENNAI
SUSTAINABLE COLLECTION 2012


Potable Water Use Reduction more than 40% on the base case.

- ⦿ Native & naturalized plant species
- ⦿ Shading of ground covers by trees to reduce evapo-transpiration
- ⦿ Drip irrigation, micro-sprinklers & timer based controls
- ⦿ 3/6 Litre (0.8/1.6 gpf) Dual flush toilets, and low flow faucets
- ⦿ Water from last cycle of wash reused for first cycle in laundry



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SUSTAINABLE COLLECTION 2012


- ⦿ On site sewage treatment plant (SBR of 675 KLD) to tertiary standards
- ⦿ STP Treated water used for flushing, irrigation and air conditioning make up
- ⦿ Multiple zone hydro pneumatic water distribution system



Energy Use Optimization Key Elements


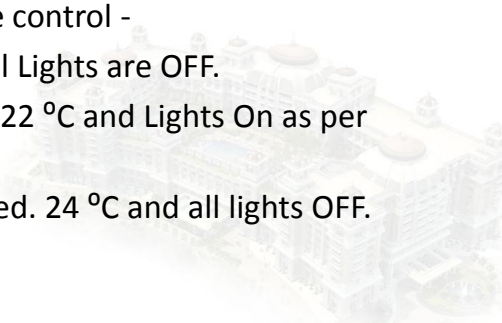
Energy Use Optimization

- Chiller efficiency of 0.55 IKW/ton (COP 6.3) under ARI conditions (ASHRAE baseline 0.57 IKW/ton, COP 6.1)
- Variable speed cooling towers, with 76 gpm/HP. And Approach Temp: 7°F (ASHRAE 38 gpm/HP, approach 10°F)
- Central AC plant with Hartman loop (Intelligent All variable system)



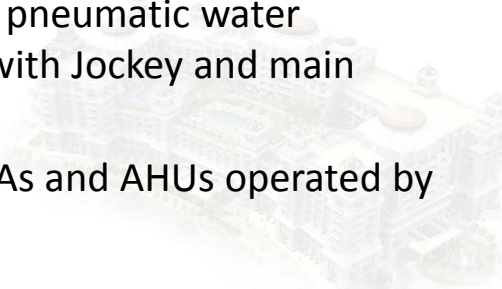
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- Ipad based room control system - Operates room lighting, sets moods, manages air conditioning, operates television, surf hotel information, restaurant menus and much more.
- Guest Room Temperature control -
 - Unrented 26 °C and all Lights are OFF.
 - Rented and Occupied 22 °C and Lights On as per Guest requirements.
 - Rented and Unoccupied. 24 °C and all lights OFF.



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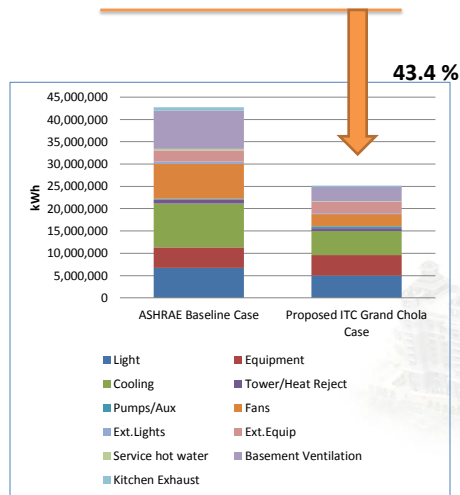
- Oxygen trimming in boilers - Continuous monitoring of the flue gases and adjusting the air and fuel mixture for optimized fuel efficiency
- Multiple zone Hydro pneumatic water distribution system with Jockey and main pump concepts
- CO₂ Sensor based TFAs and AHUs operated by IBMS



Renewable Energy Integration –

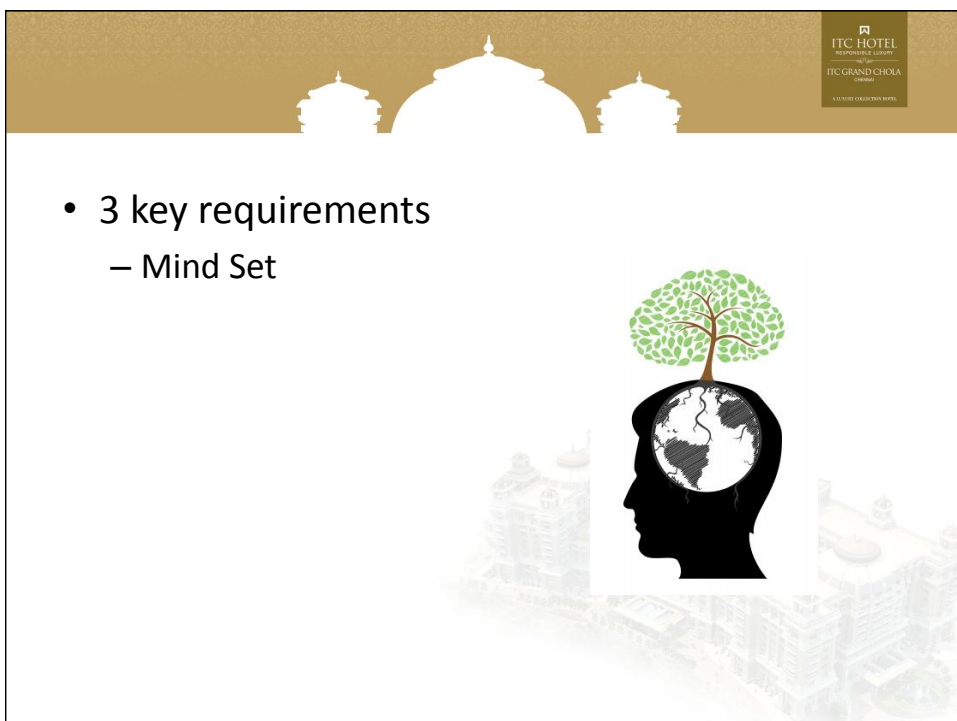
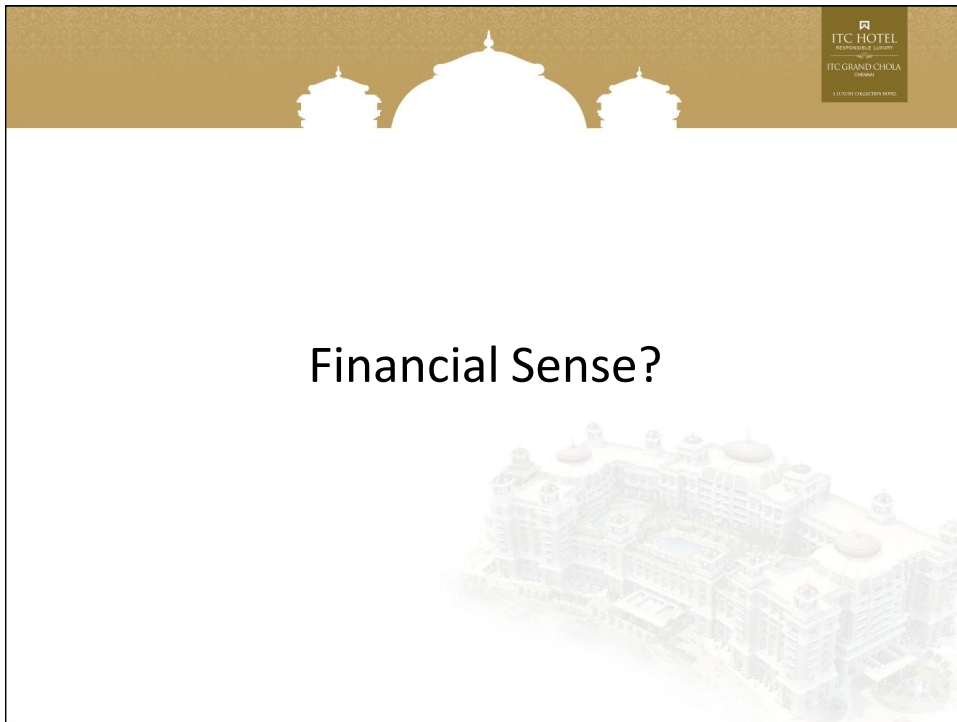
- 100% Green power equivalent to 27,900,000 kWh by means of 12.6 MW wind turbines installed at Kundadam, Near Kovai.
- 20% Hot water through Solar collectors

ITC Grand Chola



43.4% annual energy savings compared with the ASHRAE 90.1.2004 Baseline

**Annual Energy Use Comparison -
ASHRAE Baseline v/s
Proposed ITC Grand Chola Design**




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- 3 key requirements
 - Funds

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- 3 key requirements
 - Legwork





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- 3 key requirements
 - Mind Set
 - Funds
 - Legwork


Clients play a major role

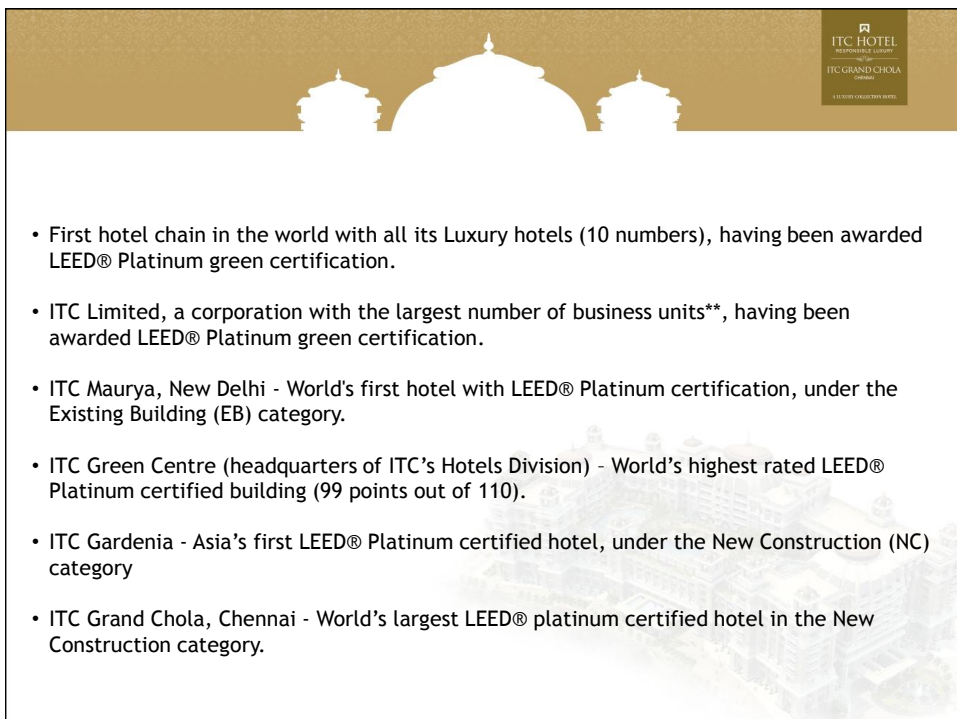
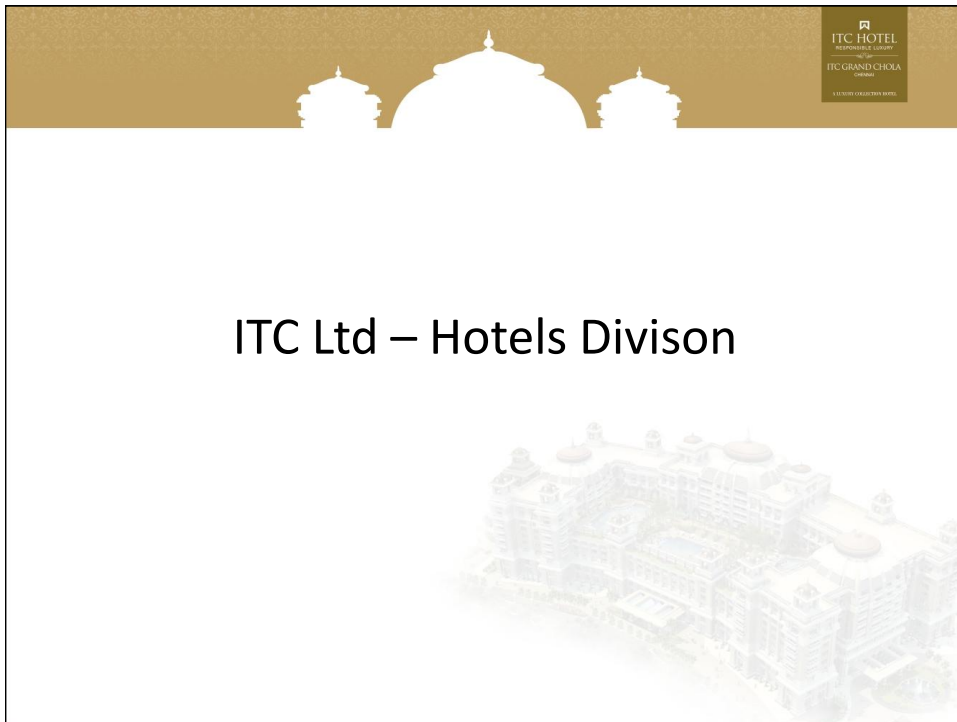
Can be outsourced



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- Additional upfront costs of of app 5%
- Paybacks and IRRs
- Operating cost savings
- Intangibles viz. Increased Customer awareness
- Soft Benefits (Increased productivity/ greater occupant health/ Improved Public relations)








ITC Green Centre, Gurgaon

US Secretary of State, Hillary Clinton calls it : “Monument to the future. The centre is a model for environmental stewardship and economic development....”





Thank You