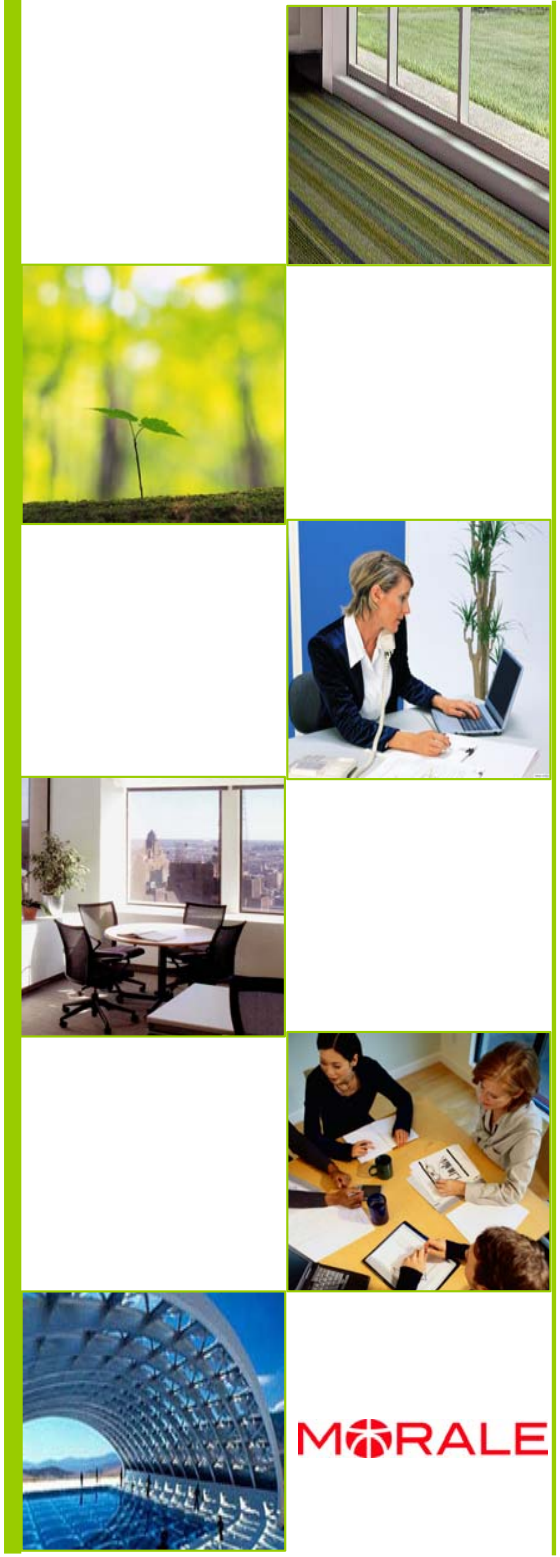
LEED

Leadership in Energy and Environmental Design



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Leadership in Energy and Environmental Design (LEED)

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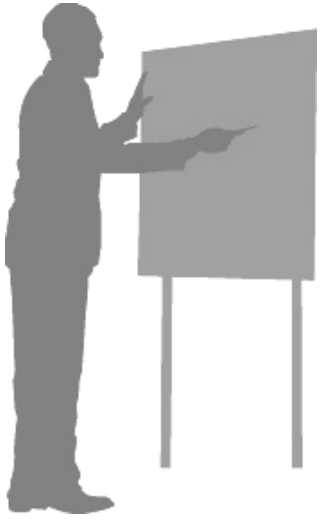
Morale and LEED

LEED is a division of the U.S. Green Building Council and is an internationally recognized benchmark of high-performance green buildings.



LEED promotes a "whole-building" approach to sustainability in performance of five key areas of human and environmental health:

- **sustainable site development**
- **water savings**
- **energy efficiency**
- **materials selection**
- **indoor environmental quality**

LEED gives building owners and space users a common standard to measure their buildings' and workspace performance.

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a. Four Rating Systems

b. Six Categories of LEED

c. Four Levels of Certification

What is LEED

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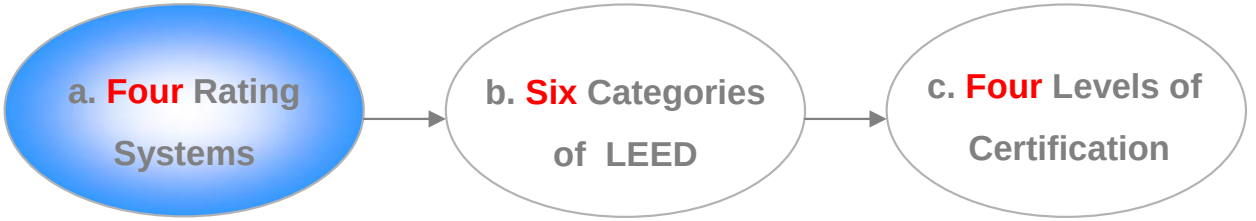

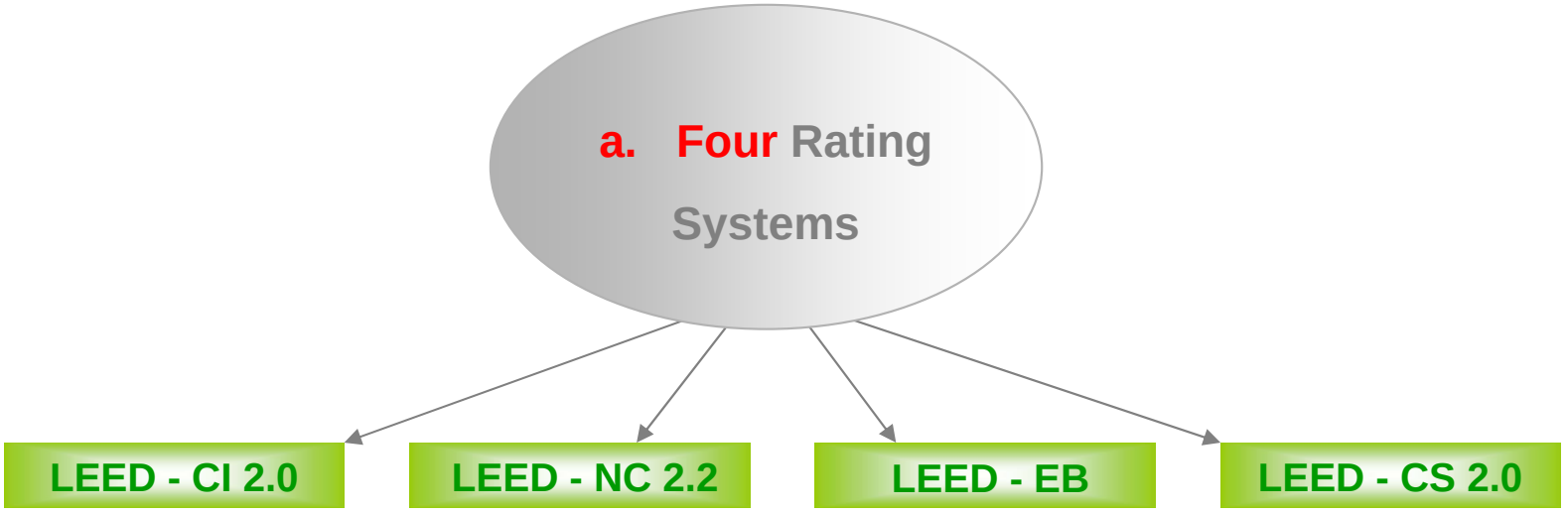

Commercial Interiors

This system is primarily for tenant improvements of new or existing office space.

New Construction

This system is primarily for new commercial construction and major construction projects. (single owner of space)

Existing Buildings

It provides sustainability guidelines for existing building operations and an entry point into the LEED certification process.

Core and Shell

This system is primarily used for construction of building's core and shell to complement to the LEED for Commercial Interiors.

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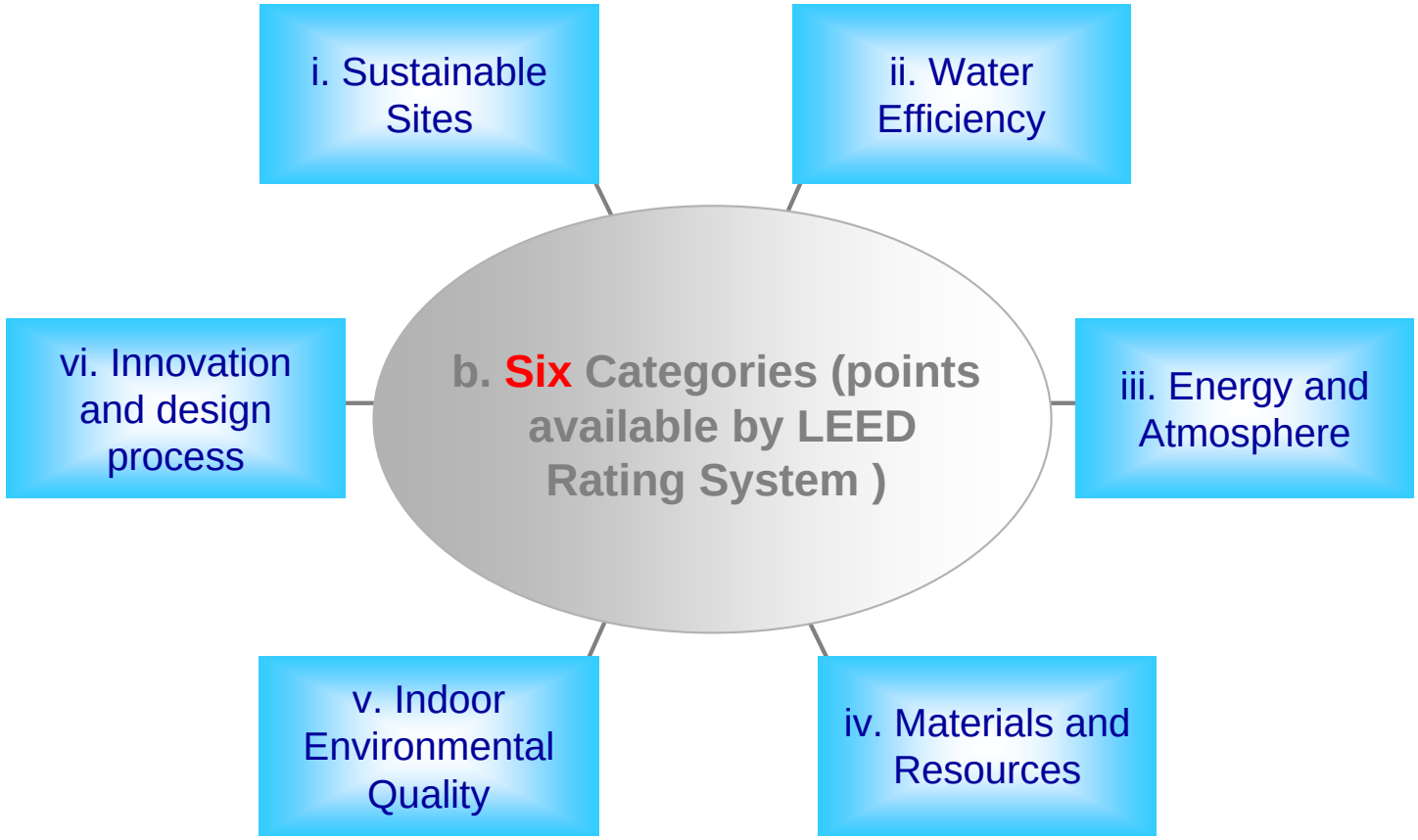

What is LEED

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a. **Four** Rating Systems → b. **Six** Categories of LEED → c. **Four** Levels of Certification

c. **Four** Levels of Certification

- Certified
- Silver
- Gold
- Platinum

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A project is a viable candidate for **LEED** Certification if it can meet ALL **Prerequisites** and achieve the minimum **Points** required to achieve the ‘Certified’ level.

Achievement	LEED NC	LEED CI
Certified	26-32	21-26
Silver	33-38	27-31
Gold	39-51	32-41
Platinum	52-69	42-57

Benefit on sustainable LEED

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LEED is a rating system that insures environmental protection and sustainability. A **LEED** accredited company with sustainable design will enjoy benefits include:

i. Reduction of operating costs

ii. Increased staff retention rate

iii. Improve public relations and image

Solution & Products

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Morale and LEED

Morale, in alliance with Tandus C&A, has committed ourselves to environmental protection, we offer assistance to our client with:

i. Solution -- professional services on contributing to the site sustainable design

ii. Products -- products that contribute to LEED credit points

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Furniture plays a significant role in helping to achieve LEED NC and CI certification**:**

		Relating furniture contribution
Sustainable Site	7 points	
Water Efficiency	2 points	
Energy and Atmosphere	14 points	4 points
Materials and Resources	14 points	10 points
Indoor Environment Quality	15 points	3 points
Innovation and Design	5 points	3 point
Total	57 points	**20 points**

Furniture Related Credits - Overview

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Energy & Atmosphere		
EA 1.1	Optimize Energy Performance: Lighting Power	**1-3 point**
EA 1.2	Optimize Energy Performance: Lighting Controls	**1 point**
Materials & Resources		
MR 2.1	Construction Waste Management: Divert 50-75% From Landfill	**1-2 point**
MR 3.3	Resource Reuse: 30% Furniture and Furnishings	**1 point**
MR 4.1	Recycled Content: 10-20% (post-consumer + ½ pre-consumer)	**1-2 point**
MR 5.1	Regional Materials: 20% Manufactured Regionally	**1 point**
MR 5.2	Regional Materials: 10% Extracted and Manufactured Regionally	**1 point**
MR 6	Rapidly Renewable Materials: 5%	**1 point**
MR 7	Certified Wood: 50%	**2 point**
Indoor Environmental Quality		
EQ 4.5	Low-Emitting Materials: Systems Furniture and Seating	**1 point**
EQ 6.1	Controllability of Systems, Lighting	**1 point**
EQ 8.3	Daylight and Views: Views for 90% of Seated Spaces	**1 point**
Innovation & Design Process		
ID 2	LEED Accredited Professional	**1 point**
ID 2.1	Education of occupants	**1 point**
ID 2.2	Community development	**1 point**
	Total :	**16 – 20 points**

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Optimize Energy Performance: → **1-3 points**

Lighting Power

Using a Task Light option with powerful reflector and an energy efficient lamp can help reduce ceiling lighting power by 15-35%

Optimize Energy Performance: → **1 point**

Lighting Controls

Using a Task Light option with daylight/ occupancy sensors within 5m from window can help reduce and maximize energy performance.

Materials and Resources

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Construction Waste Management:

Divert from Landfill

1-2 points

Using environmentally friendly furniture packaging, such as cardboard, helps decrease the amount of waste (10-20%) sent to the landfill.

Resource Reuse

1 point

Morale products have a long warranty and are easy to reassemble for reusing. Charity donation to reuse instead of disposal.

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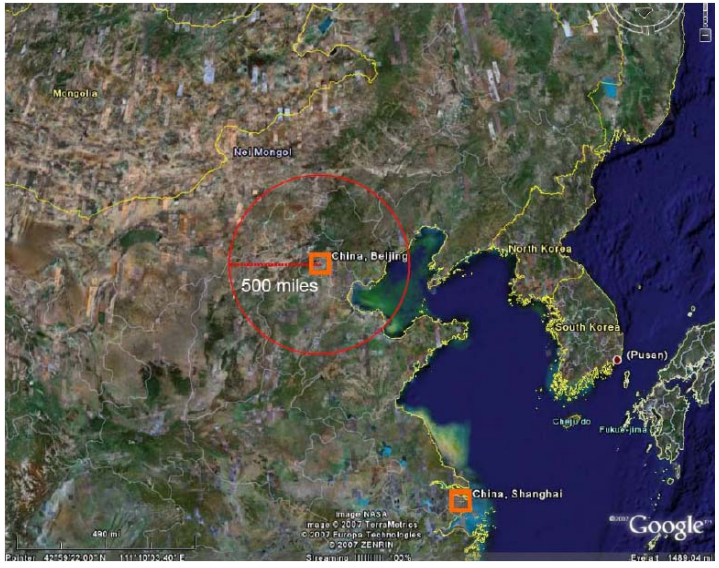
Recycled Content — 1-2 points

Morale products are built with recyclable content in both post-industrial and post-consumer content more than 10-20% required, including steel and aluminum.

Regional Materials — 2 points

Morale's factories locate in Beijing, Shanghai and Guangzhou can provide products final assembly factory within a 500 km radial from the site.

Most of Morale's product are locally produced and with parts that meet international standard. And to utilize local OEM.



Rapidly Renewable Materials — 1 point

Incorporate rapidly renewable materials in furniture design and manufacturing (i.e. strawboard, bamboo, cotton fabric, wheat- grass)

Certified Wood — 2 points

Use low VOC paint, adhesive composite wood, coating ... for furniture manufacturing
Use FSC certified wood in furniture content

Indoor Environmental Quality

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Low-emitting Materials: → **1 point**

Systems Furniture and Seating

Morale products are built with the environment in mind. All products can be tested in lab with low VOC emitting.

Controllability of Systems: → **1 point**

Lighting

Powerful and highly efficient task light option for system workstation

Daylight and Views: → **1 point**

Views for 90% of Seated Spaces

System panel with various height, 1050H or below, or with glass panel above

Innovation and Design Process

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LEED Accredited Professional	**1 point**	A LEED AP consultant to assist on LEED certification process
Education of Occupants	**1 point**	Provide LEED training and seminar to all staffs
Community Development	**1 point**	Corporate Social Responsibility program by donating existing unused furniture and equipments to support poverty

LEED FSC - COC

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FSC - Forest Stewardship Council, established to promote the responsible management of the world's forests.

FSC - 森林管理评价委员会，其宗旨就是解决因不正当采伐而造成的森林损坏，并提倡负责任的管理和开发森林。

- Being **FSC** certified shows that you comply with **the highest social** and **environmental standards** on the market. As public concern about the state of the world's forests and timber resources increases, **FSC** provides you with a simple solution to complex environmental and social issues.
- **FSC** certification helps to protect your brand and reputation and it allows you to access highly environmentally sensitive markets.
- **森林管理评价委员会**的认证表明您在市场中遵守**社会和环境的最高标准**。对于公众日益关注的世界上森林和木材资源，**森林管理评价委员会**提供了一套可解决复杂环境和社会问题的简单而有效的方案。
- **FSC认证**有助于树立公司的绿色品牌和形象，可使您进入对环境高度敏感的市场。

FSC/CoC (Chain of Custody) certification requires operations to identify the origin of raw materials used in FSC certified products and to keep FSC certified products separate from other products throughout the production process.

FSC/CoC认证 (产销监管链认证)，是对木材贸易与加工企业从原材料采购、仓储、生产到销售等环节进行链状监管与确认，以确保木材来自于一个已经认证过的森林，也来自一个优质管理及可持续开发的森林。

LEED Large Chamber Test Report

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LEED - Large Chamber Test
绿色建筑评估体系认证 – 大型实验室检测

EQ Credit 4.5: Low - Emitting Materials, Systems Furniture and Seating

EQ Credit 4.5: 低排放量材料，系统家具和座椅

- Option A: Greenguard Indoor Air Quality Certified.
- Option B: Calculated indoor air concentrations, based on the U.S. Environmental Protection Agency's Environmental Technology Verification (ETV) Large Chamber Test Protocol for Measuring Emissions of VOCs and Aldehydes (September 1999) testing Protocol conducted in an independent air quality testing laboratory.
- Option C: Calculated indoor air concentrations, based on ANSI/BIFMA M7.1-2007 and ANSI/BIFMA X7.1-2007 testing protocol.
- 选择A： Greenguard室内空气质量认证。
- 选择B：计算室内空气浓度，基于美国环境保护局的环保技术核查（ETV）大型实验室检测协议测量挥发性有机物和醛的排放量（ 1999年9月）独立空气质量检测实验室的测试协议。
- 选择C：计算室内空气浓度，基于ANSI / BIFMA M7.1 - 2007和ANSI / BIFMA X7.1 - 2007测试协议。

Test Items 检验项目	System Furniture Emission limits (LEED-CIv2.0) 系统家具 标准限量 (LEED-CIv2.0)	Test Results 检验结果
Formaldehyde 甲醛	50 ppb	37.3 ppb
Total-aldehydes 总醛酮	100 ppb	67.9 ppb
TVOC	0.50 mg/m³	0.13 mg/m³
4-Phenylcyclohexene 4-苯基环己烯	0.0065 mg/m³	Undetected 未检出

Furniture Contributions to LEED Credits – CI 2.0

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Simple System

Materials and Resources

Credit 2.1	Construction Waste Management:	Divert 50% from landfill	1 point
Credit 2.2	Construction Waste Management:	Divert 75% from landfill	1 point
Credit 3.3	Resource Reuse:	30% furniture and furnishings	1 point
Credit 4.1	Recycled Content:	10% (post-consumer + pre-consumer)	1 point
Credit 4.2	Recycled Content:	20% (post-consumer + pre-consumer)	1 point
Credit 5.1	Regional Materials:	20% manufactured regionally	1 point

Indoor Environmental Quality

Credit 4.5	Low-Emitting Materials:	Systems furniture and seating	1 point
Credit 8.1	Daylight & Views	Daylight 75% of Spaces	1-3 point

Innovation and Design Process

Credit 1.1-1.4	Innovation in Design:		1-4 point

Furniture Contributions to LEED Credits – CI 2.0

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Match

Materials and Resources

Credit 2.1	Construction Waste Management:	Divert 50% from landfill	1 point
Credit 2.2	Construction Waste Management:	Divert 75% from landfill	1 point
Credit 3.3	Resource Reuse:	30% furniture and furnishings	1 point
Credit 4.1	Recycled Content:	10% (post-consumer + pre-consumer)	1 point
Credit 4.2	Recycled Content:	20% (post-consumer + pre-consumer)	1 point
Credit 5.1	Regional Materials:	20% manufactured regionally	1 point
Credit 6	Rapidly Renewable Materials	Materials such as cotton or wool	1 point

Indoor Environmental Quality

Credit 4.5	Low-Emitting Materials:	Systems furniture and seating	1 point

Innovation and Design Process

Credit 1.1-1.4	Innovation in Design:		1-4 point

Tandus C&A Carpet

LEED-NC2.2 and CI 2.0 Contribution

Carpet Related Credits – Overview

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Materials & Resources		
MR 1.1	Tenant Space, Long Term Commitment	**1 point**
MR 2.1&2.2	Construction Waste Management: Divert 50-75% from landfill	**1-2 point**
MR 4.1&4.2	Recycled Content: 10-20% (post-consumer + ½ pre-consumer)	**1-2 point**
MR 5.2	Regional Materials: 10-20% Extracted and Manufactured Regionally	**1 point**
MR 6	Rapid Renewable Materials	**1 point**
Indoor Environmental Quality		
IEQ 4.1	Low-Emitting Materials: sustainable clean products	**1 point**
IEQ 4.1	Low-Emitting Materials: adhesives and sealants	**1 point**
IEQ 4.3	Low-Emitting Materials: Carpet Systems CRI Green Label Plus	**1 point**
Innovation & Design Process		
ID 2	LEED Accredited Professional	**1 point**
ID 2.1	Education of occupants	**1 point**
ID 2.2	Community development	**1 point**
	Total :	**11 – 13 points**

Project Reference for LEED Accredited

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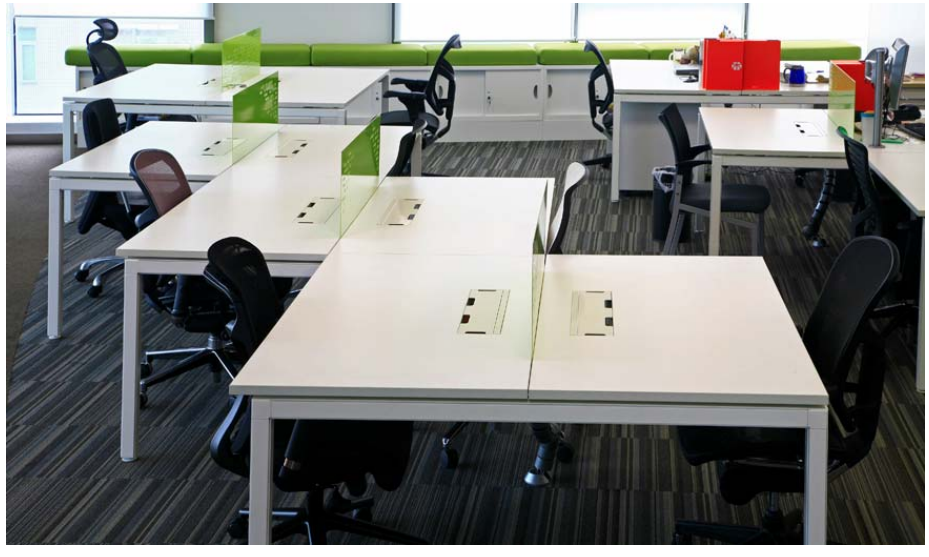
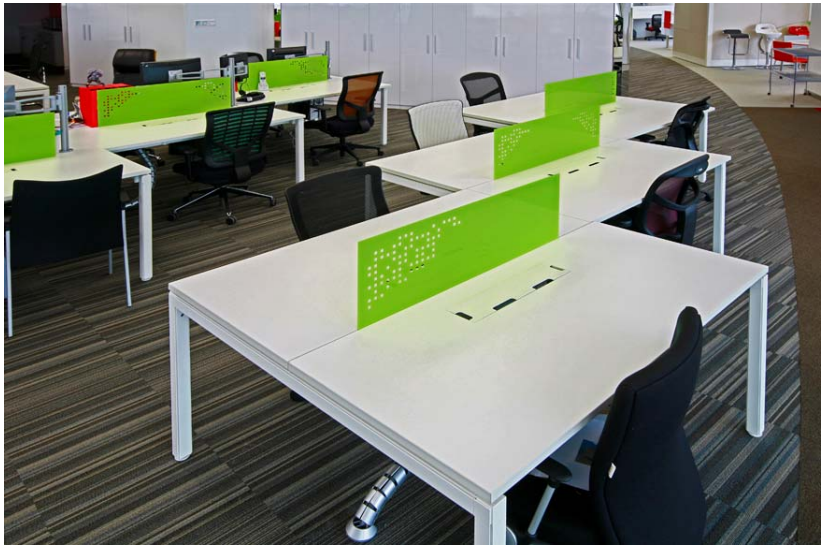
MMOSER Beijing, Shanghai and Guangzhou offices with LEED - Gold Grade credit





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• Our Products and Services Development

With the environment in mind**,** Morale is committed our sustainable development, providing high quality products, and professional service.

• Our Commitment to the Community

Our LEED commitment extends beyond the contribution to credits. We believe in conducting our business in an environmentally community responsible way.

- Staff training and education seminars to enhance staffs' awareness of sustainability.

- Program co-organizer of **China Poverty& Alleviation Development Council** to support poverty in China as our **Corporate Social Responsibility** focus.

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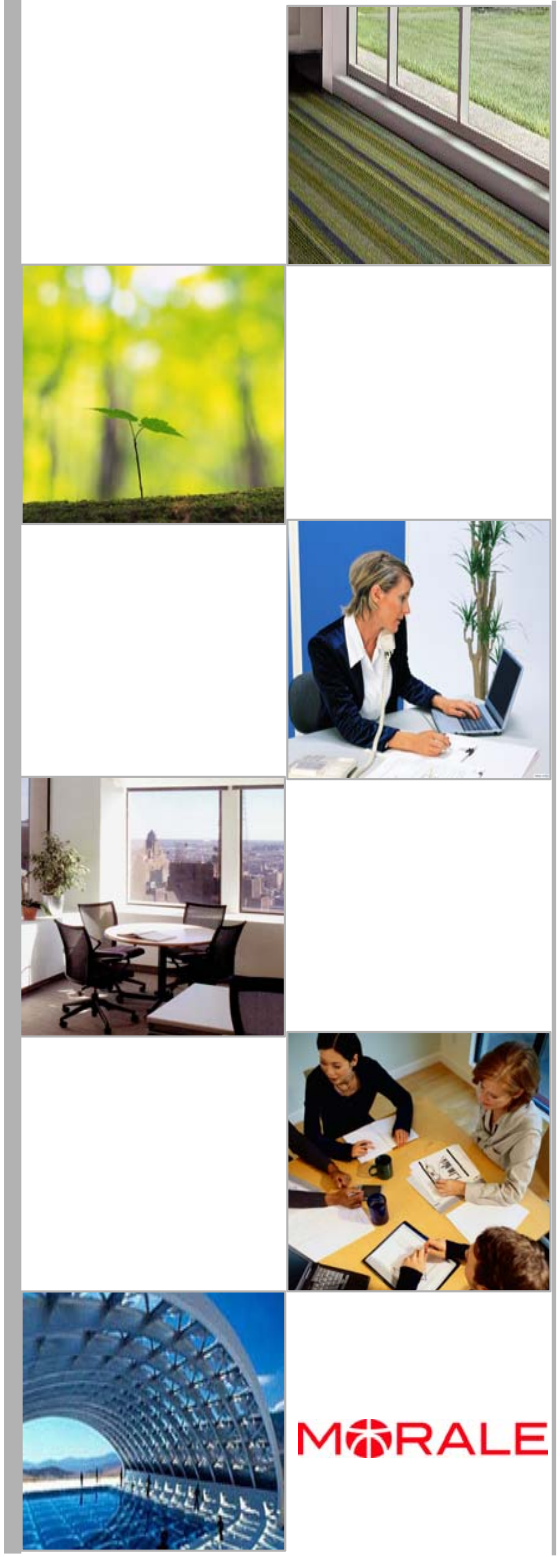
We at Morale are happy to provide any assistance with your sustainability questions and needs

Website: www. moralef . com

Thank you!