

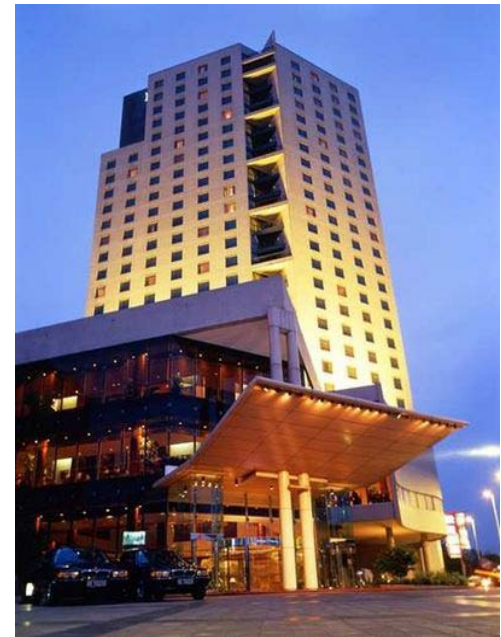
www.u-tron.com



Hotel Retrofits饭店照明改造方案 采用**LED**技术



June 2012
2012年6月



**2012-4/5月进行的
Survey Summary – 测量汇总
And 和
Recommendations 建议**

Phase 1

- **F&B outlets 餐饮业场所 Total 3Year Savings: ¥183,262.00**
 - Element 元素餐厅
 - One East 酒吧/咖啡厅
 - Zeta Bar 酒吧
 - Caffé Cino-Tonic Lounge 咖啡厅
- **Public Areas Total Savings: ¥ 1,880,067.00**
 - Lobby 大堂
 - Toilets 卫生间
 - Exec Lounge 贵宾厅
 - Guest Floor Corridors 客房走廊 (main tower 20 floor + 8 Exec Floor)
 - Guest Rooms 客房 (MR16 only)
 - 2nd and 3rd Floor public areas 2层和3层公共场所
 - Parking 地下停车场

* Total Potential 3 years Saving will reach 0.8 Million RMB after deducting purchase cost.

Phase 2 —3

- **Conference and Meeting rooms** 会议场所
 - **Vision total** 8个会议室
 - **Strategy Rooms** 会议室
 - **Business Center** 商务室
 - **Concessionaires** 服务台
- **Guest Rooms/Suites** 客房及套间 (Excluding MR16除外)
 - **Main tower** 主楼
 - **Exec Tower** 会滨楼
 - **Rest Of the Property** 其他地产
- **Exterior lightings** 室外照明
 - **Signage** 广告灯箱
 - **Back of Houses and Offices** 后勤及办公场所
 - **Staff Areas** 员工专用场所

* Total Potential 3 years Saving TBA following Phase 1 implementation

Phase 1 Total Savings 节能对比

Type of Lights 灯型	# of bulbs 数量	Before 以前 kwh/year	After 以后 kwh/year	3年节约电费合计3Year Savings RMB	Purchase Cost of LED bulbs 采购费用
Comets Spot light 射灯	7027	529,965.40	93,624.54	1,439,924.84	702,700.00
Helios ball light 球泡灯	1274	266,128.80	114,172.00	501,457.44	203,840.00
Extendum T8 tube 36 W 管灯	1595	88,038.00	48,618.00	130,086.00	422,675.00
Comet G53 射灯	28	17,228.00	4,893.92	40,702.46	4,480.00
Drago Par 38 吧灯	16	7,592.00	1,775.36	19,194.91	4,800.00
Savings and Cost in RMB 节约及费用(人民币)				¥2,131,365.65	¥1,338,495.00
Total amount of RMB saved over 3 years			¥792,870.65		

Phase 1 Total Savings 节能对比

Type of Lights 灯型	# of bulbs 数量	Before 以前 kwh/year	After 以后 kwh/year	3年节约电费合 计3Year Savings RMB	Purchase Cost of LED bulbs 采 购费用
Comet Spot light 射灯	7027	529,965.40	93,624.54	1,439,924.84	702,700.00
Helios Ball light 球泡等	1274	266,128.80	114,172.00	501,457.44	203,840.00
Comet G53 射灯	28	17,228.00	4,893.92	40,702.46	4,480.00
Drago Par 38 吧灯	16	7,592.00	1,775.36	19,194.91	4,800.00
Savings and Cost in RMB 节约及费用(人民币)				¥2,001,279.65	¥915,820.00
Total amount of RMB saved over 3 years			¥1,085,459.65		

This slide Not including Garage lights - for reference only...

Why U-Tron 为什么选优创

- **Lowest Price** 厂家直销 – 价格低
- **No Middle Man – Customs Products** 无中介可以开发客户专用产品
- **Localized After Sales Service** 本地化服务 - 提供安装和维修
- **Outstanding 3 Years Warranty** 满意的 3 年保修
- **Optional Extended Warranty**
- **Excellent Financing Terms** 提供多种付款方式

U-Tron, a LED solutions company

优创 – 提供一条龙服务

成立 于
1992:
Established



1997:
First LED traffic
signals
推广第一批交通灯



2006:
R&D and
manufacturing High
Power LED Products
功研发生产大功率
LED 产品

2008:
Successful deployment of
first LED Street Lighting
Products
成功安装第一批路灯



2012:
Present: over 100 products
manufactured & more then
10 patents
10多个专利和100多个产品

U-Tron Outdoor products 优创户外产品

- Lucas LED Street Lights 卢卡斯路灯
- BatLED Light 蝙蝠灯
- Venus LED Light 维纳斯 射灯
- SoLEDs Solar Powered LED Light 太阳能 LED 灯
- LeDiwali Solar Powered LED Light 低成本太阳能 LED 路灯
- LED Signal Lights 信号灯



U-Tron Indoor products 优创室内LED灯系列

- Helios and Helios Jr. LED Bulbs 太阳神 Helios 灯、小太阳
- Comet LED Spot Light 太阳神 Helios 灯、小太阳
- Moon Light 月亮灯 系列
- Milky-way LED Panel Light 银河平板LED顶灯
- Cultivar LED Plant Growing light 植物生长灯
- Extendum T8 Tube Light 管灯
- UFO Series LED Down Lights



Project:

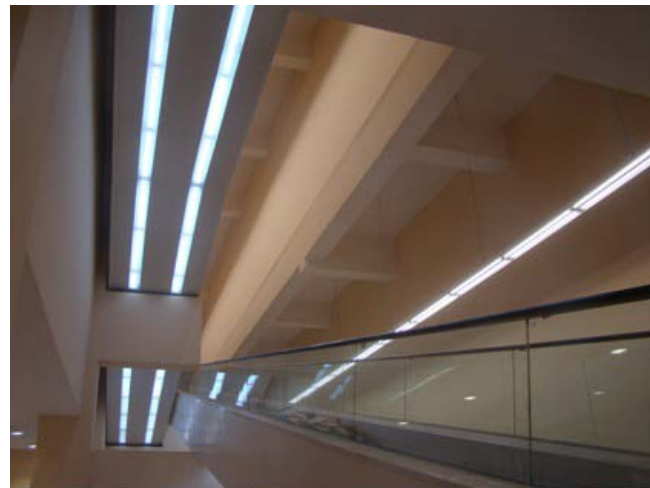
Case Studies案例

Tesco Supermarket Retrofit

- Location: Tesco Daxing Beijing
- Number of installed lights: 6000
Extendum T8 Tube Lights & 260
UFO Recessed Lights
- Installation date: January 2012

**项目:
乐购超市**

- 地点: 乐购大兴店
- 数量: 6000 T8灯管
260 UFO 筒灯
- 安装日期: 2012年1月



Case Studies 案例

Project:

Street Lights in Gothenburg, Sweden

- Location: Jacobson between 12th and 13th Street
- Number of installed lights: 24
- Products types: 20 Lucas II 84 and 4 Lucas I 42
- Height of poles : 12 Meter
- Distance between poles: 25 meters
- Installation date: December 2008
- Contact: Lasso Stevenson

项目:

瑞士古登堡路灯

- 地点: Jacobson 介于 12th 和13th 街
- 安装数量: 24
- 产品型号: 20 Lucas II 84 and 4 Lucas I 42
- 灯杆高度 : 12 米
- 杆距: 25 米
- 安装日期: 12月, 2008
- 联系人: Lasso Stevenson



Case Studies 案例

Project:

Installation for WAB International School

- Location: Beijing Jingxi School Development Zone
- Number of installed lights: 53
- Type of light: BatLED II 84
- Installation date: Sept 2011

项目:

京西WEB国际学校

- 地点: 京西国际学校
- 安装数量: 53
- 灯型: BatLED II 84
- 安装日期: 9月, 2011



Case Studies 案例

Project:

Tianjin People's Stadium Solar Lights

- Location: Tianjin People's Stadium
- Number of installed lights: 5
- Product type: LeDiwali Outdoor
- Height of poles: 3.5 Meter
- Installation date: July 2009

项目:

天津人民广场太阳能灯

- 地点: 天津人民广场
- 安装数量: 5
- 产品型号: LeDiwali Outdoor
- 灯杆高度: 3.5 米



Main Lobby大堂



Current Conditions: 现状

Lux reading: 200 Lux average 平均照度为200Lux

CCT: 2700

Dimmable: Yes but not used 可调光但没有使用

Hours of Operation: 24 Hours 使用时间为24小时



Main Lobby:

Before and After Comparison 大堂：以前和以后的分析

Type of Lights 种类	Before 以前		After 以后		KWH Savings 节省电 (度)	Electricity Bill savings in RMB 每年节约电费	% savings 节约%	ROI 回报投资 in years	Type of Lights 种类
	# of bulbs 灯泡数量	kwh/year	# of bulbs 灯泡数量	kwh/year 年消耗-度					
spot light	150	26280	150	3.2	4205	22,075	¥24,283	84%	0.68
E27 lights	38	11651	38	6	1997	9,654	¥10,619	91%	0.12
G53	12	7884	12	35	3679	4,205	¥4,625	59%	0.29
Par 38	8	5256	8	12	841	4,415	¥4,857	92%	0.54
*Note, Savings calculation does not include maintenance savings					Total Savings: 1 Year		¥44, 383		
					Total Savings: 3 Years		¥133, 150		

Element Restaurant



Current Conditions:现状

Lux reading: 54 lux 平均照度54lux

CCT: 2700

Dimmable: Yes 可调光

Hours of Operation: 16 Hours 使用时间为16小时



Elements Restaurant: Before and After Comparison 元素西餐厅 以前和以后的分析

Type of Lights 种类	Before 以前		After 以后		KWH Savings 节省电 (度)	Electricity Bill savings in RMB 每年节约电 费	% savings 节约%	ROI 回报投资 in years
	# of bulbs 灯泡数量	kwh/year	# of bulbs 灯泡数量	kwh/year 年消耗-度				
spot light 射灯	253	29550	253	4728	24,822	¥27,305	84%	1.02
spot light (temperature)	12	19272	12	10512	8,760	¥9,636	45%	1.10
ball light 球泡灯	24	7008	20	467	6,541	¥7,195	93%	0.49
lighting tube 灯管	120	19622	120	14016	5,606	¥6,167	29%	5.48
lighting tube 灯管	60	7358	60	6307	1,051	¥1,156	14%	11.42
LED	66	4625	66	4625	0	¥0	0%	
*Note, Savings calculation does not include maintenance savings *主意: 省电计算不含节省劳务费部分			3年内总节约人民币 Total Savings: 3 Years			¥107,815		

One East



Current Conditions: 现状

Lux reading: 200 Lux average 平均
照度200Lux

CCT: 2700

Dimmable: Yes 可调光

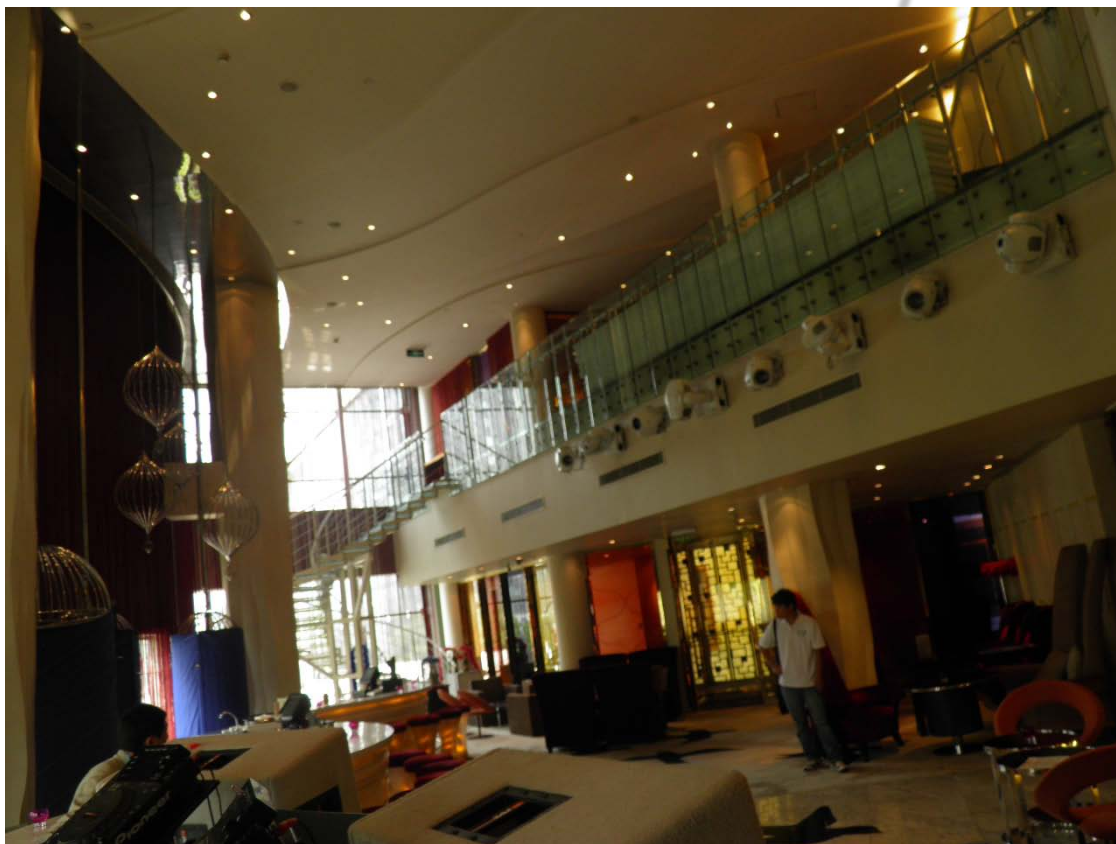
Hours of Operation: 12 Hours 使
用时间12小时



One East酒吧: Before and After Comparison 以前和以后的分析

Type of Lights 种类	Before 以前		After 以后		KWH Savings 节省电 (度)	Electricity Bill savings in RMB 每年节约电费	% savings 节约%	ROI in years 回报投资
	# of bulbs 灯泡数量	kwh/year 年消耗-度	# of bulbs 灯泡数量	kwh/year 年消耗-度				
spot light射灯	79	6920	79	1107	5,813	¥6,394	84%	1.36
E27	7	1226	7	337	889	¥978	73%	1.26
lighting tube灯管	2	184	2	96	88	¥96	48%	2.74
*Note, Savings calculation does not include maintenance savings *主意: 省电计算不含节省劳务费部分					3年内总节约人民币 Total Savings: 3 Years		¥22,118	

CTA Bar/Zeta Bar



Current Conditions: 现状

Lux reading: 200 Lux average 平均照度200Lux

CCT: 2700

Dimmable: Yes but not used 可调光但没有使用

Hours of Operation: 24 Hours 使用时间为24小时



CTA Bar / Zeta Bar 酒吧 : Before and After Comparison 以前和以后的分析

Type of Lights 种类	Before 以前		After 以后		KWH Savings 节省电 (度)	Electricity Bill savings in RMB 每年节约电费	% savings 节约%	ROI in years 回报投资
	# of bulbs 灯泡数量	kwh/year 年消耗-度	# of bulbs 灯泡数量	kwh/year 年消耗-度				
spot light射灯	140	12264	140	1962.24	10,302	¥11,331.94	0.84	0.82
lighting tube灯管	36	2207.52	36	1734.48	473	¥520.34	0.21	9.13
lighting tube灯管	15	1379.7	15	722.7	657	¥722.70	0.48	2.74
LEC - lighting cup灯杯	20	438	20	1752	-1,314	-¥1,445.40	-3.00	0.00
*Note, Savings calculation does not include maintenance savings *主意: 省电计算不含节省劳务费部分					3年内总节约人民币 Total Savings: 3 Years		¥33,996	

Guest Floor corridor lighting 客房走廊: Before and After Comparison 以前和以后的分析

Type of Lights	Before		After		KWH Savings	Electricity Bill savings in RMB	% savings	ROI in years
	# of bulbs	kwh/year	# of bulbs	kwh/year				
spot light	1232	215846.4	1232	34535.42	181311	¥199,442	84%	0.68
CFL 4 Pin	1125	216810	1125	108405	108405	¥119,246	50%	1.71
light tube	56	14716.8	56	1962.24	12754.56	¥14,030	87%	0.35
light tube	56	9811.2	56	9811.2	0	¥0	0%	0.00
light tube	56	17660.16	56	8830.08	8830.08	¥9,713	50%	1.27
flexible lighting product	224	23546.88	224	23546.88	0	¥0	0%	0.00
*Note, Savings calculation does not include maintenance savings					Total Savings: 3 Years		¥956, 063	

Garage and Parking ET 停车场 A 区 Before and After Comparison 以前和以后的分析

Type of Lights 种类	Before 以前		After 以后		KWH Savings 节省电 (度)	Electricity Bill savings in RMB 每年节约电费	% savings 节约%	ROI in years 回报投资
	# of bulbs 灯泡数量	KWH/Year 年消耗-度	# of bulbs 灯泡数量	kwh/year 年消耗-度				
Light tube 灯管	192	60549.12	192	5382.144	55166.976	¥60,684	91%	0.42
*Note, Savings calculation does not include maintenance savings *主意: 省电计算不含节省劳务费部分			3年内总节约人民币 Total Savings: 3 Years			¥182,051		

Garage and Parking MT停车场 B 区 Before and After Comparison 以前和以后的分析

Type of Lights 种类	Before 以前		After 以后		KWH Savings 节省电 (度)	Electricity Bill savings in RMB 每年节约电费	% savings 节约%	ROI in years 回报投资
	# of bulbs 灯泡数量	KWH/Year 年消耗-度	# of bulbs 灯泡数量	kwh/year 年消耗-度				
Light Tube灯管	148	46673.28	148	4148.736	42524.544	¥46,777	91%	0.42
*Note, Savings calculation does not include maintenance savings *主意：省电计算不含节省劳务费部分						3年内总节约人民币 Total Savings: 3 Years		¥140,331

Common Area 2nd Floor

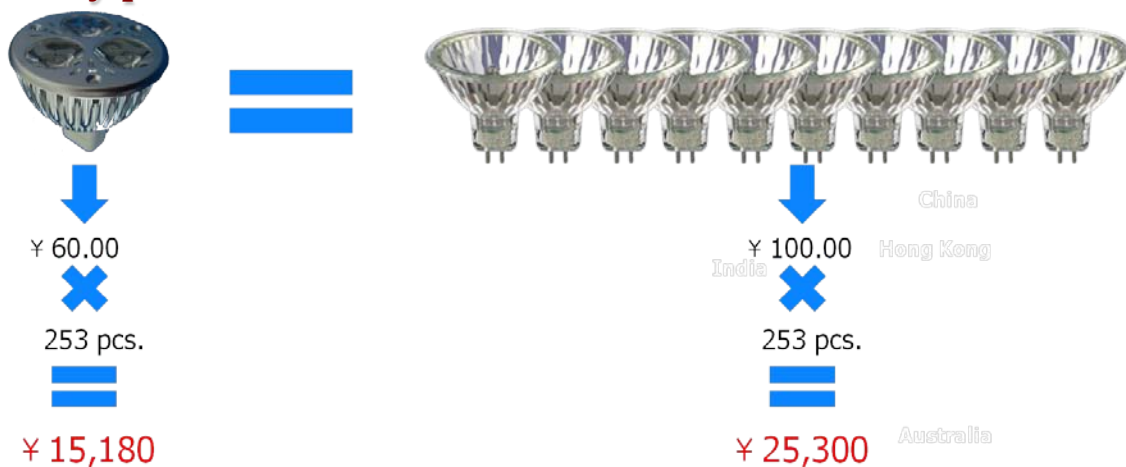
Type of Lights 种类	Before 以前		After 以后		KWH Savings 节省电 (度)	Electricity Bill savings in RMB 每年节约电费	% savings 节约%	ROI in years 回报投资
	# of bulbs 灯泡数量	KWH/Year 年消耗-度	# of bulbs 灯泡数量	kwh/year 年消耗-度				
spot light	74	8643	74	1383	7,260	¥7,986	84%	1.02
G53	16	9344	16	1215	8,129	¥8,942	87%	0.59
E27	35	12264	35	818	11,446	¥12,591	93%	0.49
PAR 20	8	2336	8	934	1,402	¥1,542	60%	1.46
*Note, Savings calculation does not include maintenance savings			Total Savings: 3 Years			¥93, 184		

Common Area 3rd Floor

Type of Lights 种类	Before 以前		After 以后		KWH Savings 节省电 (度)	Electricity Bill savings in RMB 每年节约电费	% savings 节约%	ROI in years 回报投资
	# of bulbs 灯泡数量	KWH/Year 年消耗-度	# of bulbs 灯泡数量	kwh/year 年消耗-度				
spot light	182	21258	182	3401	17,856	¥19,642	84%	1.02
E27	39	13666	39	911	12,755	¥14,030	93%	0.50
*Note, Savings calculation does not include maintenance savings			Total Savings: 3 Years			¥101, 016		

In addition...另外

**you save much more on labor and the cost of halogens bulbs
使用LED将节省更换灯具的人工费和金卤灯本身灯泡的成本费用
you may purchase over the life of the U-Tron Comet MR16**



One U-Tron Comet lasts 25,000 hours. Applied 20 hrs/day = 1388 days total lifetime.

The equivalent for this is 10 Halogen MR16 spot lights.

The Elements Restaurant has 253 spot lights, total saving is ¥ 10,120,
maintenance costs and air-conditioning savings not included.



Lights We Have Used

采用的灯泡



Comet LED™ Spot Light MR16

Technical Specifications:

- Number of LEDs: 3
- Power Consumption: 3.2 Watt
- CCT = 2500 K
- CRI = 90
- LED Type: Cree XP-G
- Power Rating: 12V A/C or D/C
- Dimmable
- LED Initial Flux: 220 lm
- Light Dimension: 50 x Ø50mm



LED Helios™ Light Bulb For Home and Office

Technical Specifications:

- Total Power Consumption: Less than 4 watts
- LED: (Cree R5) 3
- Input AC Voltage: Universal
- Brightness 280 lumen
- Equivalent incandescent light bulb 40W
- Dimmable
- Weight: 135g
- Dimensions: 56mm diameter and 106mm long
- Color Temperature In Kelvin CW= 2500 Kelvin -
- Beam Width: 180 degrees
- Approved Certification: CQC, CE and Pending UL Approval



E27



B22



GU10

**Cool White = 5500 Kelvin or
Daylight White = 3000 Kelvin**

LED Helios Junior™ Light Bulb

Technical Specifications:

- Number of LEDs: 3
- Power Consumption: 3.2 Watt
- CCT = 2500 K
- LED Type: Cree XP-G
- Power Rating: Universal
- Dimmable
- LED Initial Flux: 120 lm
- IP Rating: IP 65
- Light Dimensions: 59x122.5mm



Extendum™ T8 Tube Light 1200 mm

Technical Specifications:

- Number of LEDs: 160
- Total Power Consumption: 20 watts
- CCT = 4000 K
- LED Type: Cree CLA1B
- Power Rating: Universal
- Dimmable
- LED Initial Flux: 1900 lm
- Light Dimensions: 1200mm



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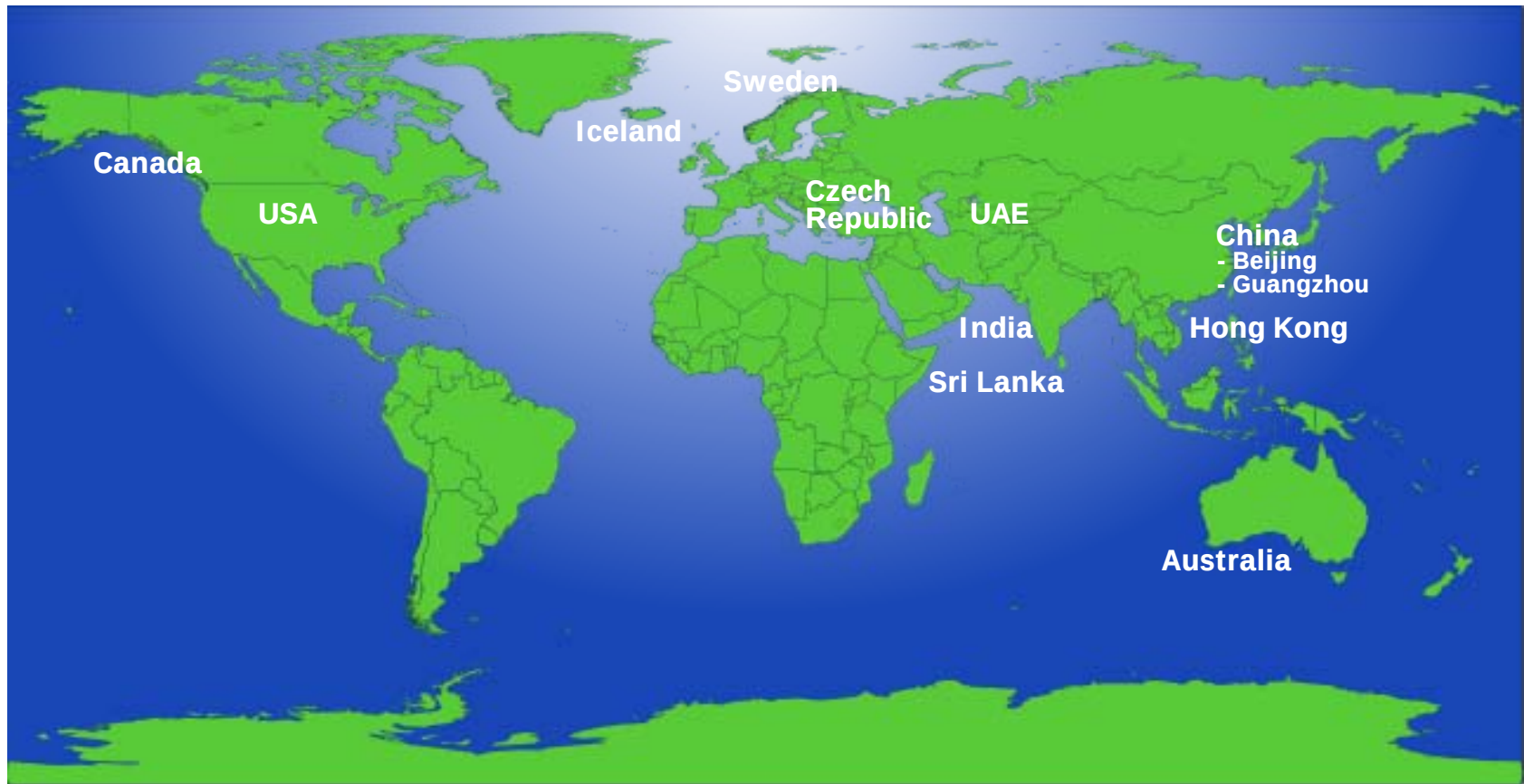
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