

Technology & Art

A Designer's Perspective

2006 DOE Solid State Lighting Workshop

Are we
there
yet ?



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City Design Group Inc.



**LIGHTING EFFICIENCY
TECHNOLOGY REPORT**

**Volume IV
RECOMMENDATIONS
REPORT**



**CALIFORNIA
ENERGY
COMMISSION**

P400-98-004VIV

Lessons To Learn

A Tale of 3 'ations'

Regulations
Public Relations
Education

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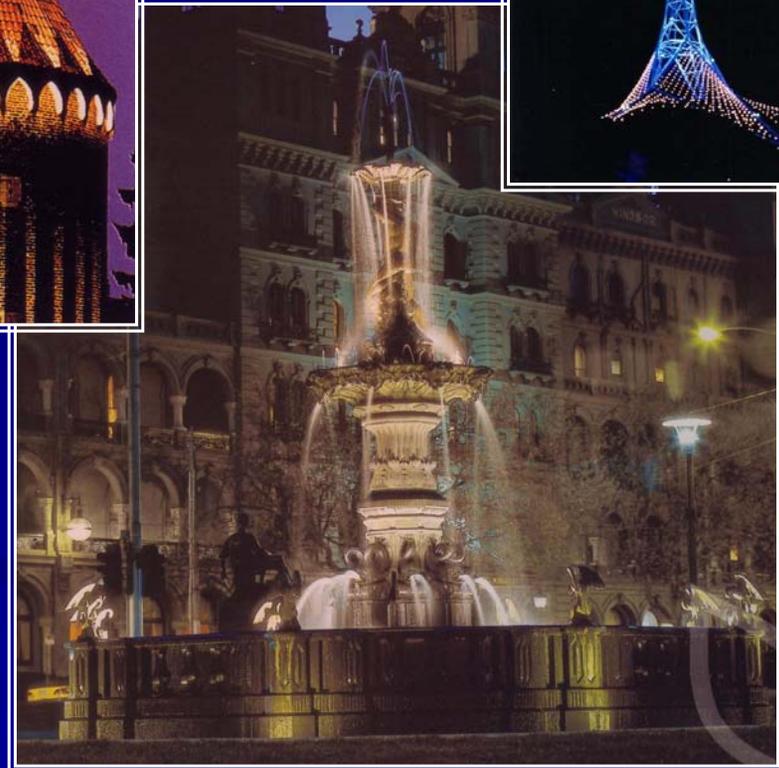
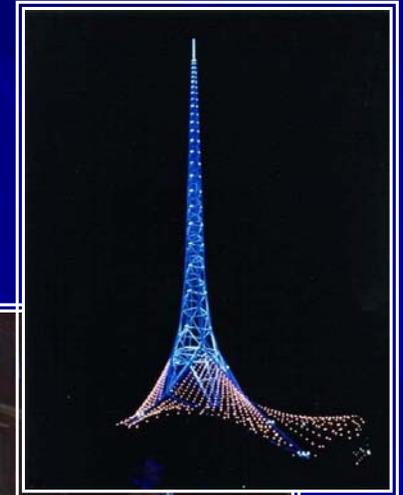
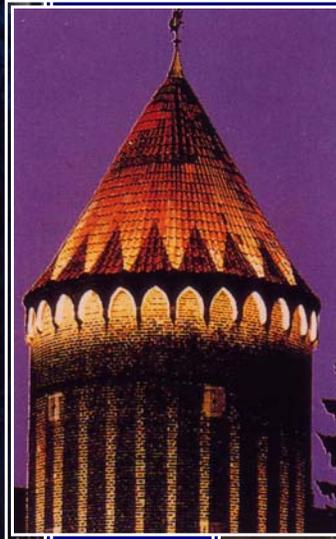
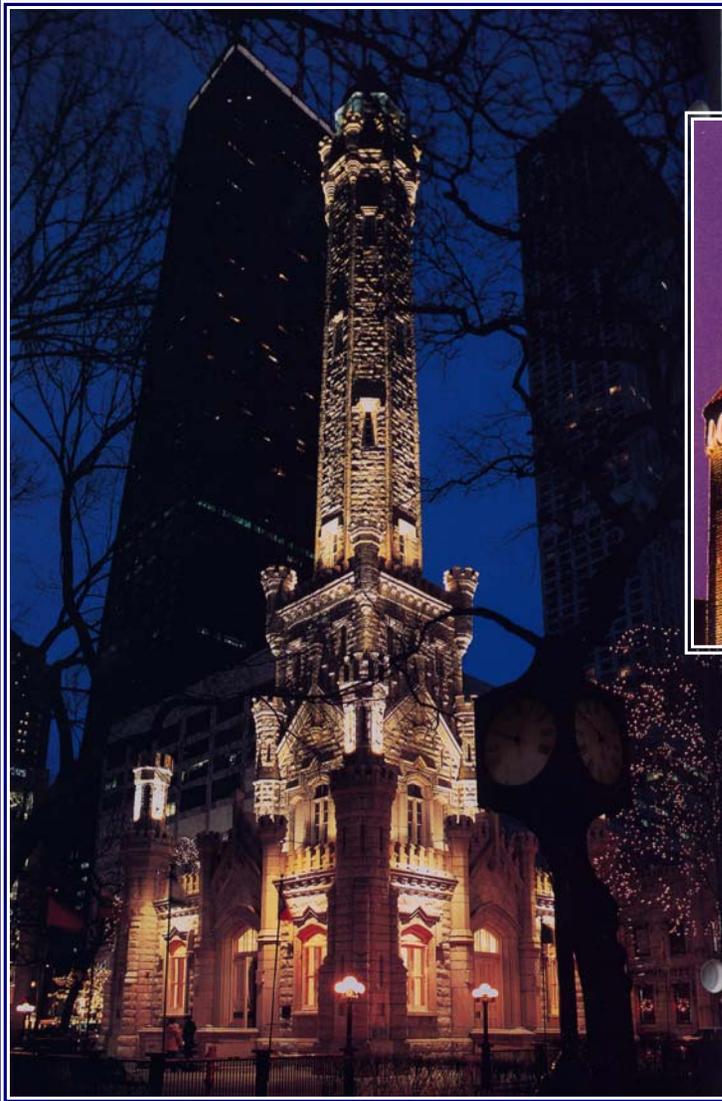
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**Patience is
a Virtue**

SEPTEMBER 1999

Lighting as Art



The Jin Ton Bridge



Architecture as Art



焰火灯光喷泉音乐汇集 四种特效上阵国内首创 昨晚“玻璃桥” 首演“灯光秀”

新报讯【记者 那珊】昨晚9点钟，金汤桥夜景工程进行首次“试灯”，绚丽的光芒与晶莹剔透的“玻璃桥”交相辉映，形成了一道独特的风景。据悉，金汤桥夜景工程预计将于8月份全部完成，届时，夜晚灯光开启后，站在海河两岸的会师公园内即可以欣赏到“亮”起来的金汤桥。

金汤桥的“灯光秀”夜景工程，将焰火、灯光、喷泉、音乐四种夜景特效融合在一起，当属国内首创。大型节日“灯光秀”开启时，安装在桥下河中几十个喷泉喷出的水柱将随着音乐翩翩起舞。同时，主桥上的喷泉将喷出水幕效果，桥上10个聚光灯和灯杆发出的变色灯光照射在水柱和水幕墙上显得更加生动。此外，桥上两侧的焰火也将同时燃放。

据悉，金汤桥两侧玻璃引桥桥面上的景观灯已经安装完成，目前，桥两侧的灯光控制室正在进行安装，其作用是直接控制金汤桥夜景“灯光秀”的所有特效。控制室安装完毕后，桥下河中的喷泉也将开始安装。据了解，金汤桥昨晚的首次“试灯”是为了检验景观灯以及控制系统的安装效果，这一美丽的景观吸引了无数市民驻足观赏。



Let's review our progress



- Color Consistency
- Fixture Design/Manufacturing
- Signal Stability/Firmware
- Brightness

What sort of experience was it ?



So what do customers want ?

Quantitative Standards

Warranty Guarantees

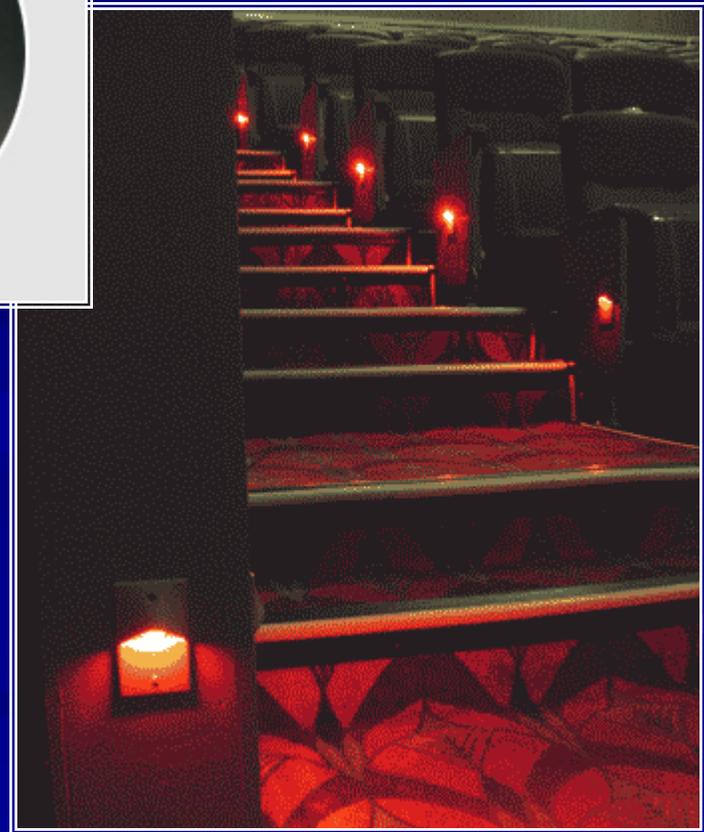
Dependable Packaging

Specification Support

Defined Pricing

and ... to be heard.

Quantitative Standards



Warranty Guarantees



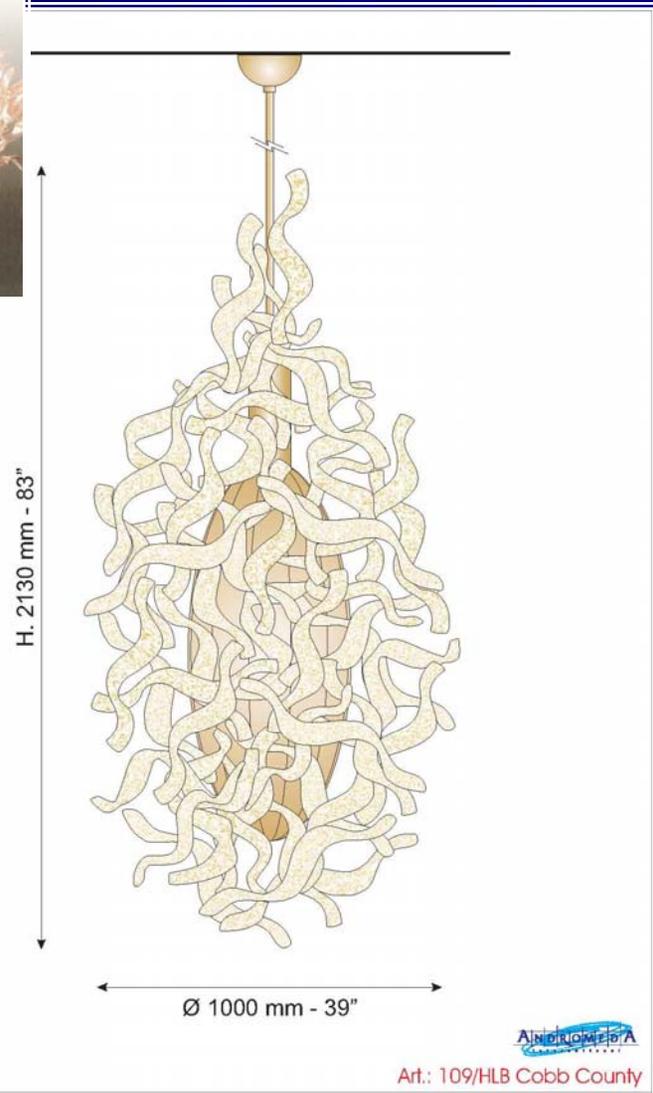
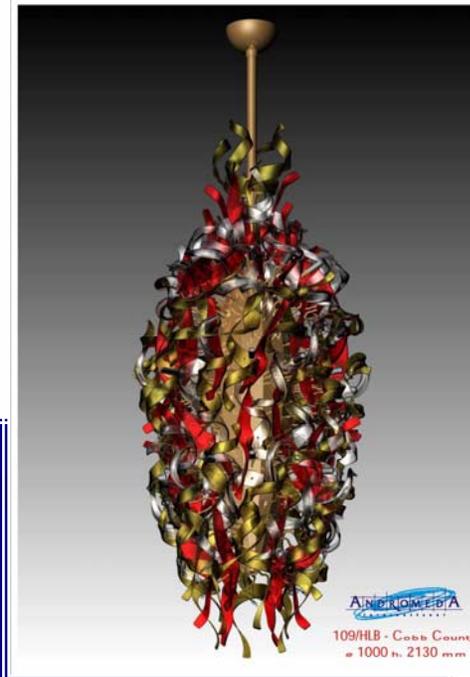
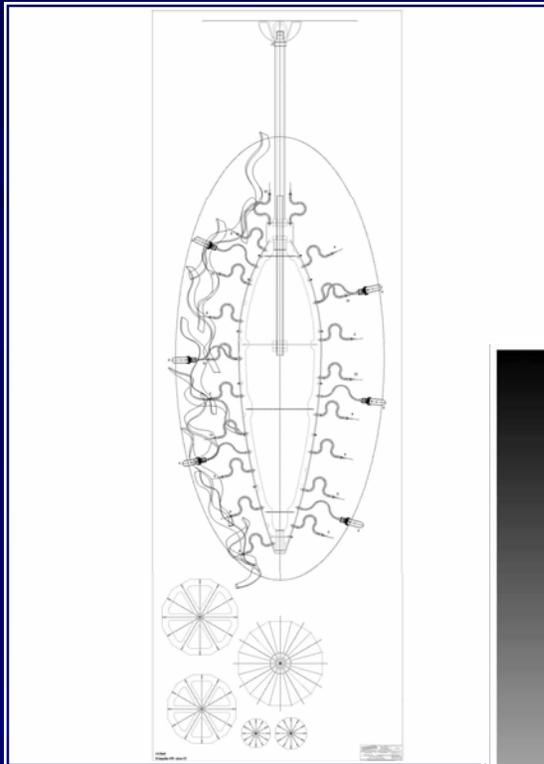
BLAME

THE SECRET TO SUCCESS IS KNOWING WHO TO BLAME FOR YOUR FAILURES.

Dependable Packaging

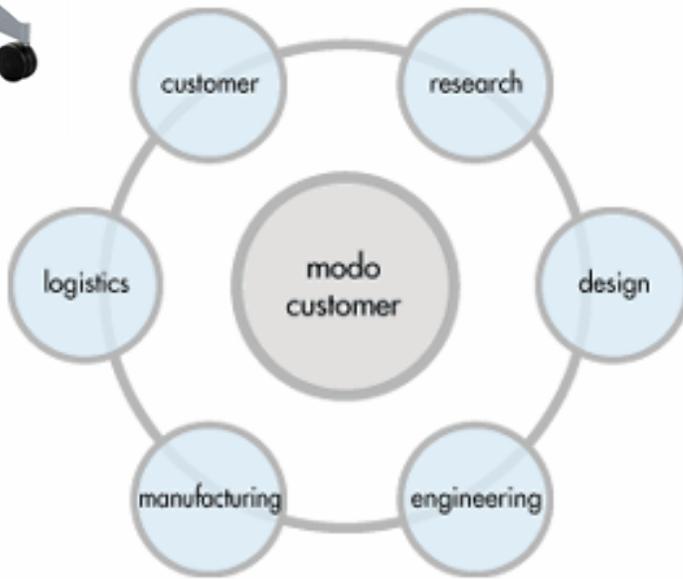


Specification Support



Defined Pricing





These are
the result
of listening
to the
customers

These
are not



DO YOU KNOW WHAT YOU DON'T KNOW?



IGNORANCE

IT'S AMAZING HOW MUCH EASIER IT IS FOR A TEAM TO WORK TOGETHER
WHEN NO ONE HAS ANY IDEA WHERE THEY'RE GOING.

So what should drive the market ?

Regulation

Technological Curiosity

Operational Savings

Decorative Desires

and ...

Problem-Solving.

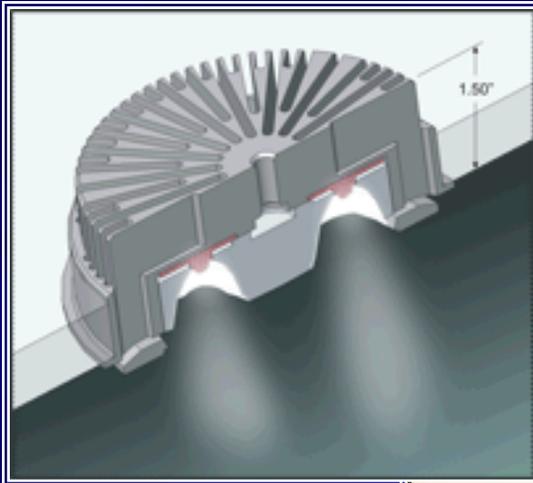
Regulation



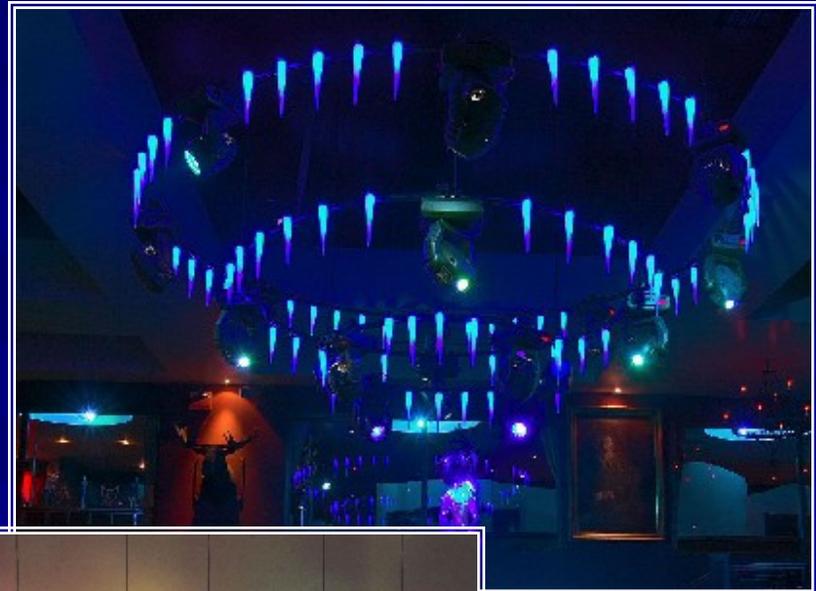
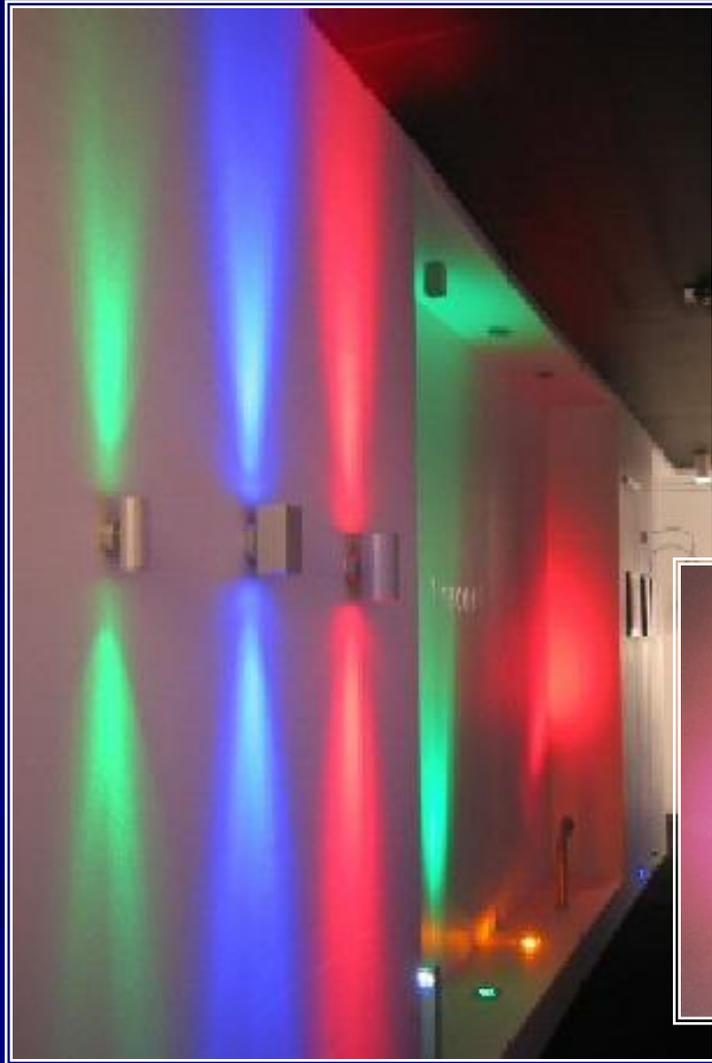
Technological Curiosity



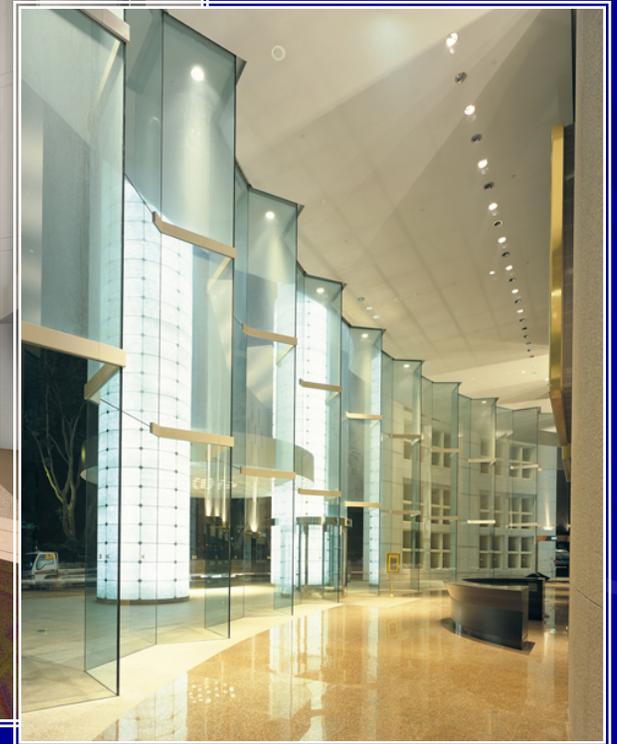
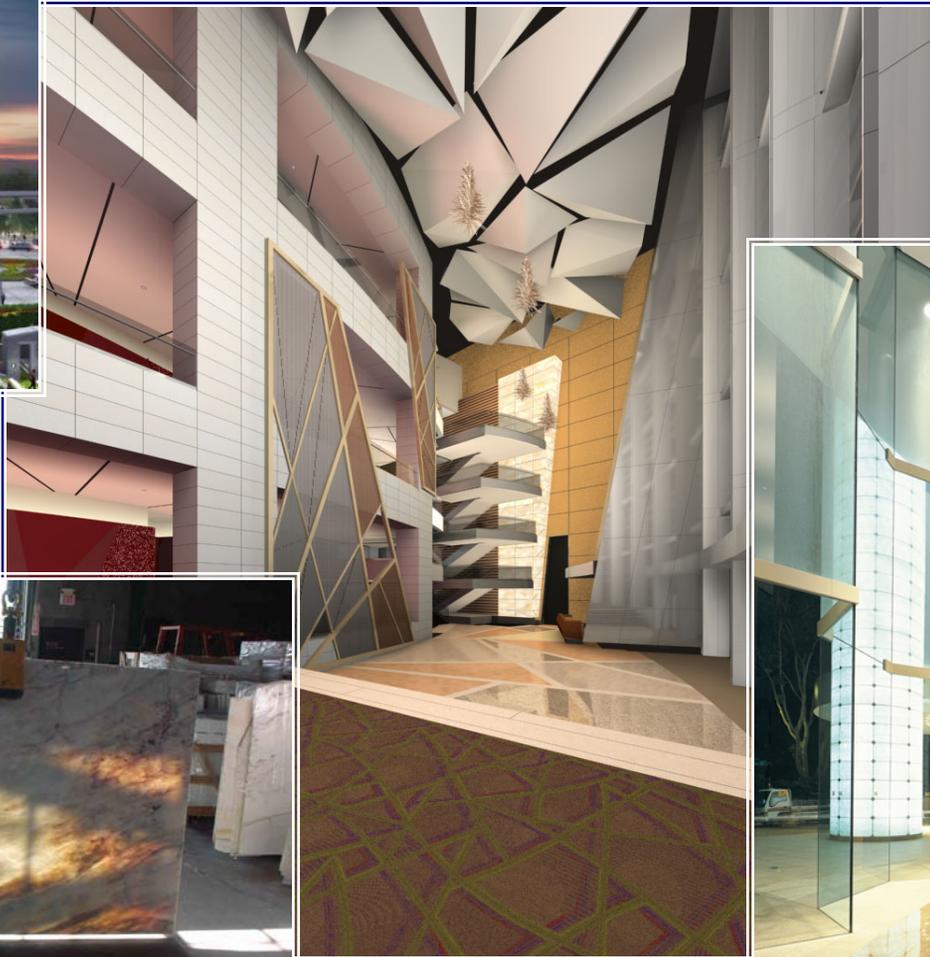
Operational Savings



Decorative Desires



But mostly, problem solving





CONSULTING

IF YOU'RE NOT A PART OF THE SOLUTION,
THERE'S GOOD MONEY TO BE MADE IN PROLONGING THE PROBLEM.

Science is spectral analysis
Art is light synthesis

Karl Kraus, *Pro Domo et Mundo*



Ted Ferreira, Principal
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Thank You