



Energy, chemicals and the Higg Index 能源, 化学品管理和Higg Index

A commercial approach to sustainability in mills? 染厂可持续发展的商业价值及方向

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Company Overview



● : RESET's projects in Asia

- Our team has delivered energy efficiency, carbon, and water management services to clients through nearly 200 projects, across more than 10 countries.
- We help companies develop and reach their sustainability targets through building a strong commercial case for action.
- RESET also assists EU and US-based corporates and brands to strategically engage their supply chain in sustainability initiatives in Asia.

Objectives of this presentation

- Define the typical commercial case for sustainability in Asian companies
- Review and discuss the commercial case for sustainability with textile mills
 - Cost saving opportunities
 - Customer relationship opportunities
- Outline what brands and textile suppliers can do to maximise the commercial opportunity for sustainability
- Review and discuss features of the Higg Index Facilities Module as a tool for supporting commercial sustainability programs
- Summarise key elements of a commercial sustainability approach in this sector

About RESET 有关锐思

We provide commercial sustainability services to customers in Asia that:

我们为亚洲各类型企业及工厂提供可持续发展服务, 目的为:

- Reduce customer costs 减少客户成本
- Improve customer reputation 改善企业声誉



The commercial value proposition for mills 染厂可持续发展的商业价值

Cost savings from energy efficiency 能效提升带来的成本节省

NRDC 10 Best Practices								
Plant/Type	Production (tons/yr)	Age of Plant	Investment Costs (RMB)	Savings (RMB)	Payback (months)	% Energy Reduction (steam)	% Elect. Reduction (kWh)	% Water Reduction (tons)
Fiber (A)	6,684		2,003,000	3,190,286	8	24.2%	2.7%	-
Fiber (B)	4,523		551,350	644,375	11	2.3%	5.3%	1%
Fiber (C)	1,923		531,100	565,728	12	22.4%	15.4%	11%
Fiber (D)	890	2010	757,000	1,409,810	7	60.2%	1.3%	-
Woven (E)	877	2010	1,100,399	771,595	18	43.4%	6.9%	-
Fiber (F)	6,790	2006	445,100	752,158	7	5.8%	0.8%	10.5%
Denim (G)	28,605	2011	1,468,000	1,531,000	12	6.1%	21.3%	3%
Knit (H)	33,229		1,512,000	2,339,400	8	0.8% *	1.3%	-
Denim (I)	9,473	2005	935,000	1,622,700	7	12.0%	10.1%	32%
Denim (J)	15,201	2010	849,000	2,408,000	5	9.4%	3.7%	2%

Source: Linda Greer, Planet Textiles, 2011

数据源: Linda Greer, Planet Textiles, 2011

A high proportion of mills have excellent energy saving opportunities with strong return on investment potential

大多数的染厂均存在显著的节能机会, 并且拥有相当吸引的投资回本期

Annual savings of 560 000 – 3 million RMB per year with paybacks of 5 – 18 months

年度成本节省约为人民币五十万至三百万元, 投资回本期为五至十八个月

Turning savings potential to cashflow 把潜在的节省转化成现金

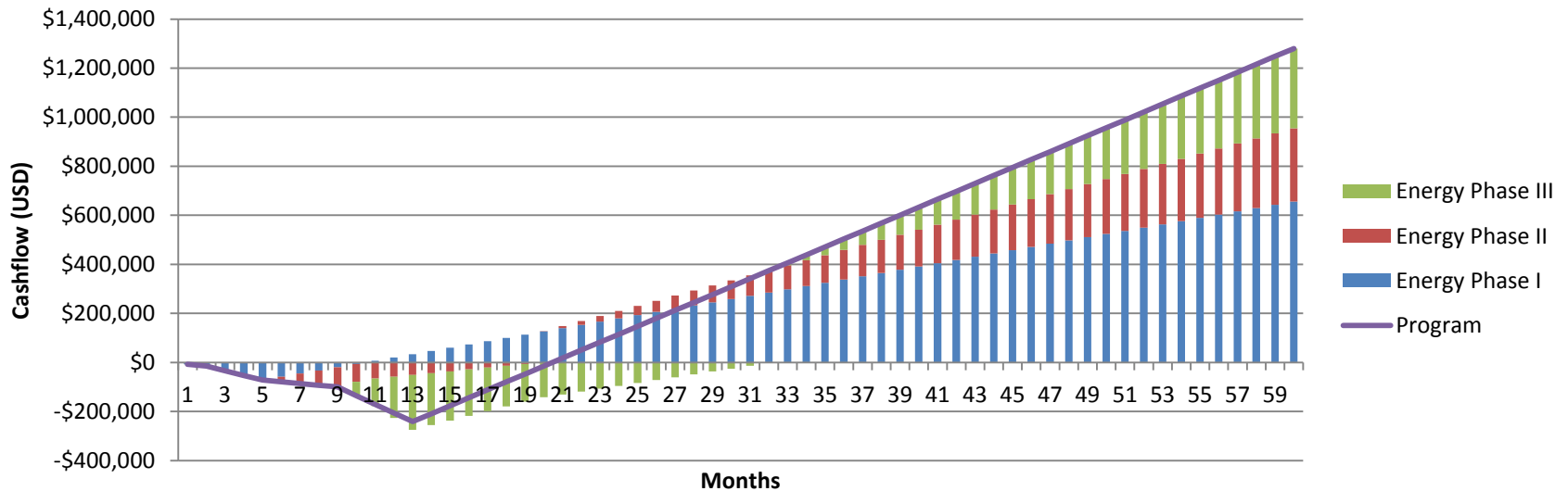
Generic energy model 一般的染厂节能模型

Assumptions 假设:

Energy bill of USD 2.6 million / year
Portfolio of 20 energy efficiency measures aligned into 3 implementation phases, implemented over 12 months
14% savings
11 month aggregate technical payback
Fixed China-typical energy price
Water savings un-costed

Outcomes 结果:

Savings per year USD 388 000
每年节省约388 000美元
Capex USD 376 000
总投资约376 000美元
Real world payback = 21 months
实际回收期21个月
5 year simple NPV = 1.3m USD
5年净现值为1.3 百万美元



Chemicals management 化学品管理

Costs and savings overview 成本及节约分析

Objective 目的	Program cost 项目费用	Additional costs 额外费用	Additional cost magnitude 额外费用	Savings type 节省成本类型	Savings details 节能详情
Mill Development Programme 染厂化学品管理项目:	\$1700 (Approx 2 onsite days & ½ day report preparation 约两天现场评估及半天报告编写) + Travel & Incidental cost Extra 差旅及额外开支	\$ 12000 (may be for new lab instrument for best Practices 因应最佳守则为实验室添置设备) \$6000 (Lab Chemicals 实验室化学品)		Time 时间 ≈15% Electricity 电力≈ 38 % Energy 能源≈ 12% Water 水≈ 10% Operator cost 仪器费用 ≈12% Production increase 增加生产 ≈ 15% Machine Utilisation 设备优化 ≈ 15%	Overall approximate 整体费用 \$ 112000

Source 数据源: Dr. Siva Pariti, Sustainable Textile Solutions

Customer –relationship benefits Are not yet significant from a business perspective

- For textile mills, customer-relationship benefits (for example new customers, more orders or more secure orders from existing customers) from improved sustainability performance are currently limited
- Mills need to look ahead and think strategically at market trends to value sustainability with customers
- This means at the moment the value proposition is concentrated around cost savings

Barriers to making sustainability a business priority

提升可持续发展为首要商业考虑的障碍

- **No customer upside - company innovators (usually senior management) have other time and business priorities**

客户没有要求 - 企业创新者(通常为高级管理层)有其他考虑及更重要的事情需处理

- **Significant capital is placed at risk on an issue where mills need to innovate**

工厂需具备创新思维去处理可持续发展, 通常都被认为需要很大投资, 并存在相闔风险

- **Lack of visibility of costs and benefits including lack of ability to compute ROI of investments**

缺乏了解项目经济效益的能力, 并且不太清楚实际的项目投资回本期

- **Lack of confidence in realisation of costs and benefits**

缺乏信心以取回投资成本及项目回收带来的效益

- **Government regulations**

各地政府之相闔法例法规

What can brands do? 品牌可以做些甚么?

Help to create a business case that suppliers can invest into 创造效益, 鼓励供应商投资

- Define clear expectations of environmental performance
清晰地界定品牌对供应商环保表现的期望
- Structure a clear commercial incentive
建立清晰的商业诱因

Example: M&S Plan A Program

例子: 马莎A计划项目

50% of all M&S products must have a Plan A characteristic by 2015, 100 % by 2020
2015年, 50% 的货品将从具有A计划属性的厂房采购; 至2020年达到100%

Plan A characteristic: E.g. Eco Factory or use of M&S specified more sustainable materials

A计划属性包括: 生态工厂资格及利用马莎认可并具可持续发展特性原材料等等

Sourcing teams are required to support the delivery of this target
采购团队需支持达到此目标



What can suppliers do? 供应商可以做什么?

Ensure that the business case is properly evaluated 确保正确地评估商业价值

- **Collect and review your current spending on energy, water and chemicals**

收集并检讨现行能源, 水及化学品的成本

- **Conduct an energy & water efficiency assessment (likely with a 3rd party). Conduct a chemicals management audit with a 3rd party.**

开展能源及水使用效率提升评估 与第三方进行。与第三方开展化学品管理核查

- Many mills have already done this, in particular for energy. Existing assessment data can be used directly.

许多染厂已进行此类项目, 尤其是节能评估! 现行数据已可直接应用

- **Model the cashflow opportunity to understand the risk/reward on energy efficiency**

透过项目现金流分析以了解节能风险及效益

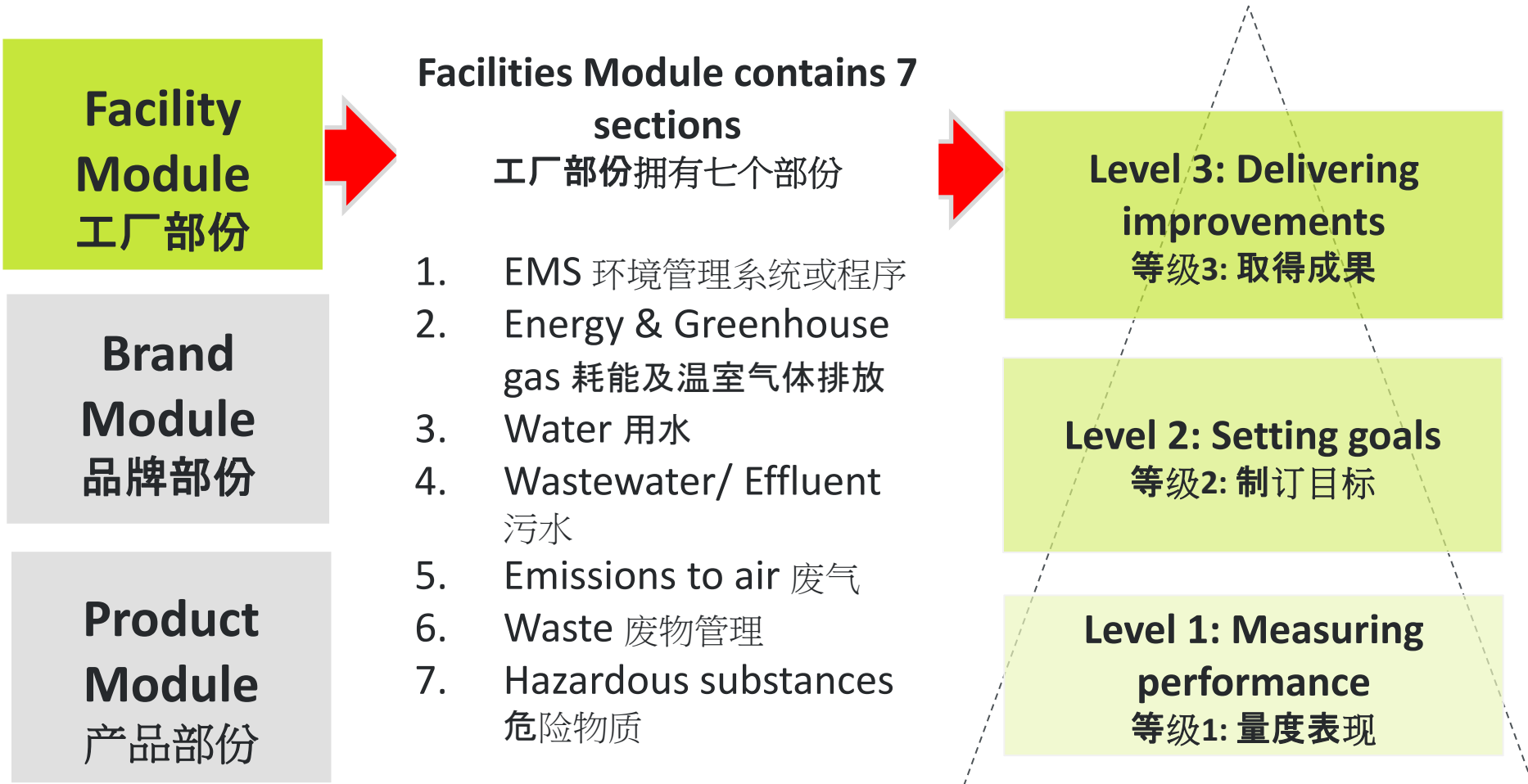
- **Make a decision on investment**

就相关可持续发展投资作出决定

How can the Higg Index support a commercial approach to sustainability?

Higg Index 如何支持厂房可持续发展?

Re-cap – Higg Index Facilities Module Structure Higg Index 工厂部份结构



Business value of Higg Facilities Index Higg 工厂部份的商业价值

Providing suppliers with a roadmap for continuous improvement

为供应商提供清晰的持续改善计划

Higg Index Facilities Module Levels system provides suppliers with a **clear pathway** for continuous improvement for each major environmental issue

Higg Index 工厂部份等级模式为供应商提供清晰路线图以改善多个主要环保表现



Business value of Higg Facilities Index Higg 工厂部份的商业价值

Supporting brands to evaluate and recognise strong suppliers


支持品牌识别及认可卓越的供应商

The Higg Index Facilities Module provides an opportunity for many brands to recognize the same system of environmental performance across their supplier base

Higg Index 工厂部份为品牌提供一个统一的评核方式, 了解不同供应商的环保表现

Multiple brands adopting the same tool will send a clearer message to suppliers about key business-relevant issues such as:

不同品牌应用同一个工具将为供应商凝造更清晰的沟通渠道:

- a) The business significance of the issue (i.e. many customers are interested)
可持续发展成为日趋重要的商业考虑 (例如: 愈来愈多客户重视可持续表现)
 - b) The nature of customer expectations (i.e. which issues are important)
客户所关注的环保事项 (例如: 哪类环保表现比较重要)
 - c) The level of customer expectations (i.e. how ambitious would they like their suppliers to be)
客户期望的水平 (例如: 品牌对于供应商表现有甚么抱负)
- 

Driving supply chain sustainability 推动供应链可持续发展

Creating the business case 创造商业价值

Create a clear business case for suppliers to:

为供应商创造清晰商业案例:

- Allocate senior management time 分配高级管理层的时间
- Train teams, collect and track environmental & cost data
培训团队, 采集及追踪环保和成本数据
- Allocate appropriate capital budgets 分配合适资本

Clear expectations from brands

清晰的品牌期望

- Linked to practical incremental improvement
与实际改善挂钩
- Allows suppliers to benefit from cost savings
允许供应商获益于节省成本
- Rewards suppliers who achieve strong performance
奖励达成改善的供应商

Higg Index Facilities Module

Higg Index 工厂部份

- Commonly recognised benchmarking tool against which brands set expectations
品牌共同认可的标杆工具
- Roadmap to guide supplier strategy & investment
协助供应商计划投资及策略的路线图

Less Carbon.
Better Business.



<http://www.RESETCarbon.com>

Thank you.
谢谢!

For more information:
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Turning savings potential to cashflow

RESET's mills model

Phase 1	Insulate the steam/oil pipes, valves and flanges	
	Insulate the steam cylinder of pre-shrinking machine	
	Repair Steam leakage	
	Repair the steam traps	
	Cut off the steam/heated oil valves not in use	
	Pre-shrinking machine condensate water recovery	
	Extra insulation of boiler casing including boiler doors	
	Insulate the economizer	
	Pre-screen coal	
	Auto-control for boiler	
	Air leakage of setting pre-shrinking machines	
	Reduce the steam pressure	
	Replace the HPS with LPS	
Phase II	Insulate casing of heated dyeing vessels	
	Insulate the condensate/cooling water pipes	
	Insulate the heat exchanger of dyeing machines	
	Reduce the steam pressure	
	Replace T8 lamps with high efficiency T5 lamps	
Phase III	Setting machine hot air recovery	
	Waste water heat recovery	