Enabling Efficient Cities
建设高效能城市

Mark Ginsberg
USGBC Senior Fellow
美国绿色建筑委员会'资深研究员 马克•金斯伯格

mginsberg@usgbc.org

How Cities Can Meet Climate Commitments through Green Technologies
城市如何能利用绿色技术而达成气候目标

Mark Ginsberg
USGBC Senior Fellow
美国绿色建筑委员会'资深研究员 马克•金斯伯格

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Two billion additional urban inhabitants are expected by 2030, the majority of whom will be in the rapidly growing cities of Africa, Asia, and Latin America.

到2030年将新增20亿城镇居民


The expected increase
in urban population of
2 billion people before 2030
would require the equivalent
of **200 new cities**
the size of the Paris region

Benefits to Cities
对城市的益处

- Reduce energy costs for the government…and citizens
- Reduce urban pollution and improve health
- Mitigate global climate change
- Assistance to achieve National and City Energy Goals
- Reduce power grid congestion
- Help assure reliable energy supplies
- Foster economic development
- Produce jobs in new and emerging technologies
- Increase community pride and reputation

- 为政府……以及市民减少能源费用
- 减少城市污染，从而改善健康
- 减轻全球气候变化
- 帮助国家和城市达到节能目标
- 减少电网负担
- 保证能源供应
- 促进经济发展
- 创造新技术领域就业机会
- 提高社区的荣誉感和知名度


We must engage
我们必须携手各方人士
Leading up to COP21 in Paris

U.S. – China Climate Leaders Summit　中美气候首脑峰会

September 15 - 16, 2015

Los Angeles, California

U.S. Governors and Mayors
美国的州长和市长

Gov. Jerry Brown

Mayor Ralph Becker

Chinese Climate Leaders
中国气候领导

11 Low-Carbon Lifestyle

Lead the low-carbon lifestyle and strengthen low-carbon community construction

In Wuhan Baibuting Community, children are making reusable bags together with foreign teachers

In Wuhan Baibuting Community, resident Yang Guangjie made soap from waste oil in smoke exhauster

In Wuhan Baibuting Community, residents made lanterns with waste materials and exhibited them on teh Lantern Festival, which were very popular. The [illegible] was concretely presented at this moment.

04 Low-Carbon Buildings

Implementation of green building standard and promotion of building energy efficiency demonstration

The implementation rate of energy saving at the design stage of newly constructed buildings in Guiyang City is 100%, while that of energy saving standard at the stages of both construction and completion is higher than 98%. There are altogether five construction projects in the city that have won 3-star green building design evaluation logo, and three projects have won 2-star green building design evaluation logo, with a total construction area of about 1.075 million m^2. There are 12 projects where renewable energy sources are used for construction and completion, with a demonstration area of application 890,000 m^2. There are altogether six projects in progress, with a demonstration area of application 2.08 million m^2.

Vertical Green in Guiyang City

Optical Lighting System in Guiyang City

Double-layer respiratory Curtain Wall

Guiyang International Conference and Exhibition Center-Green Architectural Clusters

02 Low-Carbon City

Low-carbon pilot program in full swing

China is vigorously promoting the construction of ecological civilization and green and low-carbon development. Approved by the State Council, the NDRC has implemented the pilot program of low-carbon provinces and cities in 2010 and 2012, and designated six provinces and 36 cities for this program.

欢迎来


Guangzhou is looking forward to collaborate with US and the globe to tackle climate change issues, and to strive for low-carbon development.
Welcome to Guangzhou!

U.S. – China Climate Leaders Summit 中美气候首脑峰会

Beijing. Sichuan. Hainan. Shenzhen. Guangzhou. Wuhan. Guiyang.

Zhenjiang. Jilin. Yan'an. Jinchang. Agreed to:

北京、四川、海南、深圳、广州、武汉、贵阳、镇江、吉林、延安、Jinchang 同意：

- Establish Ambitious Targets 设立高远目标
- Report on GHG Inventories 报告温室气体排放
- Establish Climate Action Plans 拟定气候应对行动计划
- Enhance Bilateral Partnership and Cooperation 加强双边合作

Committed "To achieve the peaking of CO2 emissions around 2020" – ahead of the national goal of 2030

承诺"在2020年CO2排放达到峰值" – 在2030年国家目标期限之前

https://www.whitehouse.gov/the-press-office/2015/09/15/fact-sheet-us-%E2%80%93-china-climate-leaders-summit

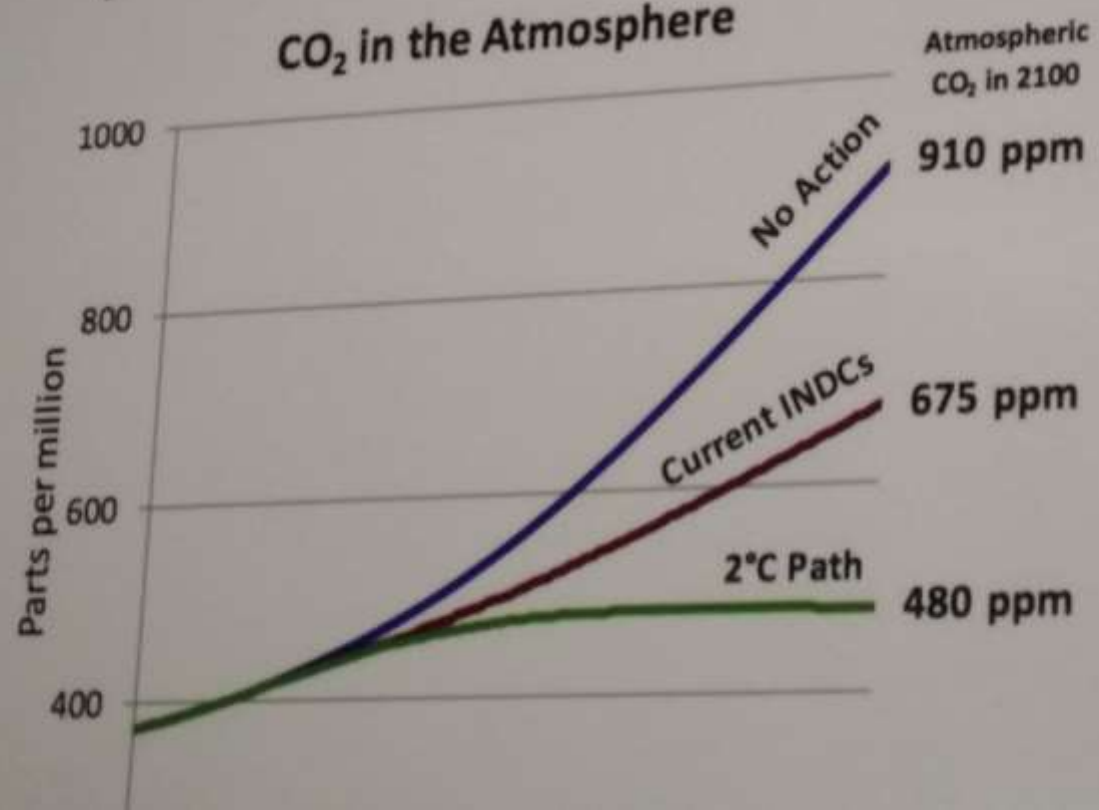
COP21 in Paris

第21届联合国气候变化巴黎大会

Welcoming 33,000 credentialed participants from 195 countries

欢迎来自195个国家的33,000位专业与会者

Why The Paris Climate Talks Matter



City Day 城市日

Hosted by Mayor Bloomberg and Mayor Hildago, who are joined by President Hollande and Xie Zhenhua

Mayors Present Commitments to UN Secretary General Ban Ki-moon
市长们向联合国秘书长潘基文作出的承诺

Gore
DiCaprio
Redford
Baldwin

Former Vice President
Al Gore

Gore at Ornate
Paris City Hall

Su Wei
News Conference

Energy Secretary
Ernest Moniz

行动动

力

Guiyang Eco-Forum 贵阳生态论坛

The Hope…..　愿景…….

The Reality……　现实……

what cannot be **measured** cannot be **managed**

准确的数据有助于管理


A SHIFT IN FOCUS
LEED 2009
FOUNDATIONAL
LEED v4
DEEPER TRANSFORMATION

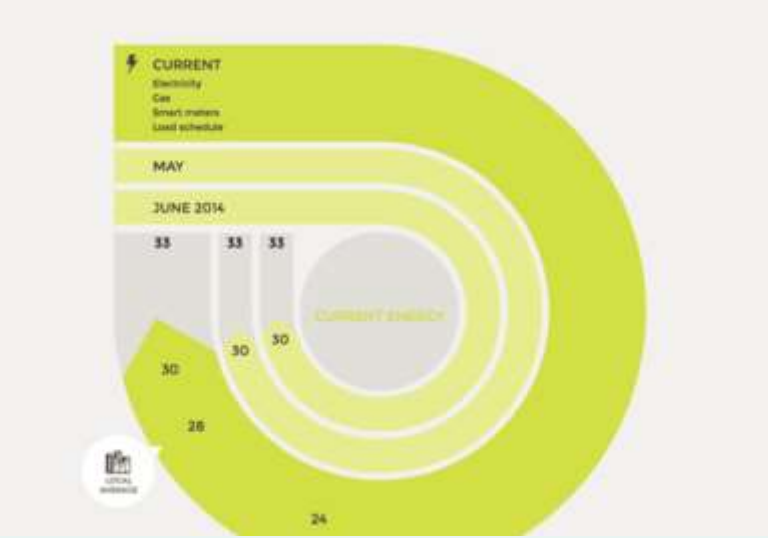
入LEED Dynamic Plaque平台

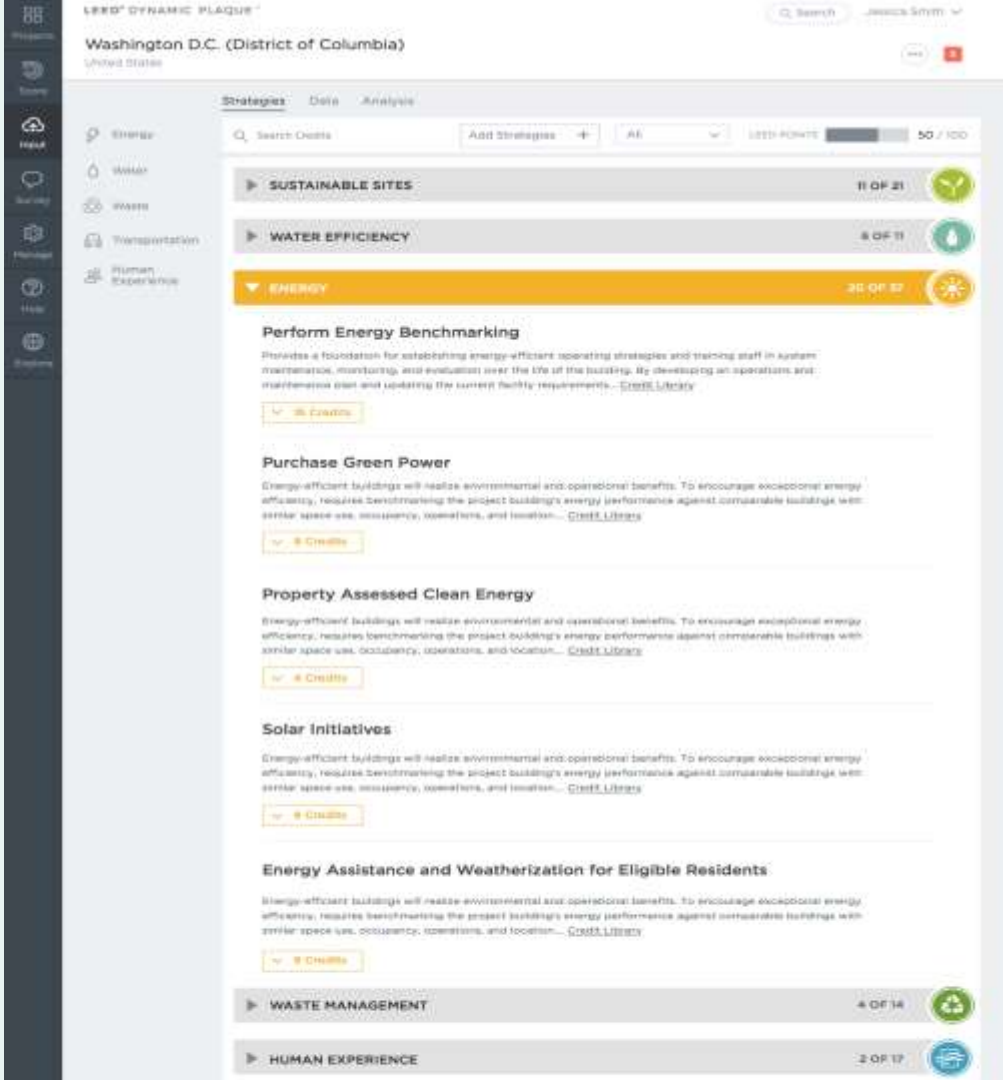
LEEDon.io

入LEED Dynamic Plaque平台

World Cities that are Implementing Strategies and Improving Performance are able to Participate

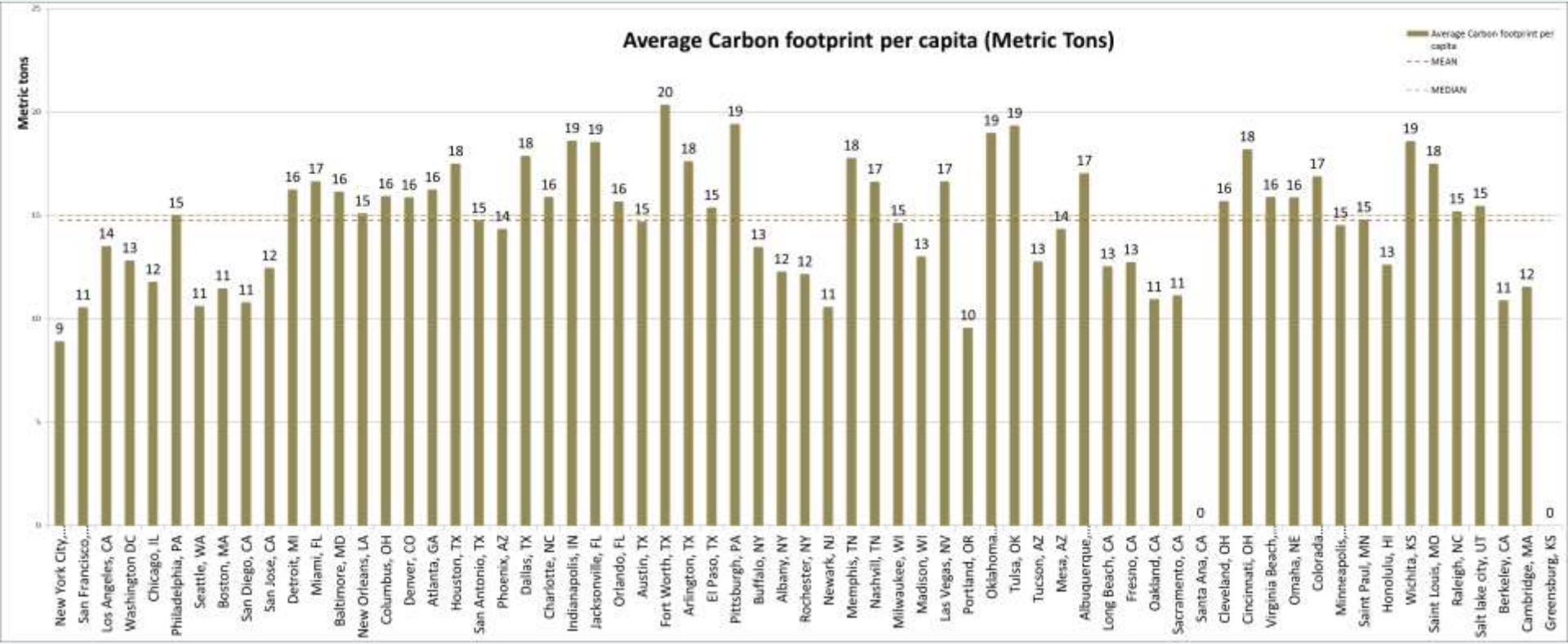
世界上有许多城市正在执行各种城市发展的创新策略、并积极提升城市发展水平，它们都能够加





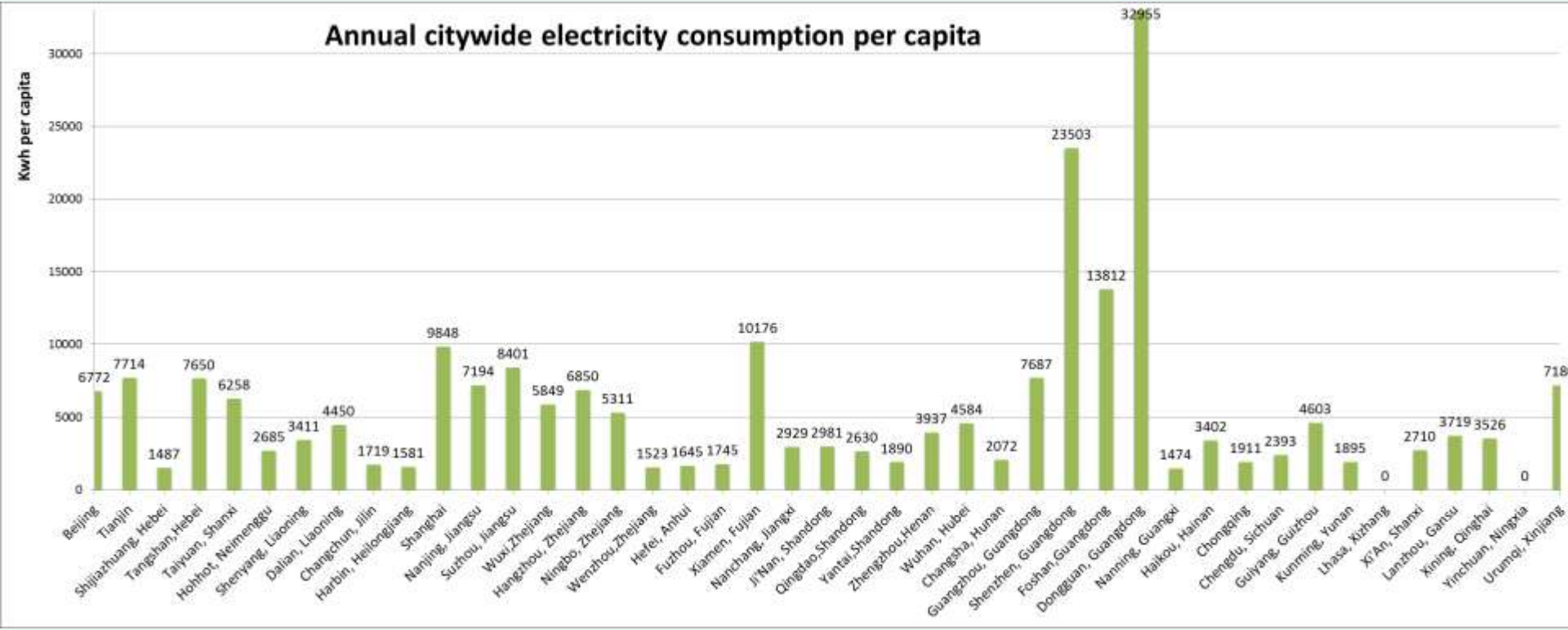
Data from 65 U.S. Cities is Already Integrated into LEED Dynamic Plaque Platform

已将美国 65个主要城市的数据整合进LEED Dynamic Plaque平台



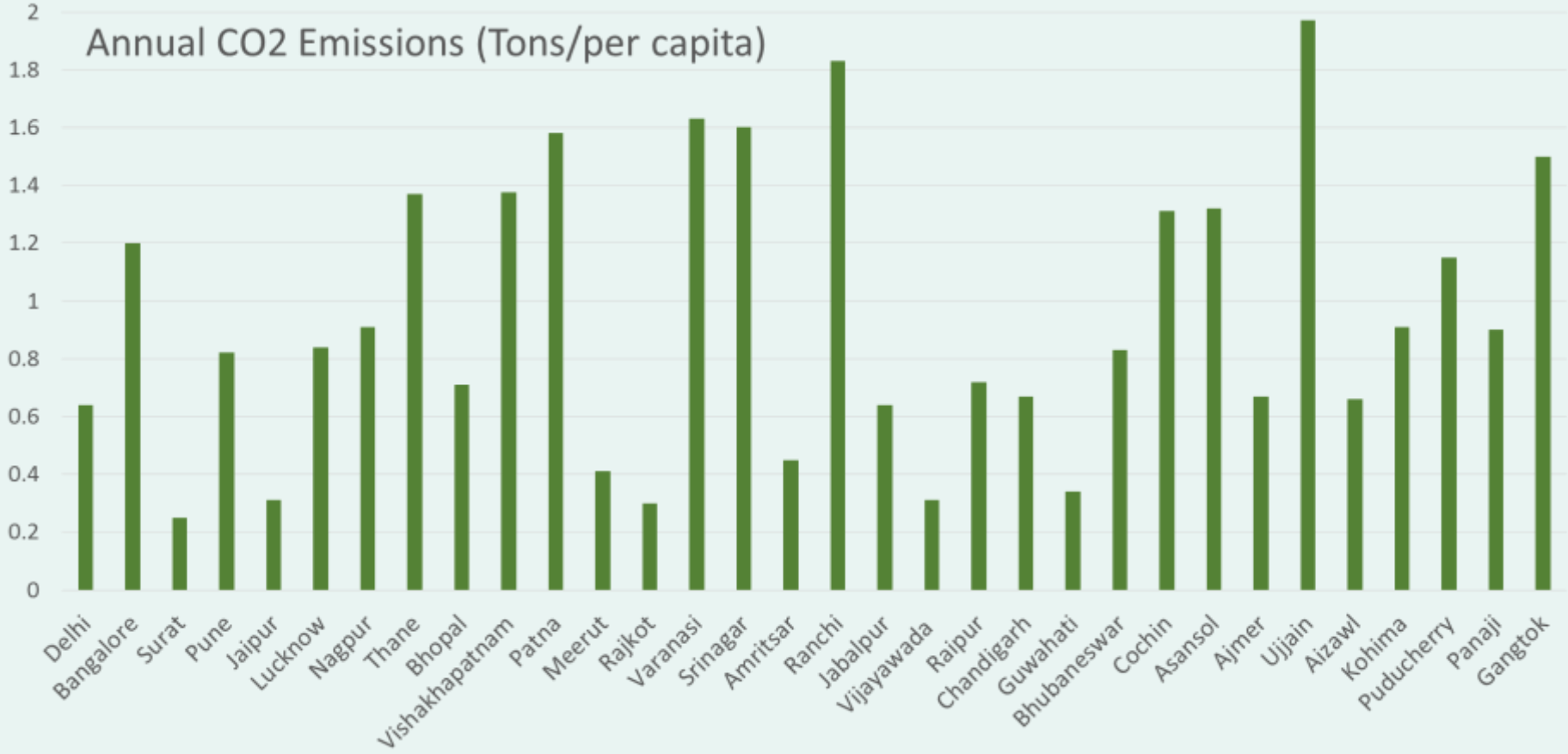
Data from 43 Chinese Cities is Ready to be Integrated into LEED Dynamic Plaque Platform

已将中国 43个主要城市的数据整合进LEED Dynamic Plaque平台



Data from 55 Indian Cities is Ready to be Integrated into LEED Dynamic Plaque Platform

已将印度55个主要城市的数据整合进LEED Dynamic Plaque平台



Suggested Targets and Strategies
建议 目标和策略

- **Energy**

- **Reduce Energy Demand**
- **Utilize Renewable Energy**
- **Require energy codes or building rating systems like China 3 Star or LEED**

- 能源

- 减少能源需求
- 使用可再生能源
- 要求建筑采用节能规范或建筑评级系统，如中国绿色建筑三星级认证系统或美国的**LEED**绿色建筑评级系统

#Detailed Targets and Strategies are available in: Environmental Sustainability Framework for Smart Cities, prepared By U.S. Green Building Council (USGBC) & The Energy Resources Institute (TERI)

Suggested Targets and Strategies
建议 目标和策略

Water

- **Reduce water demand by effective management**
- **Utilize all methane generated from the waste water treatment plants for energy.**

水

- 通过有效的管理，减少水资源的消耗
- 搜集并利用污水处理厂产生的甲烷气体作为能源

Suggested Targets and Strategies
建议 目标和策略

- **Waste**

- **100% collection of municipal solid waste**
- **Separation of waste that can be recycled**
- **Produce energy from all organic wastes**

- 废弃物

- 对城市固体废弃物进行**100%**的收集
- 将废弃物进行垃圾分类，便于回收利用
- 利用有机废物生产能源

Suggested Targets and Strategies
建议 目标和策略

- **Transportation**

- **Encourage walking with safe sidewalks**
- **Encourage bicycles with separate bike lanes**
- **Increase public transit (buses and subways)**
- **Convert city vehicles to electric and biofuels**

- 交通

- 确保人行道的安全，并鼓励人们步行出行
- 促进城市建设与机动车道相分离的自行车道，并鼓励人们骑自行车出行
- 加强建设公共交通系统（公交车和地铁）
- 促进城市传统能源汽车向电动车和生物燃料汽车转变

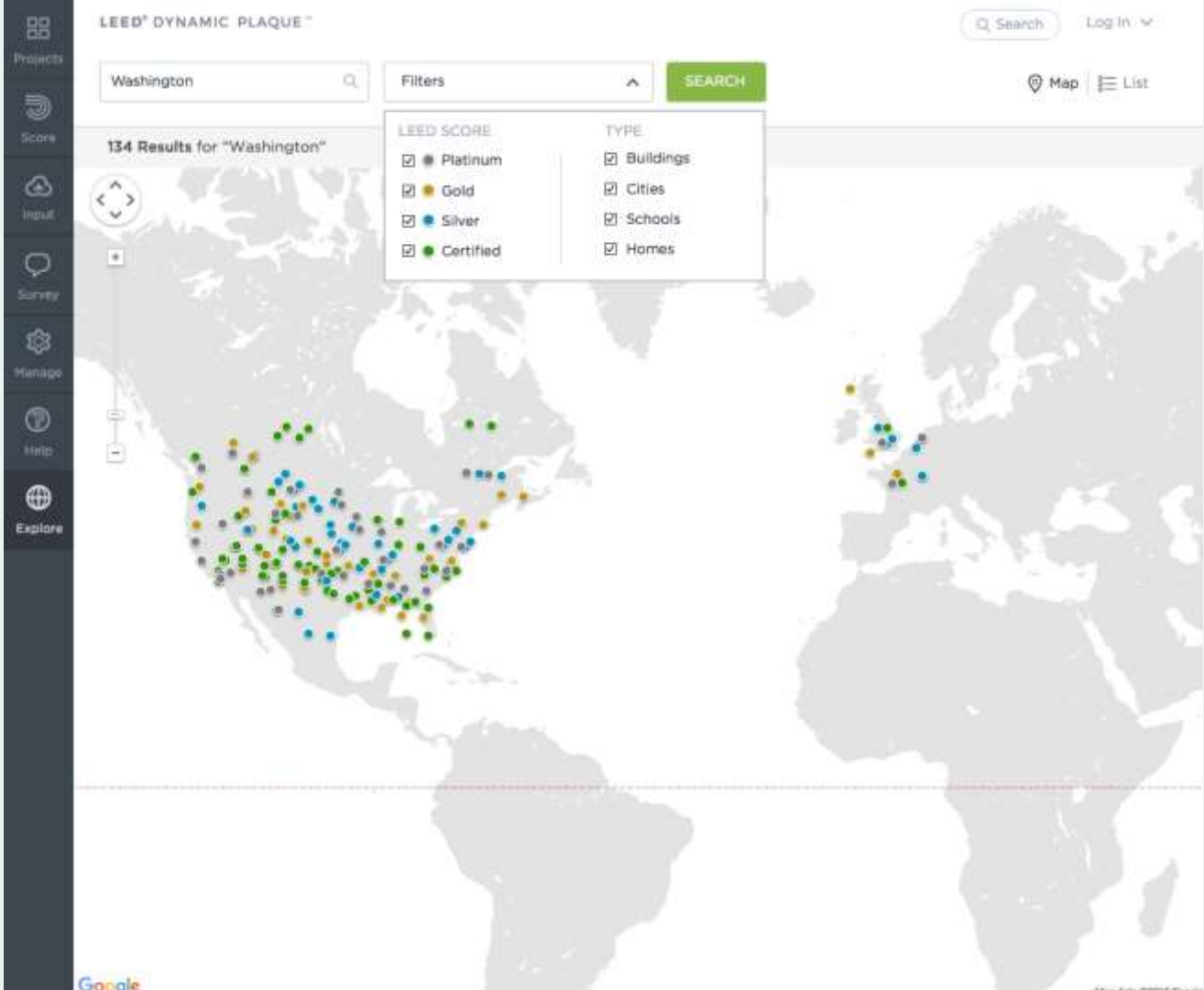
Suggested Targets and Strategies
建议 目标和策略

- **Human Experience**
  - **Improve human health**
  - **Increase green jobs and employee productivity**
  - **Make cities safe, clean, and livable**

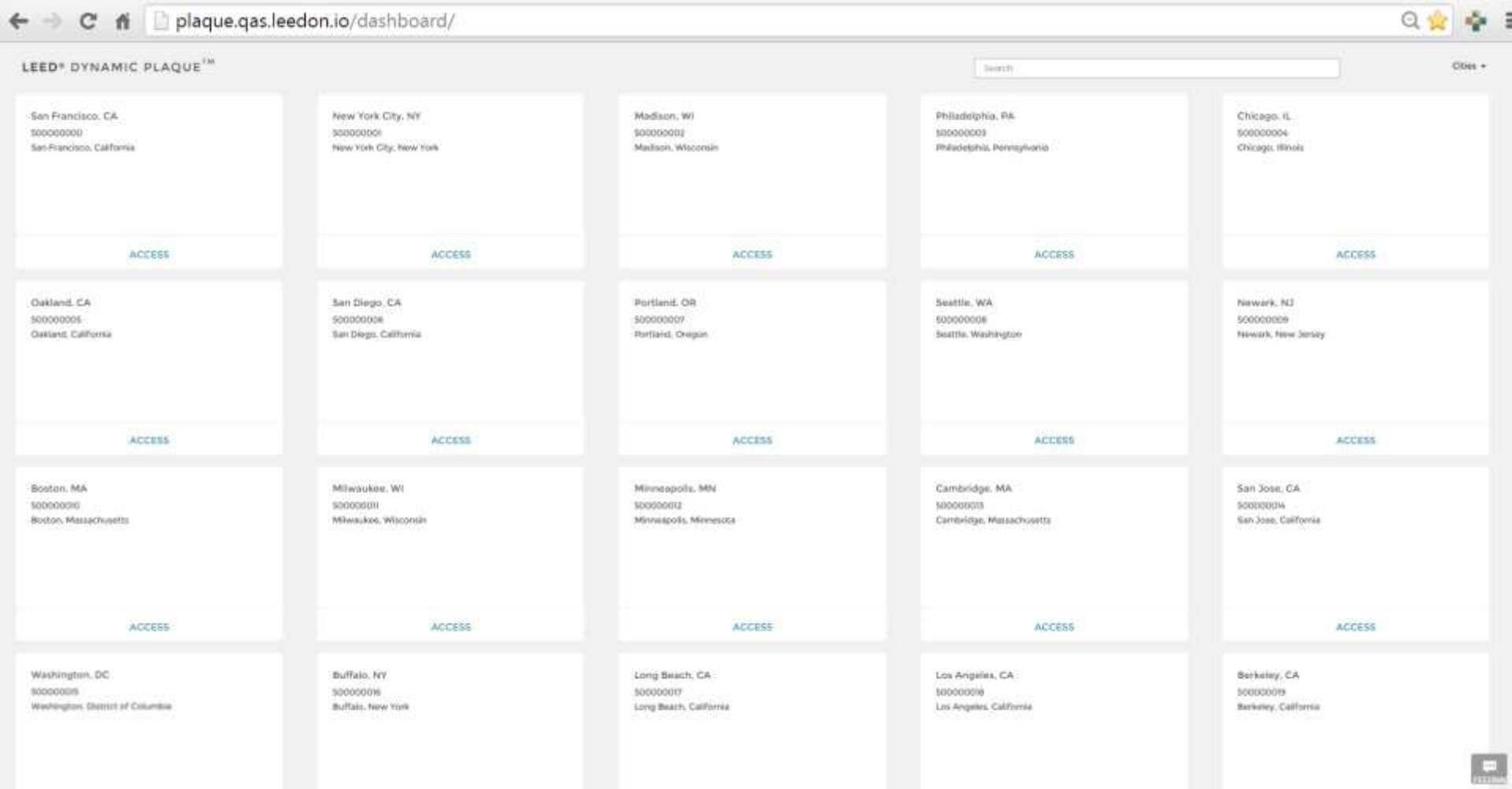
- 居民体验
  - 提高居民健康水平
  - 增加绿色就业、提升员工工作效率
  - 使得城市变得安全、清洁且宜居

LEED Online Offers World Cities a Platform to Compare and Compete

“LEED在线”为全世界的城市提供比较和竞争的平台



LEED Online – Cities Dashboard



Suggested Action Plan for Cities

- ***Invite Cities*** in to participate on the LEED Dynamic Plaque Platform
- ***Support cities*** for data collection with standardized online platforms
- Provide an ***open data platform*** for all city data
- ***Dynamically track performance***
- ***Provide world outreach*** in online and print media and Conferences
- ***Assist in deploying policies, codes and practices***
- ***Share best practices and Recognize Outstanding Leaders***
- ***Help improve urban performance*** with tools like LEED, EDGE, PEER, etc.
- ***Training and Capacity building*** – suggest workshops and education tools

建议城市的行动计划

- 邀请城市加入**LEED Dynamic Plaque**平台
- 为城市的数据收集提供标准化的网络平台
- 为所有城市数据提供公开的数据平台
- 动态追踪城市工发展表现情况
- 通过网络、印刷媒体和会议等方式，为城市提供世界服务
- 协助城市部署政策、规范，以及开展实践
- 分享最佳实践，并表彰卓越领导人
- 利用**LEED, EDGE, PEER**等工具，提升城市发展水平
- 技术培养和能力建设——建议采用研讨会和其他教学方式


Everyone in a green building within this generation.
为这一代每一个人的绿色建筑

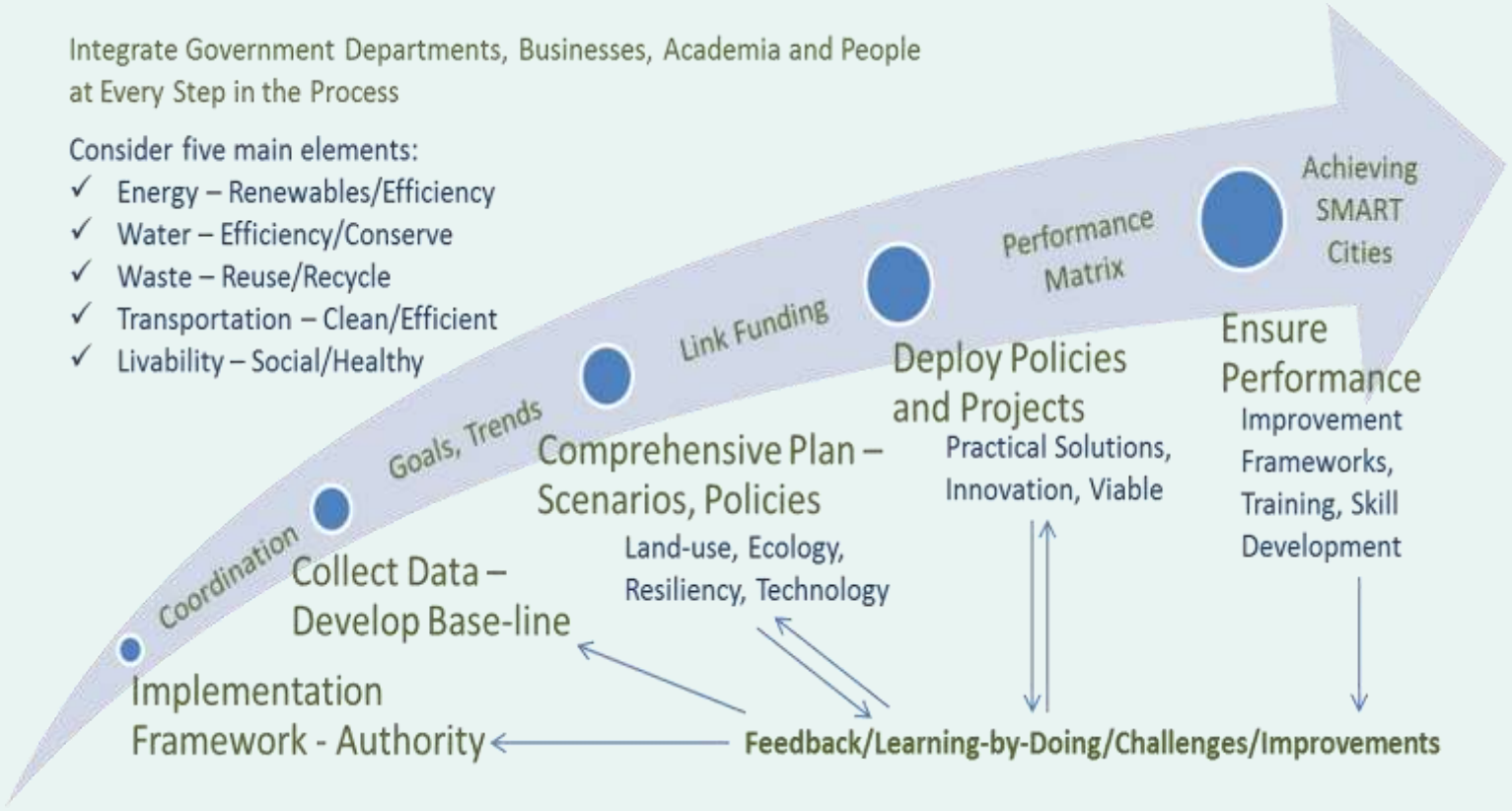

LEED
ON
LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN
LEED

Extra Slides

Our Rationale for Cities

- Cities are at the ***forefront*** of implementing most innovative and practically viable solutions.
- ***Investments made today*** in urban infrastructure and buildings will shape these cities for the next few generations.
- The construction of these cities is achievable with the ***right tools, commitment and local leadership***.
- Cities need to strive to address ***ambitious but achievable goals***, with a set of guidelines and detailed strategies.
- Cities collect much of the needed information currently, but need to assemble it into a format that will help them ***plan, implement, manage and demonstrate measurable progress***.

Suggested Comprehensive Implementation Approach



- Implementation of Action Oriented Viable Solutions
- Phased approach for 1-5 years with Capacity Building

CITIES OF THE FUTURE…

Will be successful ONLY if they are GREEN

→ Efficient
→ Affordable
→ Resilient

Green cities will utilize

→ Energy efficiency
→ Renewable energy
→ Smart grid
→ Integrated urban design