



Sustainability: A Key to Smart Market Capitalism

As a reporter in 1858 Wyoming, Mark Twain advised his readers to “buy land, they’re not making it any more.” In his inimitable way, Twain was describing a supply issue that is even more compelling in today’s global capital economies: the growing scarcity of natural capital available to sustain public and private enterprise operations. Competition for various elements of the limited capital and feedstock components of independently accessed air and water — along with Twain’s “land” — is escalating worldwide as growth in both population and economic development put increased demands on a static and regulated supply of all three.

At the same time, the operational needs of the modern industrial/digital economy compel enterprise architecture and engineering to assure access to a sufficient quantity of publicly controlled natural capital components in addition to those privately held. Sufficient air, land, and water capacity for built infrastructure emplacement, residual material handling by the removal (or disposal) chain, setbacks, and process material are natural infrastructure design basis components integral to all enterprise phases and aspects: supply chain, operating systems, residual handling, even consumer use. Revising enterprise sustainability management from current environmental compliance systems to natural capital “supply-side” management is a key to smart market capitalism growth and development going forward.

What Twain did not anticipate was just how natural capital use efficiency would come to present a distinct and recoverable value in an open marketplace. That natural capital scarcity would induce a “green” economy required several intervening steps, but Twain’s 19th century warnings regarding supply management and today’s 21st century “realeconomik” value from natural capital efficiency together typify the basic capital market principles of supply and demand. Ironically, industries and technologies that currently display some the highest levels of natural capital efficiency -- subways, railroads, baseload electricity -- frequently fail to capture or convert this sustainability value through usual market means such as market share, market capitalization, reduced cost of financial capital, or premium pricing. For most public and private enterprise, sustainability value is limited to some combination of location-specific natural capital credits, enterprise specific financial credits, or intangible social capital/goodwill. This narrow conception of natural capital value has undercut major sectors of the domestic economy and defaulted return on investment to global producers still operating with “at will” access or in state sponsored economic systems with no natural capital supply constraints.

Next generation natural capital management is at the core of market-based sustainable economies and development. Public and private enterprise that chooses to manage and recover the value stemming from efficient use under stressed natural asset supply and demand conditions will lead the developing economy. However, smart, market-based sustainability requires change management at both the strategic and operational levels. The following precepts describe the organizational orientation, value recognition, and preliminary steps that can re-design and restructuring governance and management systems to operate a smart and sustainable market enterprise for 21st century success.

- **Natural Capital Capacity Equals Enterprise Capability**

There is no doubt a liquor license or taxi medallion is an enterprise asset. For a restaurant or livery, enterprise success depends on beverages sold or passengers carried under the auspices of those indispensable operating rights. For a paper mill or an Air Force Base, an air or water discharge permit has the same operational significance, but more direct effects on productivity. Regulations cap the number of liquor licenses or taxi medallions, not the productivity embedded therein as drinks sold or miles driven. Not so with natural infrastructure use rights; those regulatory permits cap paper production or flight operations at the level of *capacity* embedded in the permit.

Yet, enterprise management seldom identifies or registers these natural infrastructure use rights -- and the quantified capacity they contain -- as operational assets. Nor is the operational natural capital capacity required by the enterprise identified in the enterprise operational design basis. Current Environmental Management Systems (EMS) focus on compliance with laws and potential liability, leaving enterprise leadership “not knowing what it doesn’t know” regarding the sufficiency of its operational natural asset capacity to meet its desired production capability. The first step in developing supply-side management of natural capital capacity is arithmetic.

The formats for this needed data compilation already exist in the built infrastructure arena. Operational air, water, and land capacity can be recorded using standardized templates for inventory, utilization rate, and through-put alignment applied for built assets. Management then acquires immediately information and knowledge as to whether natural infrastructure capacity is both optimized for current productivity and sufficient for future growth, as well as assuring regulatory compliance. Inventory/alignment data also identifies underutilized excess that could be sold, traded, or transferred to cover other production (depending on the laws of the applicable jurisdictions), and enables integrated recapitalization planning with built infrastructure assets to assure future capability for the total infrastructure asset portfolio.

- **Natural Capital Utilization Efficiency Equals Return-on-Investment**

Unit pricing stickers are a fixture in today’s grocery store. Although economies of scale do not always control choice, understanding the ratio between a unit of spending and the unit of good received is a powerful data set used in consumer decision-making in a market. The same is true in the growing “green” market.

Whether due to sustainable design, cost cutting, compliance assurance, or risk management, companies that reduce natural capital “spending” in the course of production hold competitive advantage in expanding consumer and business-to-business markets for sustainable products and services. This is particularly true for Environmentally Preferable Purchasing (EPP) programs mandated for Federal, State and many municipal governments. The Federal Acquisition Regulations (FAR), which govern billions in annual Federal procurement, require U.S. Government departments and agencies to “implement cost-effective contracting preference programs promoting...the acquisition of environmentally preferable products and services.” States, municipalities, and private sector purchasers have followed suit.

As defined by government standards, green products are those that are the greenest version of the good or service offered, making environmental preferability a fact-dependent evaluation of relative natural asset spending indexed against enterprise output. Previously unrecognized classes of goods and services have access to green market share based on quantified utilization rates that establish the product or service's environmental preferability, including aircraft repair, freight shipping, or baseload kilowatts.

Missing the green market boat can be costly. When mainstream products and services concede green branding, their shareholders and customers lose the market share, price validation, credit access and cost, and social license returns that should be accruing from natural capital utilization efficiency. Adding insult to injury, in markets where natural capital capacity is controlled or capped--creating a zero-sum game among users--one enterprise's planetary parsimoniousness becomes a competitor's capacity bonus, effectively creating an involuntary subsidy to the brown operator by any enterprise operating at the green end of an industry spectrum. After years of natural capital use limits from regulation and investment, most goods produced in the United States already have an unconverted environmental preferability advantage in the global market that can and should be captured.

The Smart Capital Economy

Every enterprise must manage financial, built, and human capital supplies along with a spectrum of natural capital elements grown more complex since Mark Twain first noted "land" scarcity more than a century and a half ago. Although technology improvements such as desalination or directional drilling increase the accessible volumes of particular natural capital sub-elements, fundamentally the volume of air, land, and water components making up the planet cannot increase.

As population soars and developing economies demand greater natural capital access and use to meet changing standards of living, basic functions of supply and demand are compelling a reevaluation of how to optimize an inherently static supply of air, land, and water assets into the future. While the principles of responsible corporate governance provide important motivation for sustainability-based enterprise management, the more compelling drivers for the enterprise economy are the smart market capitalist principles of productivity and return on investment, each of which depend on natural capital capacity. Enterprise can initiate natural capital asset management with preliminary steps such as organizing inventories of natural capital capacity on hand. Current and future requirements for natural capital capacity can be identified and compared against supplies to plan for long-term growth. Ultimately, data can be processed to inform recapitalization investment that optimizes natural capital use, and comparative data can support market strategies for converting natural capital efficiencies into sustainable market share.

Whether the rubric is conservation, wise use, no regrets, triple bottom line, sustainability, or smart economics, market economies need to advance quantified data, information and knowledge management systems that recognize, record, and optimize natural asset capacity as a function of system capability and market value to operate today and into the future. When these enterprise fundamentals are applied to management of scarce natural operating capital, sustainability is embedded in the core competency of an enterprise where it belongs.

Building Enterprise Value on Sustainable Foundations