

Triple-Bottom-Line Accounting

The failure of the current worldwide economic system is in large part a failure of accounting.

How did we get here? Many of our most pressing problems are the result of a mind-set that emphasizes parts and the short term at the expense of the whole and the long term. This bias creates specialized concentration on single-purpose concerns, often with disastrous consequences. This mind-set also contributes to the perverse incentives and distorting effects we list here; addressing these will encourage sustainable building.

- Recent architectural approaches evolved within a narrow framework that ignored the integration of multiple parts to achieve a whole. For example, Beaux Arts architecture of the nineteenth century emphasized art and history, and the resultant buildings all too often became shallow copies of the past rather than a response to contemporary needs. In the twentieth century, modernism became preoccupied with the function of space and circulation, but ignored human comfort and health, energy, and environmental impacts. Modern architecture became as narrow and fragmented as Beaux Arts design and as unsustainable, often driven by abstract formulas and theories. The distorted view of architecture as sculpture has also contributed to the failure to embrace integrated, site-adapted designs that focus on health, comfort, and satisfaction. These may look good on paper or from a helicopter, but they can be untenable for occupants. The architect often plays the artist, and engineers are used to make the sculpture livable. The lighting engineer might be directed to design the lighting for minimal installed cost without considering possible use of daylighting (determined by the architect's window decisions) or the cost of cooling to offset lighting heat gain (a problem for the mechanical engineer). The architect would often design the building without consulting anyone about the implications for natural heating, cooling, or daylighting. User comfort, health, and productivity are rarely an issue.

Reimagining architecture as a complex team effort that integrates art and engineering from the start to meet human environmental needs and embracing sustainability is critical and will result in a new green architecture as different from modern architecture as modernism was from Beaux Arts.

Like architecture, economics has also devolved into a highly fragmented endeavor where many complexities and costs are ignored by exiling them to the public and environmental realm as "externalities." At the same time, obsolete subsidies from the past have become frozen through the dominance of lobbies and political contributions. The result is a rapidly crumbling economic edifice of flawed accounting, wasted resources, inefficiencies, obsolete subsidies, and the misplaced focus on financial manipulation and wasteful marketing. The effect of all of this on architecture and building is to further accentuate the disconnection between building impacts and costs described above.

- Given current financial pressures, a developer in the United States must often focus on minimal first cost without considering life-cycle costs, health, comfort, and productivity. Building owners usually pass all energy costs to leaseholders and little pressure to improve efficiency. Many large buildings are poorly operated and maintained. Building operation is not a highly valued or rewarding profession, and operators are not treated well or given the resources they need to do their job well. Managers of flawed buildings often assume the energy demands are immutable and may reduce or fire maintenance staff to save money, further increasing life-cycle cost as poorly maintained mechanical systems add pollutants to indoor spaces and the moisture buildup and leaks lead to mold, and increasing risk to health and productivity. The difference in building service life between the United States and Europe is related to differing economic incentives. Buildings in Europe have a lifetime that is typically double, but often four times as long as, that of a comparable building in the United States.
- Subsidized power and material costs are also important.