

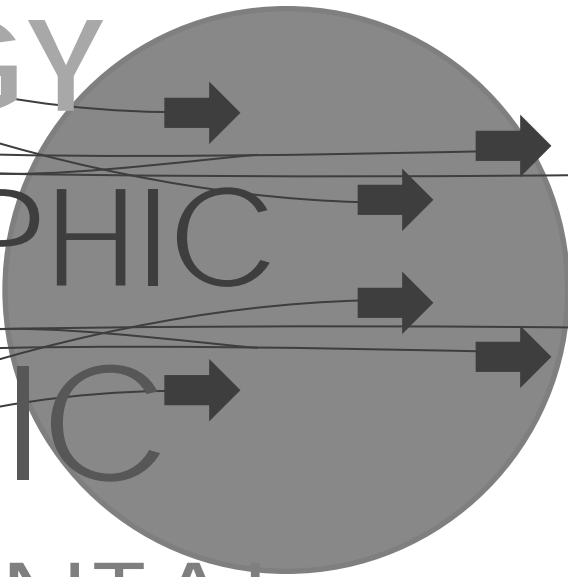
# FUTURE IMPACTS ON DESIGN AND THE WORKPLACE



INTERIOR ARCHITECTS  
Seattle Washington

Historic Catalysts

TECHNOLOGY  
DEMOGRAPHIC  
ECONOMIC  
ENVIRONMENTAL

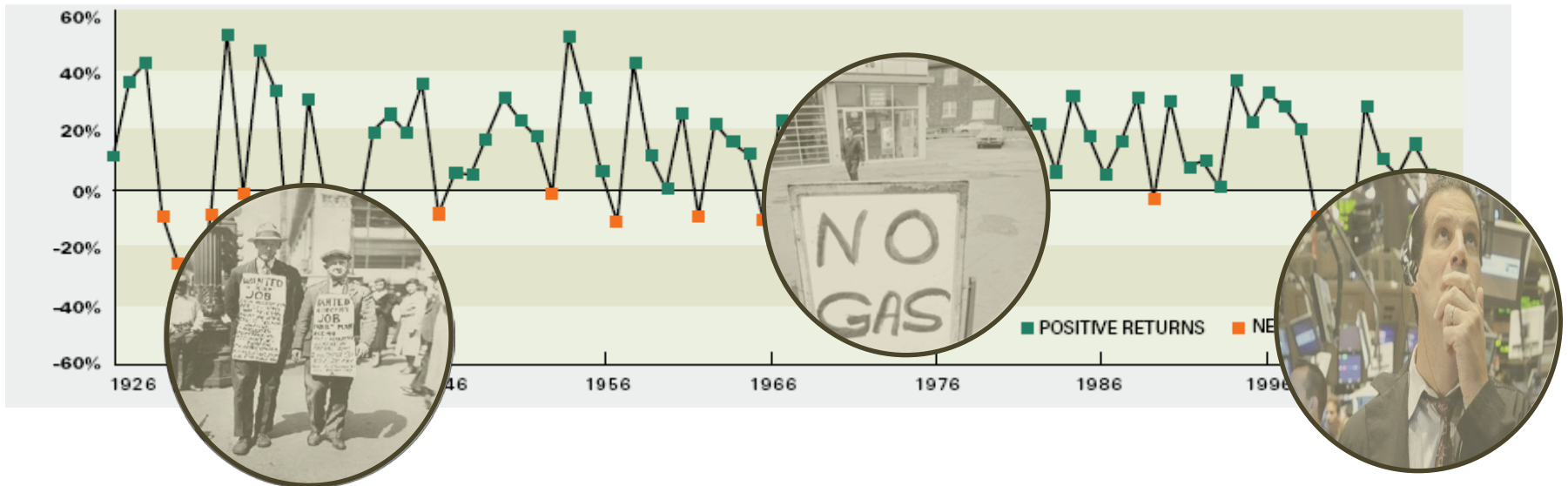


**EMERGING  
TRENDS**

# 1926-2009

The Market rarely moves in a straight line. Market fluctuations and market extremes are a fact of life. The one certainty is that your portfolio will experience volatility.

Reported by Lord Abbett + Ibbotson Associates, Inc





**1951**

The UNIVAC I, the first commercial, general-use computer, designed by John Mauchly and J. Presper Eckert. It can retain a maximum of one thousand numbers and is able to add, subtract, multiply, divide, sort, collate, and take square and cube roots. \*

**It also took the space of a one-car garage.**

**8**

ft high

**7**

ft wide

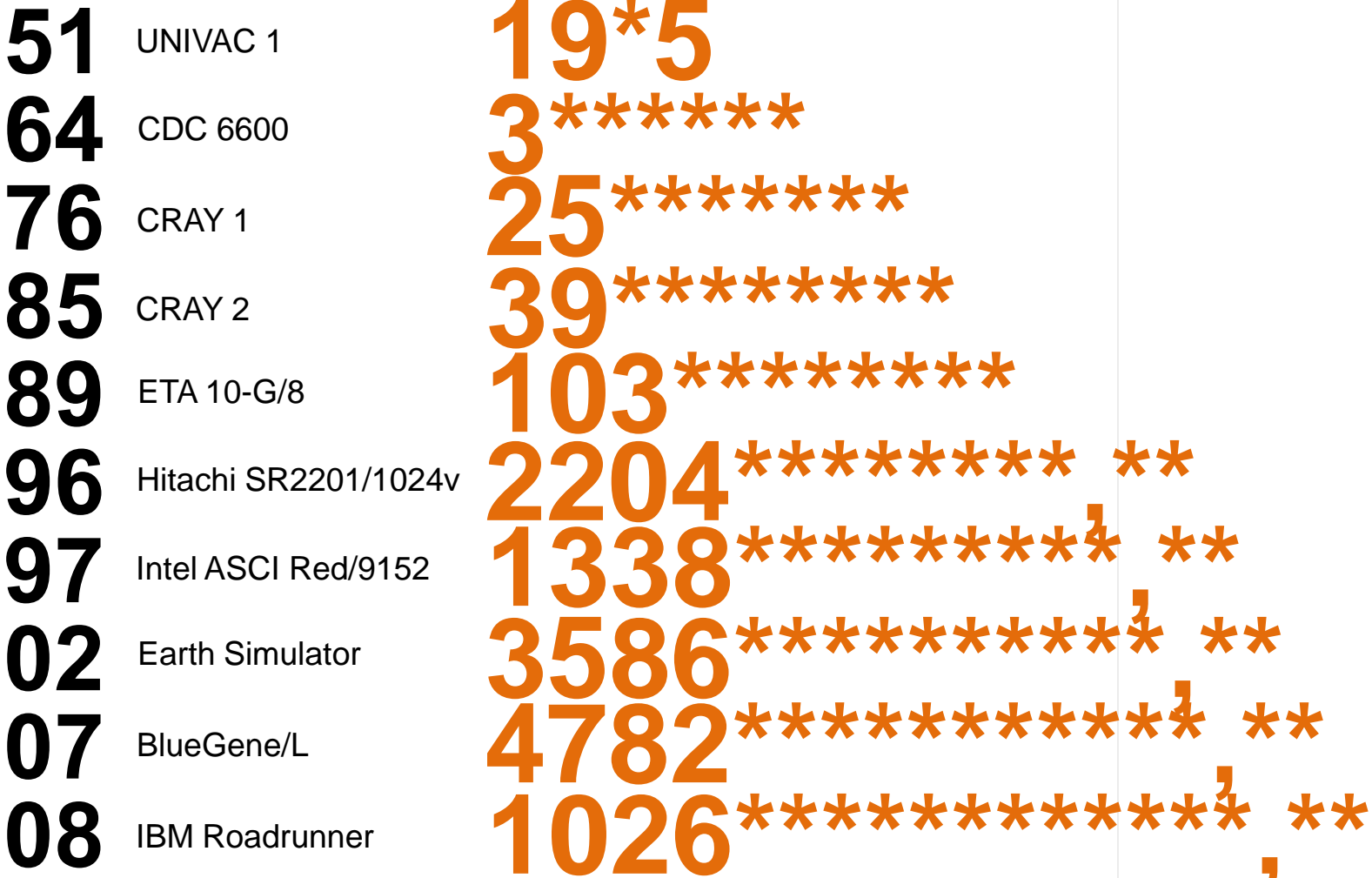
**14 1/2**

ft long

# Historic Catalysts

## Computation Milestones : Floating point Operations per Second

FLOPS



YEAR

Source: M. Dietrich & U. Zimoch

**Computation speeds have increased exponentially and the space needs dropped almost as dramatically; leading to productivity gains and entirely new ways of working. Research by the Work Design Collaborative indicates a**

**1.4** return on investment for every dollar spent on new technology.

By the year 2000, the EPA estimated that 44,000 buildings were demolished every year. About

**25 - 33%**

of the waste in landfills were from construction and renovation -

**57%** of that being from commercial buildings.

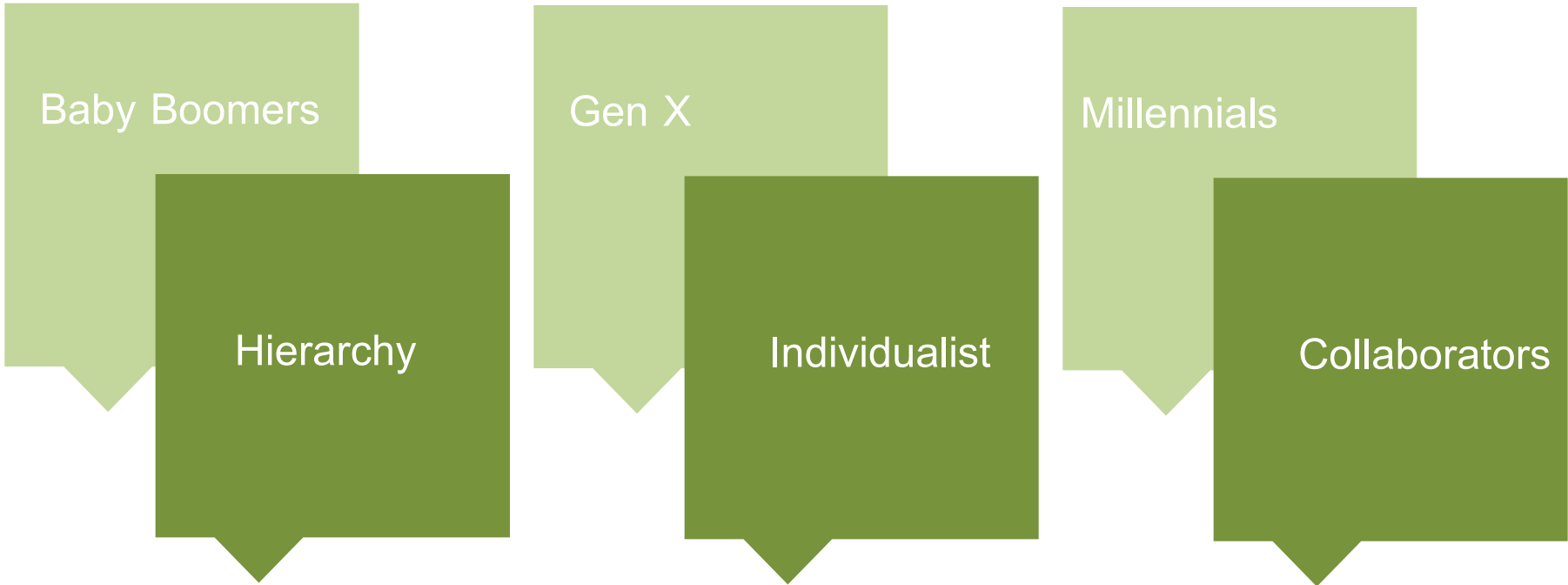


In 2007, over **1.2** million tons of material was diverted from landfills in the metropolitan Seattle area. That's 82.4% of all construction waste.

That's **82.4%** of all construction waste.

Source: King County Solid Waste Division

# Generational Character Shifts



**what  
matters**



profitability  
matters

**The most important real estate issue facing my business in the coming 12-18 months is:**

**53% reported Reducing occupancy costs with about the same locations**

**34% reported Expanding the number of locations**

**13% reported Reducing the number or size of our locations**

**Reported by Galaxy Partners**



**A sale-leaseback deal can improve the organization's debt-to-equity ratio and reduce depreciation and interest costs, all of which have a positive impact on a firm's balance sheet**

**Use capital for higher rate of internal return (15%-30%) compared to 7%-12% for real estate holding**

**unlocking  
real estate  
value into  
working capital.**

**Source: Bain & Company**

# factors to consider

**Control of the property – lease (expense) or own (capital)**

**Facility use, life span to occupy the facility, improvements, and financial considerations**

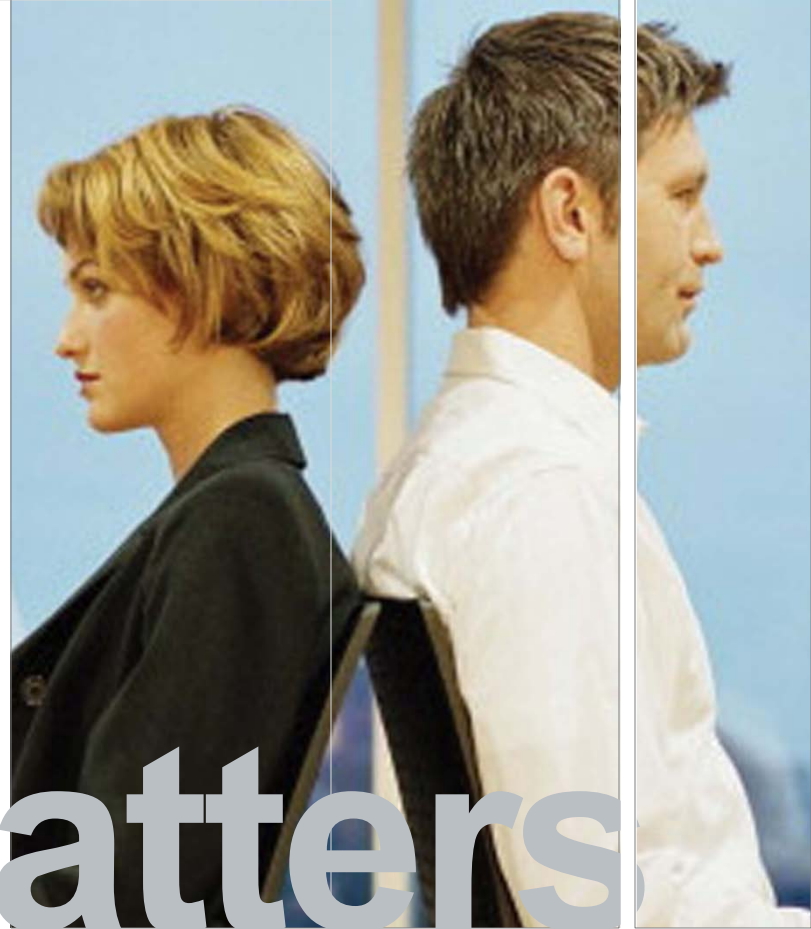
**Typically own strategic assets - R&D, headquarters and strategic manufacturing Facilities**

**Leased properties tend to be distribution facilities and the bulk of office space**

**Gain flexibility (downsizing, expanding, relocating) while maintaining control of the facility**

**Source: Bain & Company**

people matters



# Changing Lifestyles

**Baby Boomers**  
1946  
**1964**

TV Generation  
Typewriters  
Telephones  
Memos

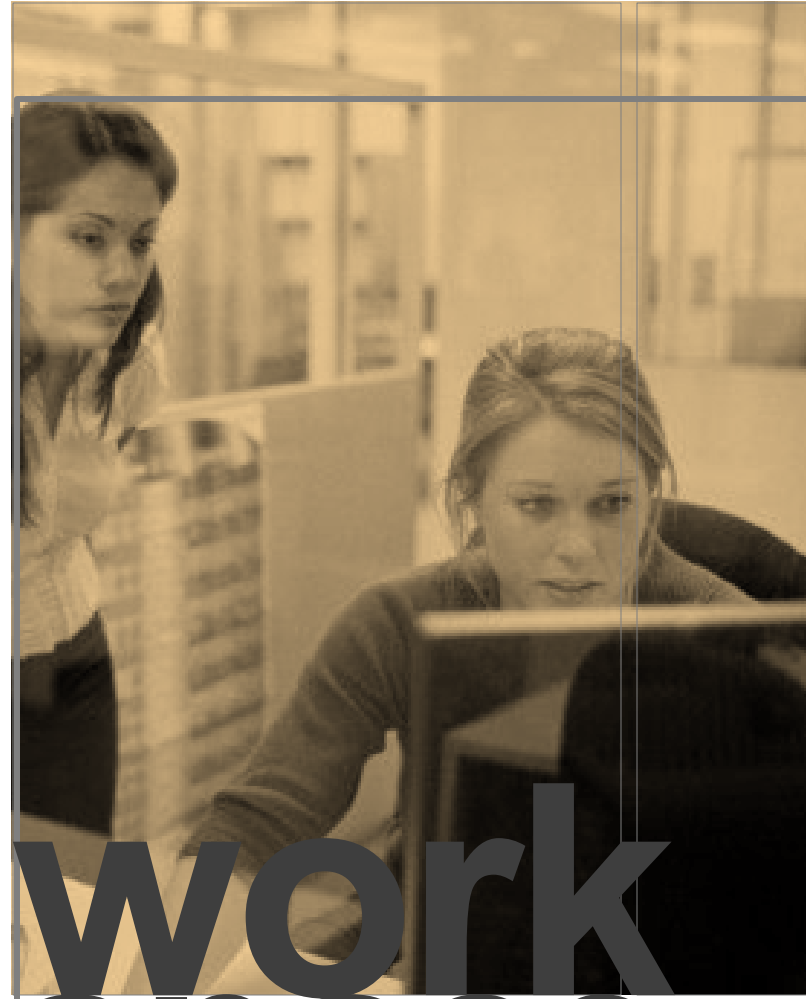
**Gen X**  
1965  
**1982**

Video Games  
PC  
Email  
CDs

**Millennials**  
1982  
**1991**

World Wide Web  
Cell Phones/iPods  
IM  
Online Communities

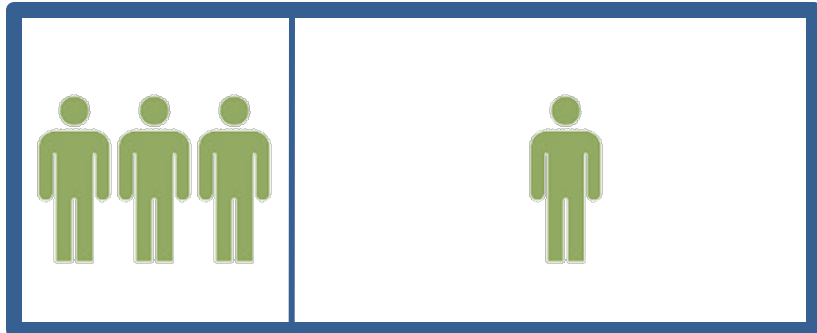
Source: CoreNet Global



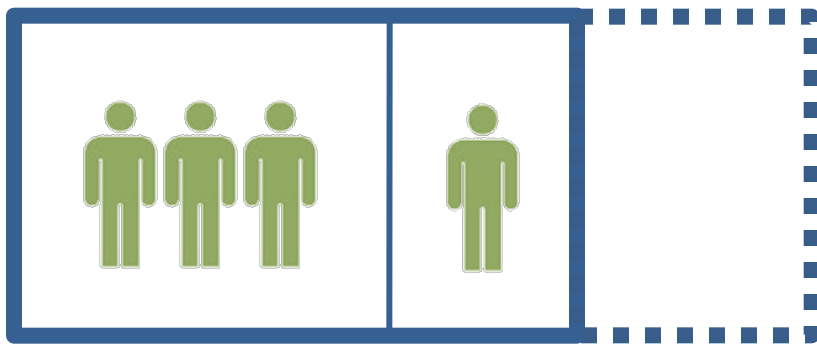
# work space

# Meeting Space

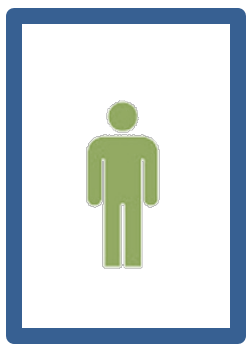
Meeting space currently averages **17** sf / person



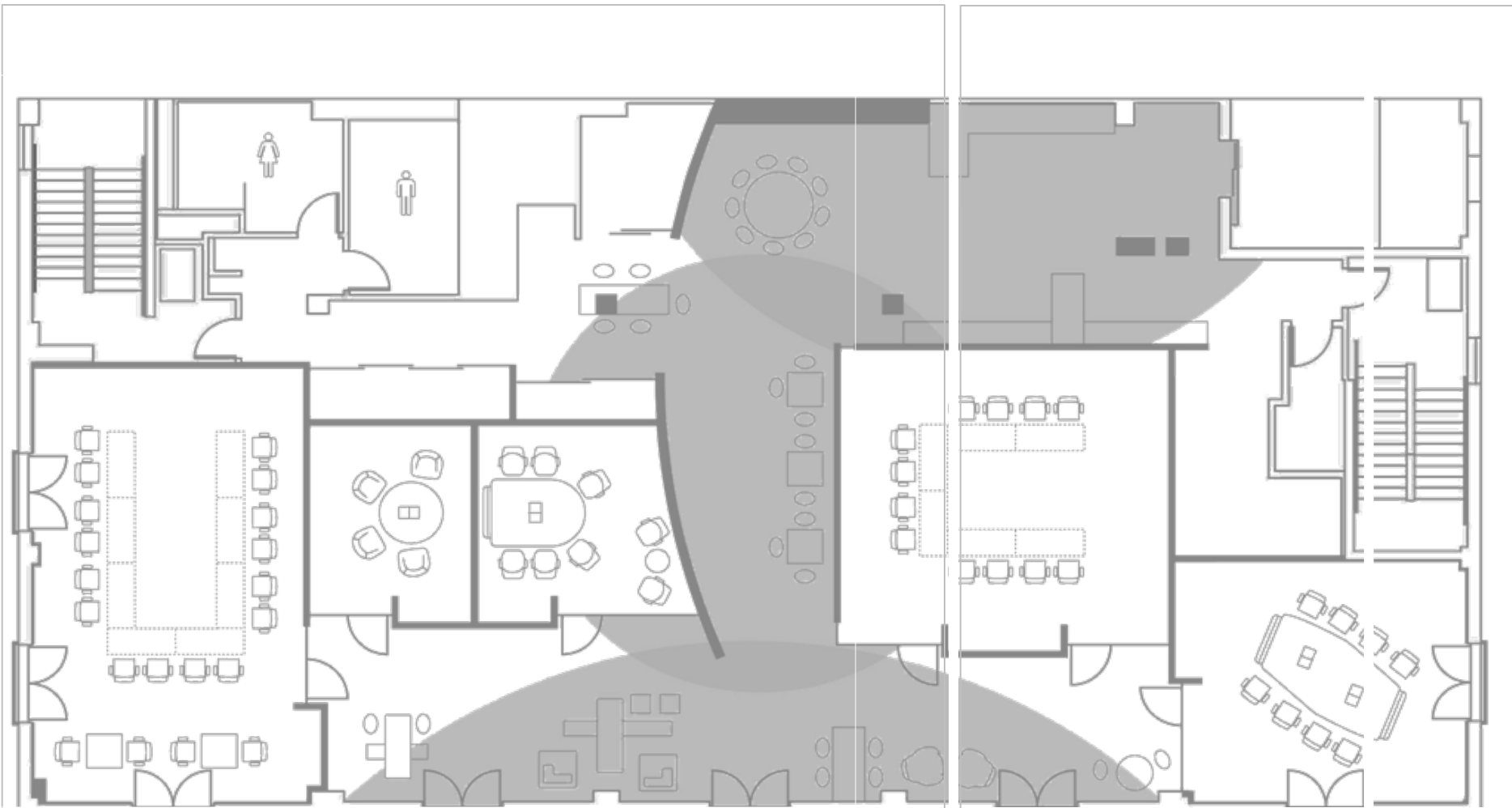
Moving to more group space & **remote** work



Reduced Area



Remote Work

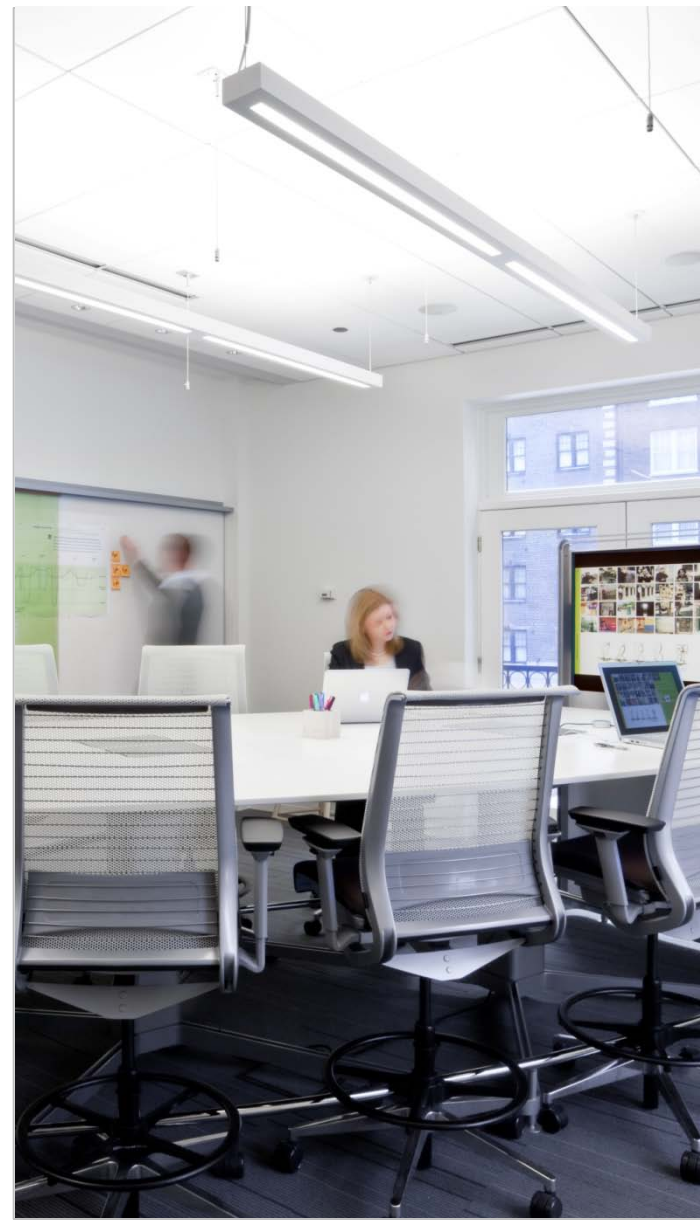


# interaction & collaboration

are redefining the workplace.

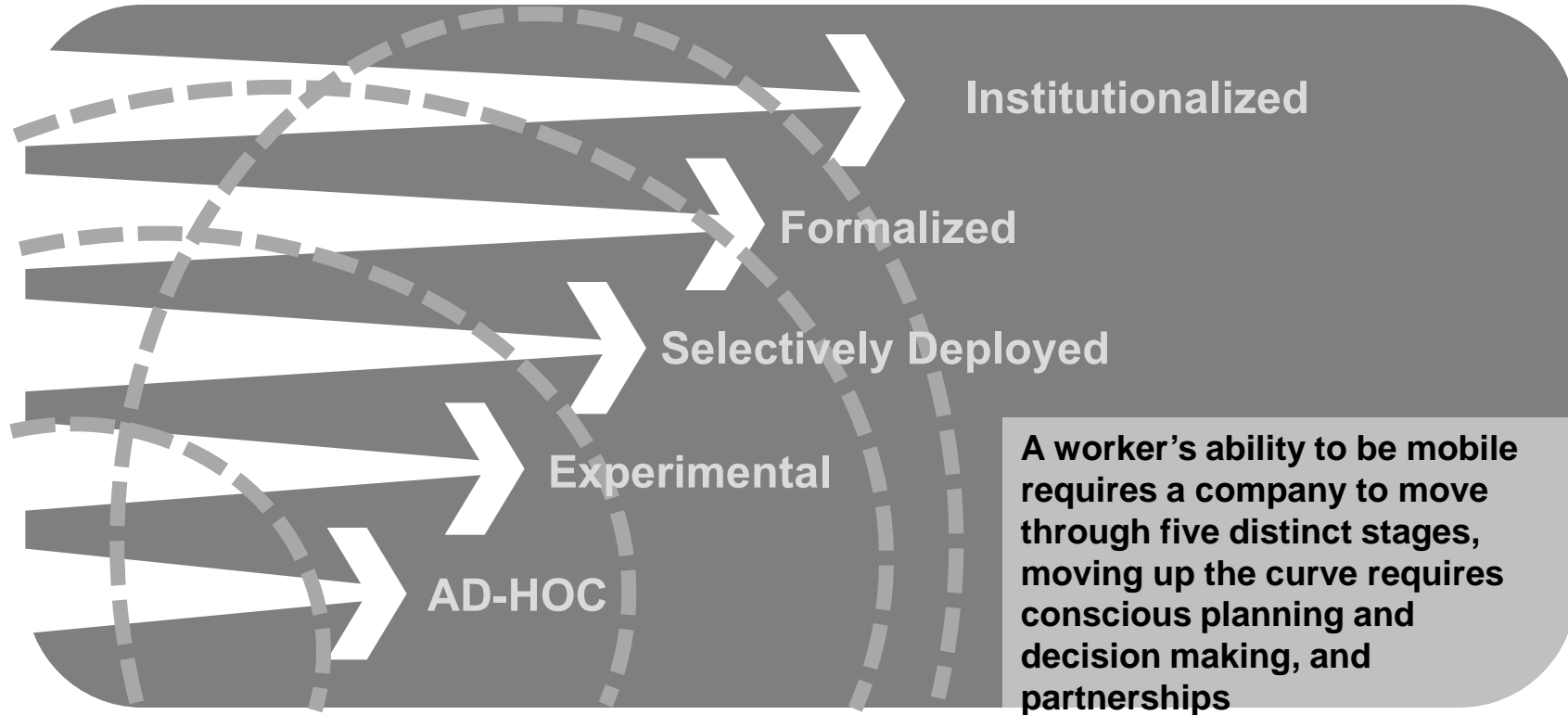
**Workspring**  
Chicago, Illinois





# Technology Mobility Maturity Model

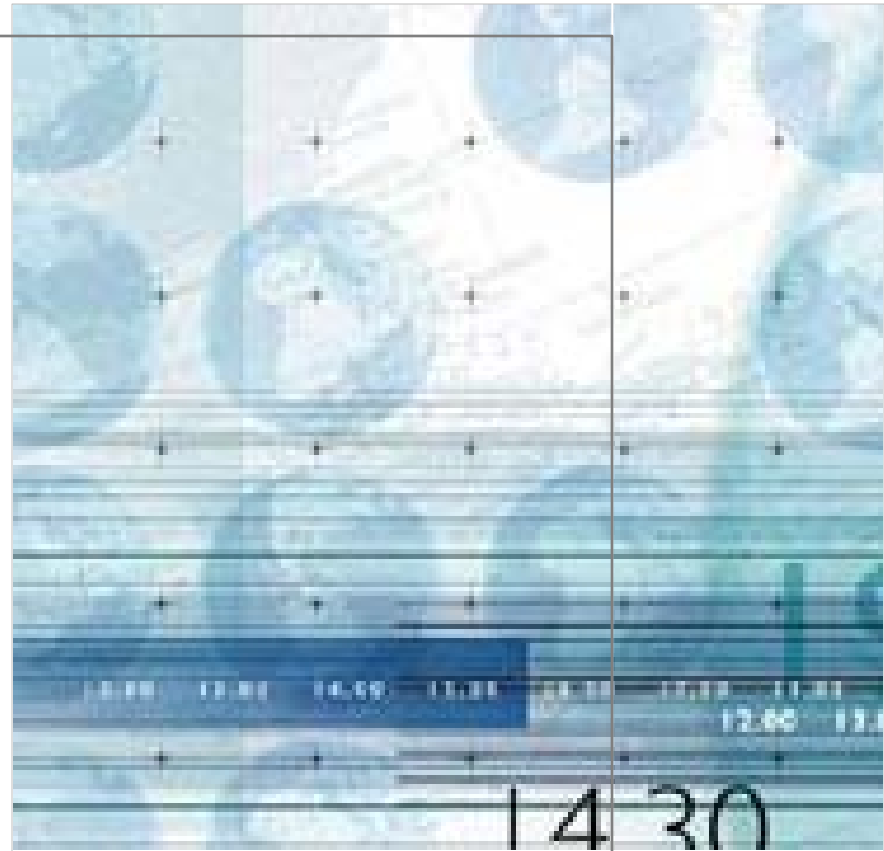
**Program Age &  
Telework Experience**



**A worker's ability to be mobile requires a company to move through five distinct stages, moving up the curve requires conscious planning and decision making, and partnerships**

**low    Scale of mobile program    high**

Source: CoreNet  
Global



# planet matters

**"WE**  
**DO** NOT  
INHERIT THE EARTH  
FROM OUR ANCESTORS;  
**WE BORROW IT**  
FROM OUR  
**CHILDREN"**



OPTIMISTIC  
RESILIENT  
VISIONARY  
TRANSFORMATIVE



sustain-  
ability



**Green Lease**

**Due Diligence**

**Building Energy Usage**

**environmental  
drivers**

- 01 Green Lease
- 02 Connecting with Nature
- 03 Adaptable Design
- 04 Energy Efficient Office Equipment
- 05 Energy Efficient HVAC
- 06 Energy Efficient Lighting
- 07 Employee Well Being
- 08 Healthy Building Materials
- 09 Regional Resources
- 10 Construction Waste Management

# green lease

# overview benefits strategies checklist

## QUICK GUIDE

## 01 GREEN LEASE



### Overview

Landlords compete for tenants by designing, building and managing sustainable buildings that do not sacrifice comfort or operation, but still maximize the landlord's return on investment.

Recent studies show that spaces designed to green building standards yield higher rental rates and resale values. They can also result in more generous loan underwriting.

For the tenant, Green Lease incentives include enhanced recruitment, lower healthcare expenses, greater productivity and lower operating costs. There are two different types of Green Leases.

The **Net Lease** shifts the landlord's responsibility for operating costs. Some say that this structure creates a financial incentive for landlords to effectively design, build, and manage high-performance buildings. When the lease is such that energy costs are not passed through to the tenant, the owner could pocket the energy savings, reduce rents in a competitive market, improve occupancy, and therefore increase profitability.

The **Net Lease** puts responsibilities on the tenant. The landlord transfers the risks of rising energy costs, since the tenant pays base rent plus a separate charge for all operating costs (utilities, maintenance, insurance, and taxes). Proponents of this structure say there is more incentive for tenants to use less energy, as they will see the savings more directly.

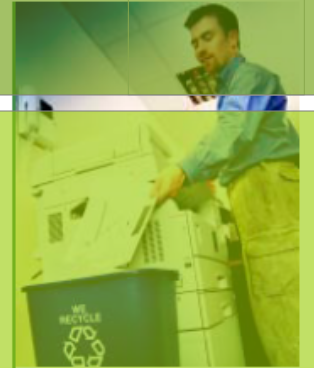
### Strategies

*Prior to negotiating a greener lease, consider establishing criteria for selecting a site or a shortlist of properties.*

Staff will have more options for traveling to work if the location is in close proximity to public transportation, if there is access to bike storage, if there are shower rooms in the building, and if there are designated carpool or alternative fuel vehicle parking spots or nearby access to a Flexcar program. In addition, proximity to amenities such as banking, shops, and restaurants is desirable to staff and helps build quality of life and the surrounding community.

Reduced absenteeism and lessened healthcare costs are proven results of a healthier work environment. Starting with the use of non-toxic building materials to proper air filtration to the use of non-toxic cleaning products, green practices make a difference. One of the greatest contributors to poor indoor environmental quality and poor health is an improperly designed, installed, and maintained HVAC system. Systems commissioning—a continual audit and maintenance to assure that equipment is performing as intended—is important to a systems' continued efficiency. Insurance companies are taking note. They may begin offering premium credits, lower deductibles and rebates since commissioned buildings will be less problematic, thereby reducing claims.

Energy efficient lighting systems and HVAC systems reduce operating costs. When the tenant has the ability to pay for and monitor their utilities separately, they can realize the savings on smart choices regarding plug load, lighting use and HVAC operation. Plus, more efficient buildings emit less harmful CO<sub>2</sub>, thus reducing our impact on the environment.



### Quick Fact

*In the average office building, energy costs approximately \$1.59 per square foot, per year. That's 16% of the total operating costs.*

	SITE 1	SITE 2	SITE 3
<b>Existing Green Ratings</b>			
Is the building or will it be LEED certified (Platinum, Gold, or Silver)?			
Is the building Energy Star rated? If so, document score.			
<b>Score:</b>			
<b>Transportation</b>			
<i>By selecting office space that is conveniently located to public transportation as well as providing alternative transportation options - your Company can reduce the impacts and costs associated with employee commutes.</i>			
Is the building within a 1/4 mile of major bus lines?			
Does or will the building have secure bike storage available to tenants and employees?			
Does or will the building provide showers, change facilities and lockers for cyclists?			
Does or will the facility provide special charging stations for alternatively fueled cars? Or do Zipcars reside in the building?			
<b>Score:</b>			
<b>Energy Use</b>			
<i>Utility bills can represent 30% of a total buildings budget and are the single largest operating cost. By selecting energy efficient building systems and controls your Company can significantly reduce emissions and utility costs by as much as 50%.</i>			
Does or will the building use ENERGY STAR products?			
Have the buildings HVAC systems been recently commissioned and serviced?			
Are the tenants spaces separately metered?			
Verify the daylighting controls or occupancy sensors utilized or standardized in the building.			
Does or will the landlord provide the ability to purchase renewable energy?			
Does or will the landlord monitor and report base building energy use?			
Reported Energy Use (kBtu/sq ft):			
<b>Score:</b>			

transportation  
energy use  
materials & resources  
water use  
building management  
daylight & views

due diligence

Energy usage disclosure –  
coming soon to legislation  
near you?

CBECS

Energy Star

ASHRAE

EU Building Labeling



energy  
disclosure

**Green building no longer a premium. Proven savings in operating costs. Holistic approach yields best value.**

**3.5% lower  
vacancy  
13%  
higher rents**

**roi  
validation**

0% to 4%  
more than  
conventional

0% - 1%  
typical green  
premium

green  
building

**GSA's sustainably  
designed green  
buildings have 26%  
lower energy use  
compared to the  
National Average**

**26%  
lower energy  
use**

**energy  
savings**

**Healthier buildings  
reduce sick time and  
increase productivity.**

**Natural light, good  
ventilation, and less  
toxic materials ensure  
happier, healthier  
workers.**



**55%  
reported  
improved  
productivity**

**productivity**

**Database of State Incentives for  
Renewables & Efficiency**

[www.dsire.com](http://www.dsire.com)

**Utility Rebate Programs**

**Advanced Energy Office**



**rebates  
incentives**

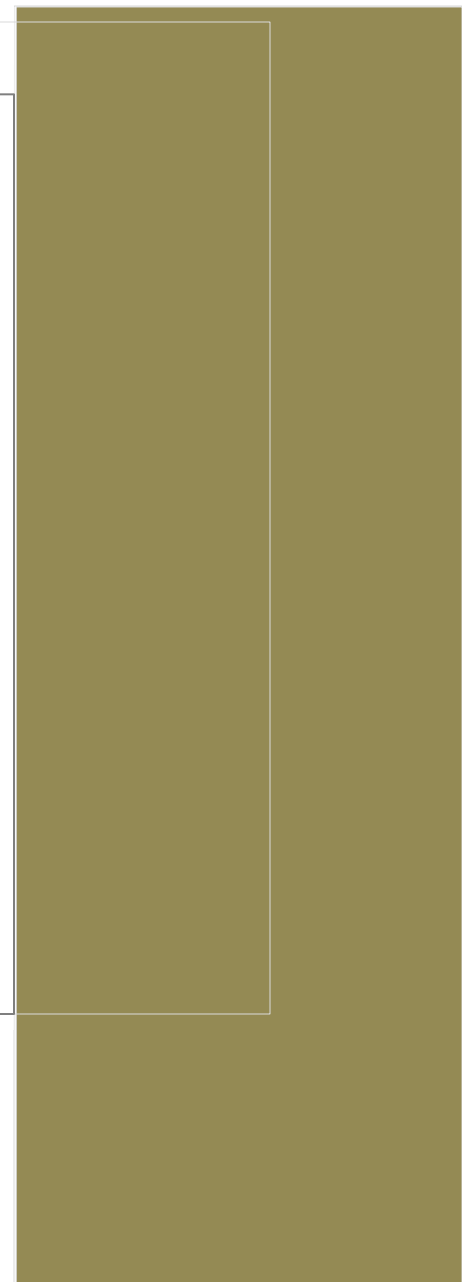
Policy makers are collaborating with designers to assist with removing barriers to provide an easier path towards innovative design strategies

innovative  
adaptable  
expedited  
processes

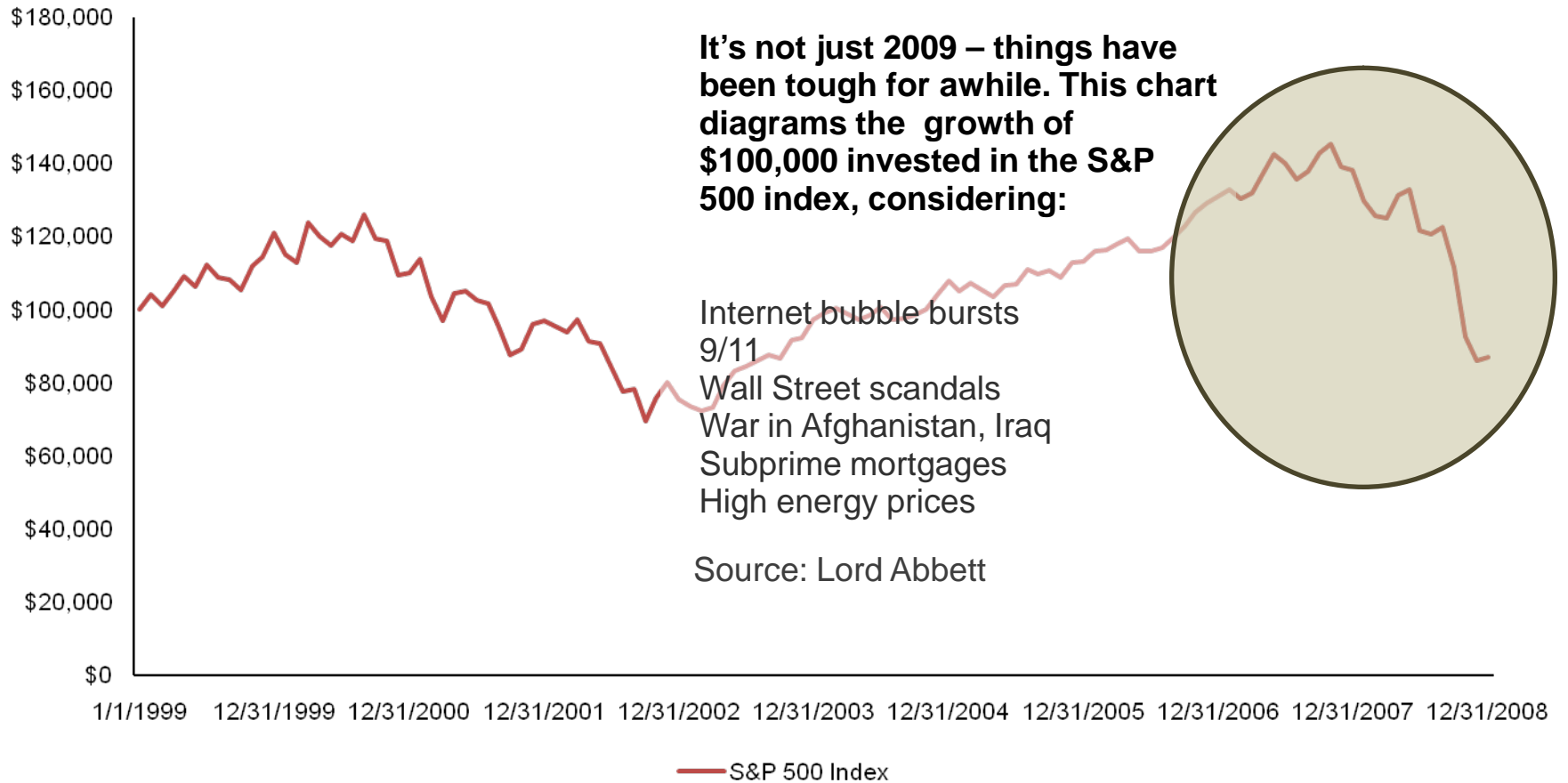
municipality  
support



re-  
focus



# a cultural shift 1999-2009



## Culture

Expanding demographics and interests.

## Performance

Adopt new technologies and ways of working.

## Finance

More criteria for investment.



# drivers of change

# WORK STYLES

high mobility is high status

# OFFICE SPACE

a community place

# BUILDINGS

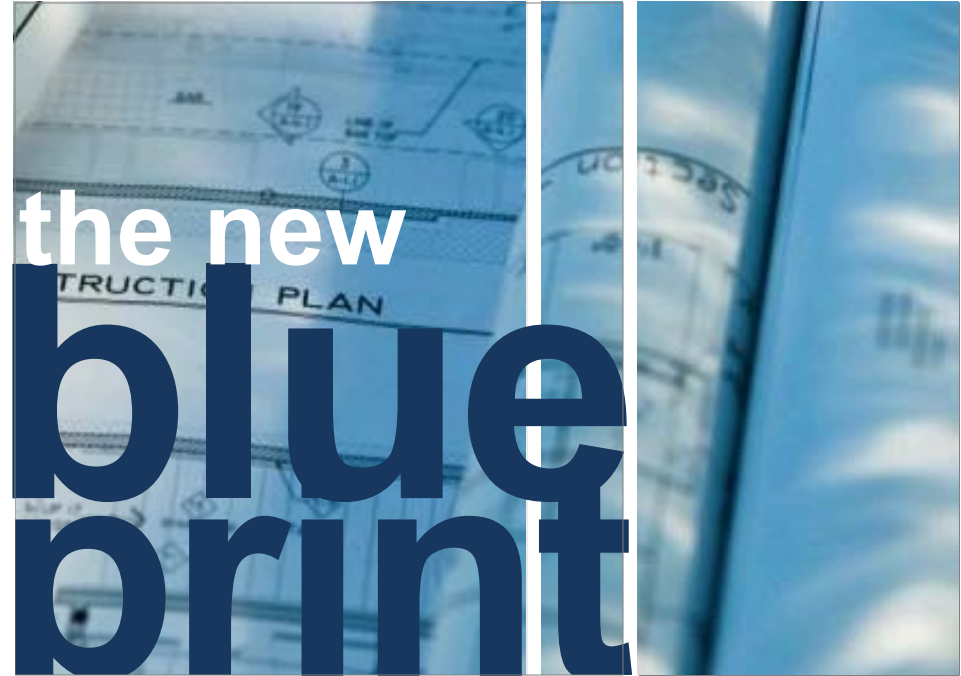
flexible kit of parts

# CITIES

new life for old buildings

# GOVERNMENT

code follows function



**“Greening Buildings and Communities: Costs and Benefits”, Good Energies 2009**

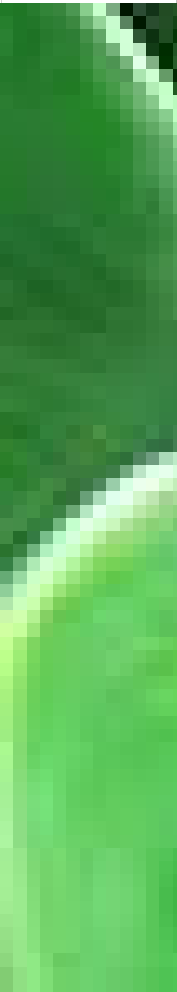
**“Assessing Green Building Performance”, GSA Public Buildings Service, July 2008**

**“Energy Performance of LEED NC Buildings”, New Buildings Institute 2008**

**U.S. Department of Energy and Center for Building Performance and Diagnostics, Carnegie Mellon University: “Field Studies of the Major Issues Facing Existing Building Owners, Managers, and Users,” DOE Building Studies, 1994**

**“Windows and Offices: A Study of Office Worker Performance and the Indoor Environment”, California Energy Commission, October 2003**

**“Do Green Buildings Make Dollars and Sense?” University of San Diego and CB Richard Ellis, November 2009**



# reports



questions