

Pré-Fabricação: O Contexto Habitacional e Sustentabilidade

WAL★MART *Brasil*

LOJAS ECOEFICIENTES

Palestrante

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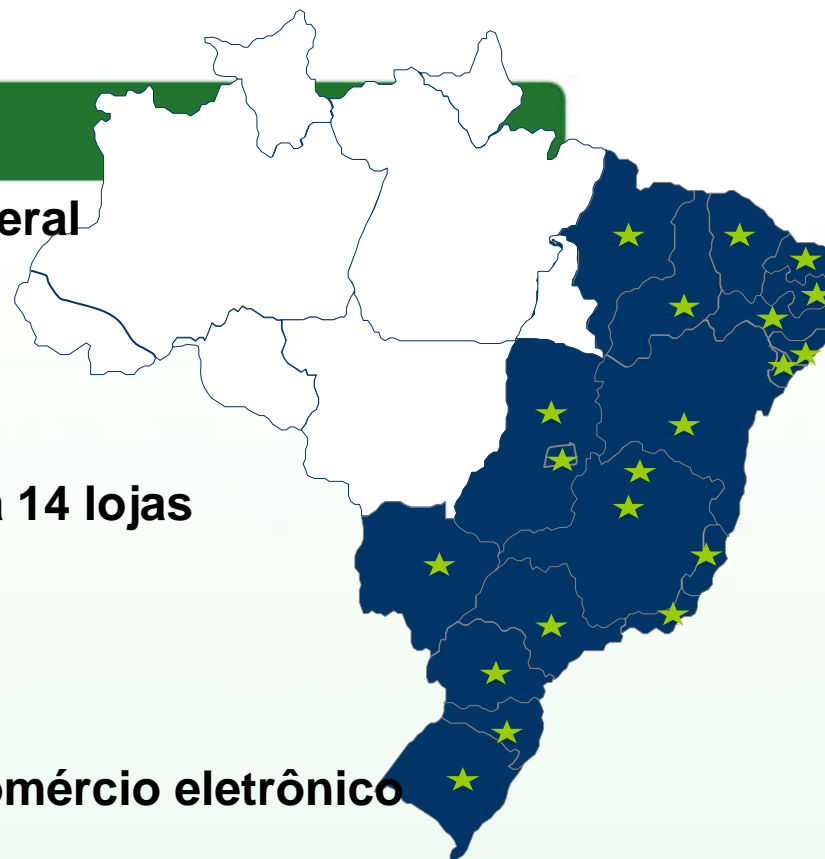
Diretora de Obras



27 de agosto de 2009

Wal-Mart Brasil

- Presente em 18 estados e o Distrito Federal
- 365 lojas
- 48 lojas em construção
- Inaugurará 91 lojas em 2009 e reformará 14 lojas
- Mais de 75 mil funcionários
- Mais de 175 farmácias
- Presente em todos os estados com o comércio eletrônico



Operação Multiformato



O impacto do varejo

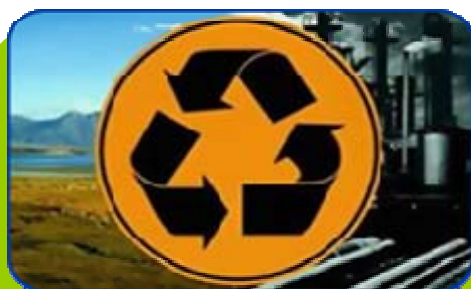


Metas Corporativas de sustentabilidade



**Ser suprido
100% por
energia
renovável**

Clima e



Impacto Zero

Resíduos



**Comercializar
produtos mais
sustentáveis**

Produtos

Pessoas

Cardapio de iniciativas de construções

Energy Efficiency

- 2.1 Motion sensors in administrative rooms
- 2.2 Motion sensors in restrooms
- 2.3 Motion sensors at covered parking areas
- 2.4 Photo sensors at covered parking areas
- 2.5 Photo sensors at sales floor
- 2.6 Sales floor lighting dimmerization
- 2.7 T5 lighting in administrative areas
- 2.8 T5 lighting at covered parking areas
- 2.9 T5 lighting in sales floor
- 2.10 Sales floor 7% reduction of lux level
- 2.11 LED lighting for backlight
- 2.12 LED lighting in refrigeration doors
- 2.13 LED lighting for facades
- 2.14 Complete Energy Management System (EMS)
- 2.15 Commissioning of the energy systems
- 2.16 Solar heating panels
- 2.17 Low toxic gas emission cables

Refrigeration System

- 3.1 Panels foam for walls
- 3.2 Insulation floor
- 3.3 Self closing sliding cooler and freezer doors
- 3.4 Cold stop curtains in cooler and freezer doors
- 3.5 Bunker's night curtains
- 3.6 Rack house with heat reclaim
- 3.7 More efficient RTU's
- 3.8 Minimize the use of HCFC based refrigerants
- 3.9 Parallel system with Glicolpropylen
- 3.10 CO2 Refrigeration system
- 3.11 Protocol system
- 3.12 Space reduction in coolers, freezers and food preparation rooms
- 3.13 Enthalpy wheel
- 3.14 Dumpers to capture external air

Training and Education

- 10.1 Staff and operational team training
- 10.2 Workshops for customers
- 10.3 Visual communication about initiatives

Renewable Energy System

- 1.1 Eolic energy (wind turbine)
- 1.2 Solar energy (photovoltaic panel)
- 1.3 Biogas energy (biogas generator)
- 1.4 Biodiesel energy (use biodiesel in generators)

Recycled and Organic Materials Selection

- 4.1 Certified wood for furniture
- 4.2 Non-toxic paint, coating, sealant and adhesive (water base)
- 4.3 Exposed concrete floor
- 4.4 Flexible doors made of recycled material
- 4.5 Use of gabion instead of concrete retaining walls
- 4.6 Recycled glass tile
- 4.7 Recycled gres tile
- 4.8 Recycled dry wall partition
- 4.9 Cement CPlII (with ash)
- 4.10 Flexible pavement (CBUQ)
- 4.11 Certified products (end-to-end)
- 4.12 Recycled steel (building)
- 4.13 Recycled signing

Building Efficiency

- 9.1 Green roof
- 9.2 Building elevation shading with vegetation
- 9.3 Store height reduction
- 9.4 Use of reflexive glass
- 9.5 Reduction of glass at main elevation
- 9.6 Efficient skylight
- 9.7 EPS Block
- 9.8 Sun oriented Site Plan
- 9.9 External surfaces of the building with high solar reflectance
- 9.10 Natural lighting

Landscape

- 8.1 Redevelopment of brownfield site
- 8.2 Keep existing trees
- 8.3 Plant trees to help neutralize CO2 emission by the construction
- 8.4 Landscape with native or adapted vegetation
- 8.5 Landscape with adult trees to reduce heat island
- 8.6 Covered parking lot
- 8.7 Special stalls for carpooling
- 8.8 Special stalls for bicycle
- 8.9 Special stalls for pregnancy
- 8.10 Special stalls for flex-fuel cars
- 8.11 Permeable paving

Waste Management and Recycling

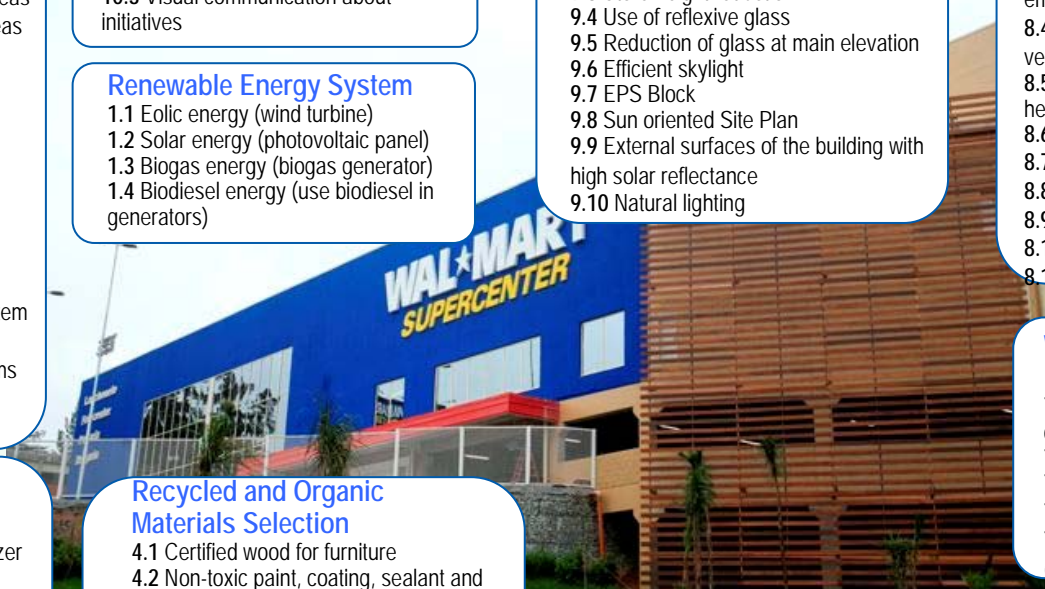
- 7.1 Waste management during construction (Zero Impact)
- 7.2 Recycled site partitions
- 7.3 Certified wood (store furniture)
- 7.4 Waste management - customers
- 7.5 Waste management - operational (PGRS)

Water Conservation

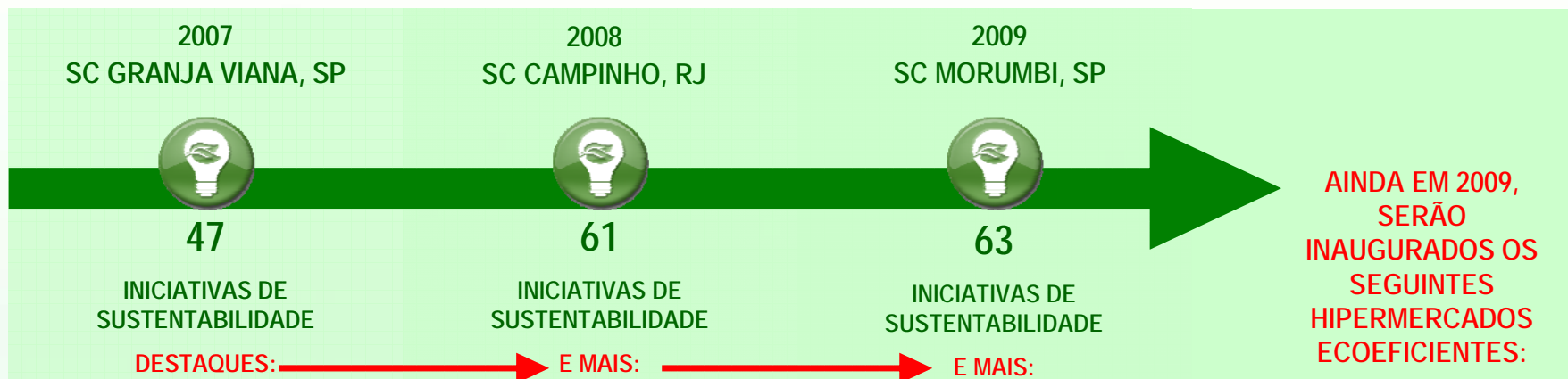
- 6.1 Reuse of storm water
- 6.2 Reuse of grey water
- 6.3 Pressmatic faucets or with moving sensors
- 6.4 Low-flow faucets aerators or water flow restrictors
- 6.5 Waterless urinals
- 6.6 Dual flush toilets
- 6.7 Automatic shower
- 6.8 Sewage treatment
- 6.9 Irrigation system

Storm Water Management

- 5.1 Porous concrete on circulation and sidewalks
- 5.2 Detention pound
- 5.3 Retention tank

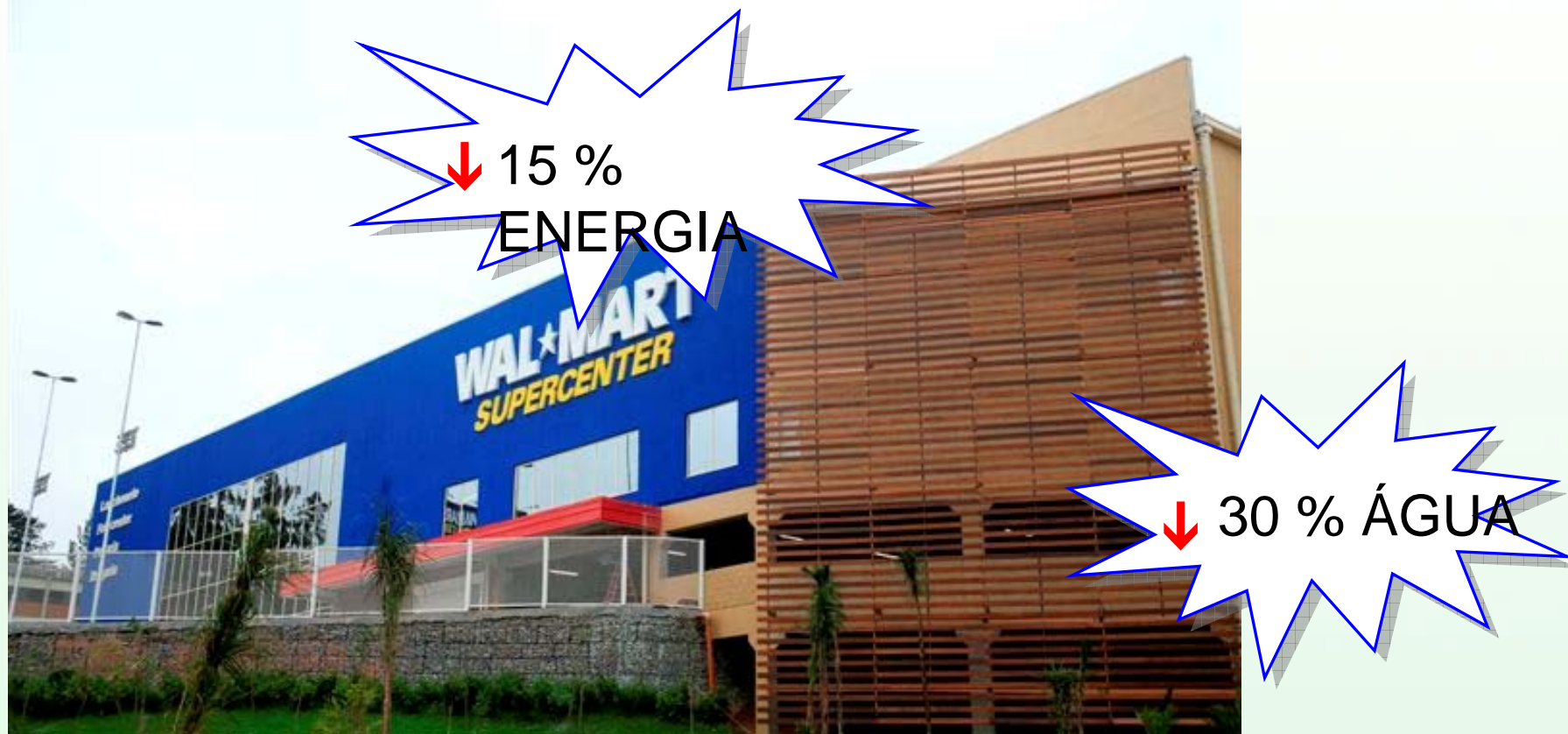


Evolução das iniciativas



Evolução das iniciativas – supercenter granja vianna, SP

47 iniciativas de sustentabilidade



Evolução das iniciativas – supercenter campinho, RJ

61 iniciativas de sustentabilidade

↓ 17%
ENERGIA

↓ 35% **ÁGUA**



Supercenter Morumbi, São Paulo

Evolução das iniciativas – supercenter Morumbi, SP

↓ 19%
ENERGIA



↓ 40% ÁGUA

63 iniciativas de sustentabilidade

Exemplos



Energia solar



Plantas nativas



concreto



Fluído à base de água para refrigeração



Luz natural



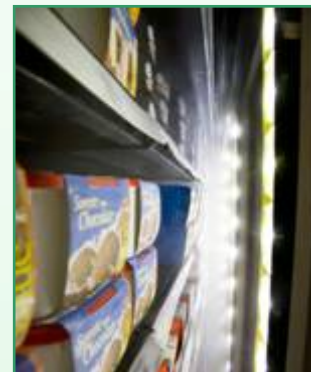
Vagas especiais



Reuso de água



Mictório seco



LED nos balcões



Estação de Reciclagem

Utilização do concreto pré-moldado

- **Mais competitivo (custo e prazo)**
- **Produto de alta qualidade: valor para nossos clientes**
- **Racionalização na construção**
- **Controle pela cadeia produtiva**
- **Minimização do impacto de consumo de energia e recursos naturais**
- **Responsabilidade social**

Pré-Fabricação: O Contexto Habitacional e Sustentabilidade

- Principais fornecedores



CAS50L
ANOS

Premo



- Exigencias contratuais atuais:

Controle de resíduos na obra

- Consultores parceiros para aferição :



GÉRANCE

ENVISION



SUSTENTAX

Pré-Fabricação: O Contexto Habitacional e Sustentabilidade

Ações Wal-Mart (atuais e futuras):

- **Projetos**
- **Foruns promovidos pela rede**
- **Avaliação dos produtos, eficiencia**
- **Exigencia para Homologação dos fornecedores**
- **Certificação de materiais**

Obrigada

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