Waste Not – Want Not
Mindset Obstacles To Competitive Advantage

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People the world over face the most serious challenge in human history; maintenance of a healthy environment for the whole planet. Business is in the best position to lead restoration and protection of the natural environment. The good news is it can be done while substantially increasing profit. The major obstacle to doing this is the mindsets of individuals, communities, businesses, and governments. Such mindsets can best be sustainably changed with an inside-out approach.

The search by people, business, and government for an end to pollution without the pain of change

Few would argue with the aphorism 'Waste not-Want not'. Yet, on an individual, community, corporate, and national level, we routinely waste things of value while complaining about not having enough and the cost of disposing of the waste.

The logic inherent in 'Waste Not – Want Not' hasn't had much influence on millions of Americans. In 1997 they produced more than 195 million kg of municipal solid waste. Each year American industries also produce more than 1.1 billion kg of really nasty stuff , and dispose of it into the air, water, and ground. [1] Other industrialised societies are not doing much better.

The challenge to a business, is to make a profit, while satisfying all the other demands of the consumer, the market, the public, and government. How does business reduce the risk of negative impact on the health and safety of workers, public, consumer, and the environment . . . concurrently . . . while competing for world wide markets, capital, and skilled labour . . . and make a profit to sustain its future?

Individuals, communities, businesses, and governments create environmental problems. Yet each says they want environmental problems solved. What is the source of this apparent contradition and what can be done about it?

Research by KPMG's Sustainability Advisory Services demonstrates widespread 'expressed' interest in issues surrounding environmental protection.

- According to the Dow Jones Sustainability Index, companies that have demonstrated an effective "embedded" culture for social and environmental performance are out-performing others.
- Research published in 1997 found a strong link between high levels of environmental performance and organisational profitability.
- Many people recognise that we are living with an ecological time bomb and unless we take action now, it could explode in our children's faces.
- Majorities of people in countries surveyed are dissatisfied with industry's efforts to protect the environment.

Such conflicting 'views' originate in the individual and collective mindsets of people, communities, businesses, and governments, where they may not be recognised. As long as the beliefs supporting these survey results remain subconscious and not rigorously scrutinised, whole cultures follow them blindly and perpetuate them.

As a result, sometimes it seems the left hand doesn't know what the right hand is doing. Examples of obvious conflicts abound.

- Concurrently, the US government paid subsidies to tobacco farmers, passed laws regulating tobacco marketers to publish health warnings about use of tobacco, incured huge costs for tobacco-related health care, gave export awards to tobacco companies, and depended on tax revenue from farmers, marketers, and consumers of tobacco products.
- Likewise, many smokers received warnings about tobacco use, chose to use it, and blame tobacco manufacturers for their ill health.
- In the UK, the government is set to give a big tax rebate to get chemical industries to improve energy efficiency (one of 40 such agreements). In this case, the government will pay industries rebates to help industry cut costs and raise profits; in effect, to do what a responsible business does without taxpayer assistance. Under the agreement, energy use will still rise by 6% rather than drop as agreed in Kyoto.[2]

The nature of Mindset and Mental Maps

The accident at the Three Mile Island Unit 2 nuclear generating plant starting 28 March 1979 was the worst accident involving a commercial nuclear plant in the United States up to that time. No one was injured or died as a result of the accident. The accident initiated a major upgrade of virtually all aspects of management and operation of the US's use of nuclear energy and radioactive materials, including the Nuclear Regulatory Commission (NRC) and the US nuclear weapons complex.

The report of The President's Commission on the Accident at Three-Mile Island concluded that attitudes – at the site, in the industry, and in the NRC – contributed substantially to the accident and made its resolution difficult. Assumptions which prevailed about the technology, its management, and its regulation were more significant in producing the accident and the subsequent problems than were equipment failures.

The term "mindset" recurs in the Report of the Commission. Human Factors-Operator error- unquestionably was the proximate cause, but to the Commission, a "mindset" about safety was the more fundamental problem, for it produced the error and hampered the mitigation of the accident.[3]

The assumptions found to be in place prior to the accident

- Safety can be assured technologically
- The operator is less important to safety than is the equipment
- Safety will result if vendors, utility, and regulator fulfill their responsibilities
- Key actors assume regulation guarantees safety
- Risk analysis need not consider public perceptions of risk

Contra-assumption conclusions of Commission

- A "mindset" that overlooks non-hardware components is likely to produce a partial defence against accidents.
- A "mindset" that treats the social dimensions as unimportant imperils the performance of socio-technical systems.
- A fragmented organisational system emerged from the "mindset" that safety demanded only that each constituent part perform competently.
- The NRC treated the regulations as ends in themselves rather than a means towards a larger end: safety.
- The psychological studies on perception of risk underscore the point that public views of risks do not always conform with the probabilistic studies.

What was the source of this Mindset?

After many years of operation of nuclear power plants, with no evidence that any member of the general public had been hurt, the belief that nuclear power plants are sufficiently safe became unconscious.

Another President's Commission report, regarding the explosion of the Space Shuttle Challenger in 1986, and a report by the US Navy on the sinking of the nuclear submarine Threasher in 1963, produced virtually the same findings regarding institutional mindset:

- A long history of success
- Deeply held belief in the quality of the technology, management, and contractors
- Failure to predict, plan for, or adjust to new circumstances.

The record of these sudden incidents and records of the gradual experiences of business and governments all exemplify the same fundamental weakness: unexamined individual and collective mindsets effectively prevented these organisations from noticing what was happening to them.

Society legitimatises such unconsciousness by creating cultures that will only solve problems short term (single loop learning). The question of why the problem happened in the first place (double loop learning) is often never asked.[4] Worse, it is often not addressed.

Mindset and Mental Maps Are Fundamental to Humanity

If an individual, group, organisation, business, or government has an inaccurate belief about the self, others, or the world and life, they may be led to incorrect conclusions. While their rational mind uses a conscious map of the 'here and now', the 95% of their mind that is subconscious[5] uses a mental map created in the past. As a result, people and organisations often say one thing and do another. Stated, intended behaviours are not matched by actual behaviours, producing unintended consequences.[6] This one of the root causes of the terrorist attacks of 11 September 2001. Yet there is good reason to be concerned that single loop learning will prevail again.

To be most effective in life, our mental maps must be a true representation of the world. Working on conscious attitudes or observable behaviour may make us more positive or quicker but until a paradigm shift is made by altering the underlying belief structure, whatever effort is applied to changing the behaviour will be continuously undermined by the power of unconscious belief. [7]

Under such circumstances, how can individuals, communities, businesses, governments become aware of their unconsciousness when they are unaware they are unaware? There are two ways:

1) Choose to learn about the subconscious process and discover what beliefs direct your behaviour. Rigorously compare those beliefs with current reality to determine their current validity. Discard false beliefs, keep those aligned with reality. This is the path referred to over the ages as growth or enlightenment, and is followed by few.

2) A series of unexpected, usually dissatisfactory, events will occur to awaken us to our unconsciousness. Usually, effort will be directed to countering the negative effects of the events, but seldom to determining the root cause. This cycle will be repeated, often escalating until a tragic failure awakens someone from unconsciousness long enough to notice the pattern. A few then move to 1), above.

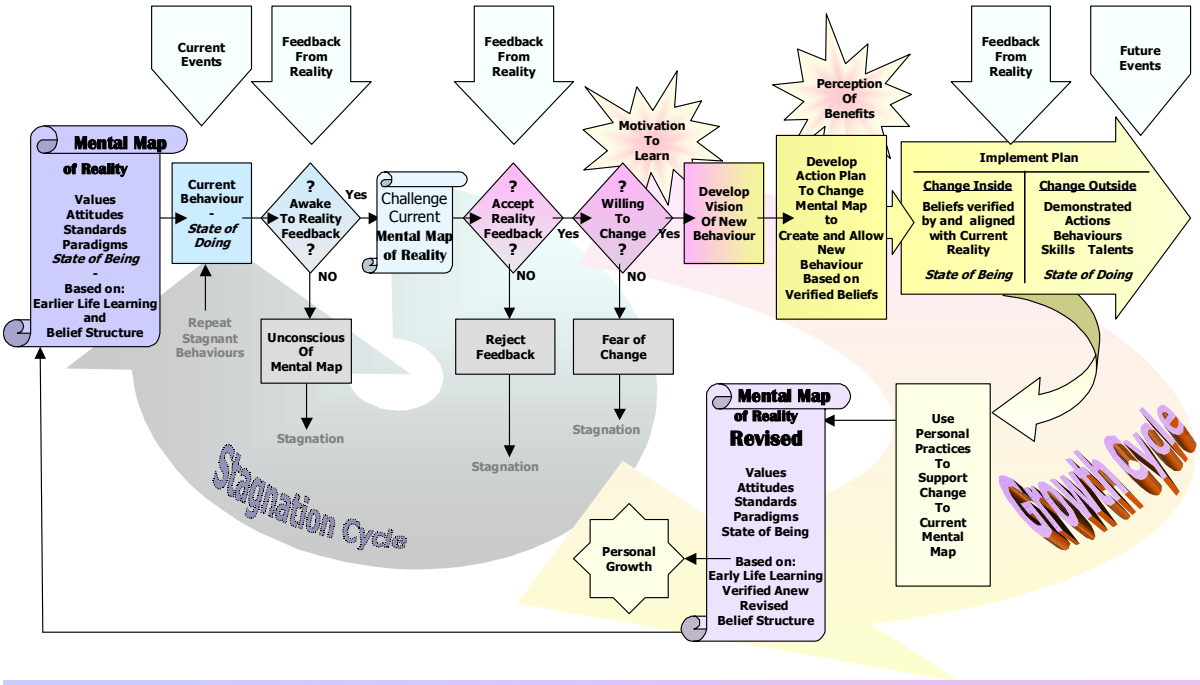

Figure I. Mental Map & Behaviour Change For Personal or Organisational Growth

Since examining widely held and deeply felt beliefs is painful and difficult. Most people will continue to react to events, unconscious of the beliefs directing the reaction. (Fig. II)[8].

Mindset and Mental Maps in Business and Government

The way mental models shape our perceptions is important in business and government.[9] A long series of painful events pointed to questionable policies. In each case, the facts were explained away, and evidence hidden from public view in loyalty to an old belief until a long series of shocking events forced deep policy review. The resultant change in beliefs was painful. This is why scrutinising and challenging beliefs is usually avoided whenever possible.

- General Motors Corporation watched European and Japanese auto manufacturers grow their US market share from under 4% in 1960 to over 38% in 1986[10] as GM's share dropped from over 50% to 26% in the same period. Each percentage point is worth $1,000,000,000.
- French and British experience in World War I, the American experience in Vietnam, and the Russian experience in Afghanistan.
- Welfare policies designed to help people until they could help themselves and leave the welfare rolls, which served to add more people to the welfare rolls.
- Road-building policies designed to relieve traffic congestion result in more cars on the road and more congestion.
- Energy and environmental policies designed for energy independence and minimal environmental impact which a) encourage use of coal, oil, and gas, related industrial accidents and deaths, acid rain, huge piles of waste ash, huge expense, and vulnerability - and b) discourage use of safe nuclear energy with virtually no deaths, no harmful emissions, waste that could be converted into new fuel, and independance.

Where to find waste, cost and . . . profit

What is waste? - - - over production, using time ineffectively, transport, inappropriate processing, unnecessary inventory or motion, defects, human potential, inappropriate systems, energy – water – materials – services, customer time, and even defecting customers, since it costs five times more to acquire a new customer as it does to retain one.[11]

How does 'mindset' influence attitudes about waste? The moment pressure groups and governments decided to coerce business into protecting the environment, the unconscious forces of opposition were put in motion. Beliefs about freedom, the proper role of government, and the potential costs of change prevented many from considering the benefits to the 'bottom line' as well as to the world. Failure to first address 'mindsets' has wasted untold amounts of money while concurrently retarding the pace of progress towards a waste-free and clean environment.

Every business, regardless of industry, scale, or profitability, produces only two things: products/services that add value and those that don't. One pound of cost reduction usually earns as much as about £20 of new sales. What executive will tell the board there is no need to eliminate all waste? Yet, how many have explicitly or implicitly done so?

Many in business and government oppose efforts to protect the environment or want to delay making the changes many agreed to in principle at Kyoto, because, they say, it would cost too much, and be detrimental to business.

Why does business resist protecting the environment, when protecting the environment is accomplished by eliminating waste – which increases profit? (Figure III). This is classic Doublethink, holding two contradictory beliefs in one's mind simultaneously, and accepting both of them.[12]

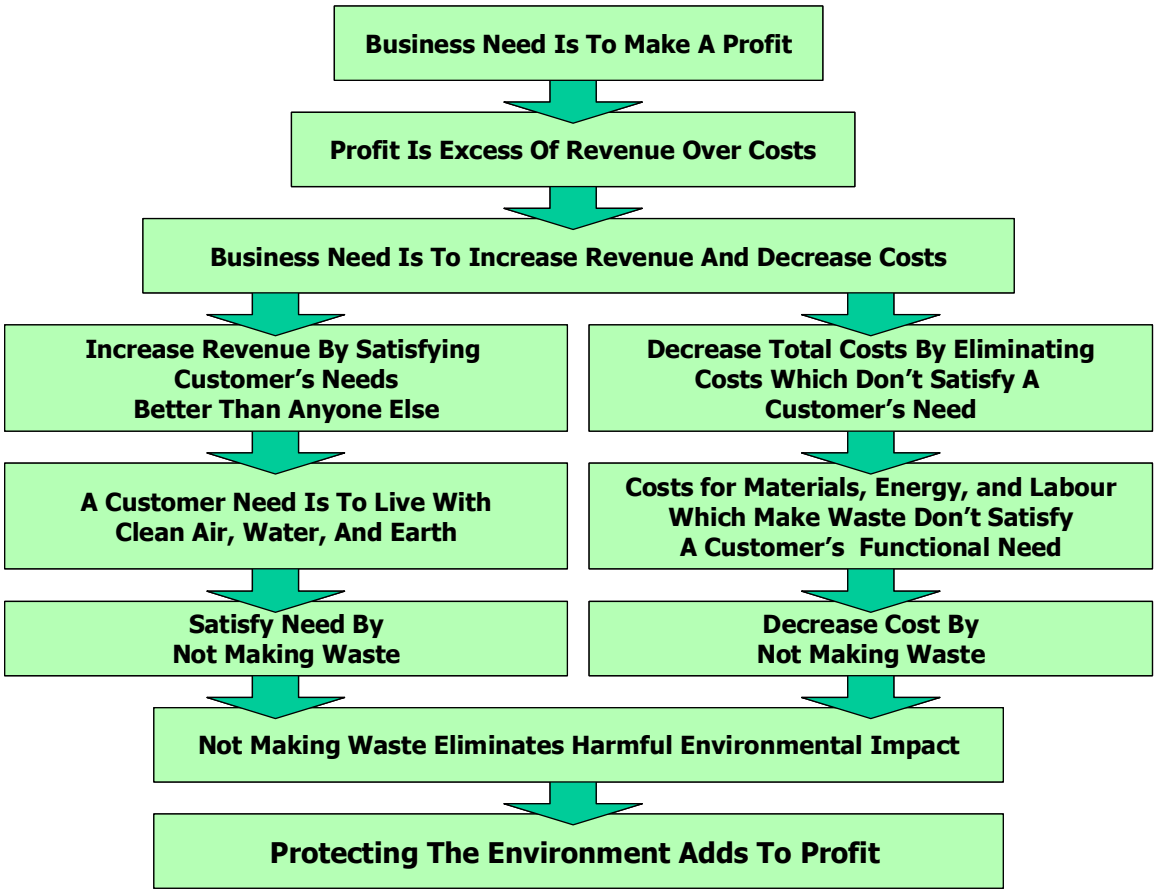

Figure II. Protect the Environment and Add to Profit

What is the problem? The problem is Mindset - resistance to being forced to change, resistance to government intrusion in the 'private affairs of business', and a thousand justifications based on subconscious beliefs.

The 'secret' to success, to achieving a significant and enduring increase in profits and productivity, is product and process redesign. Reducing wasted resources--preventing pollution--is invariably accompanied by a dramatic gain in productivity.[13]

The need for a change in mindset, and the rewards or penalties

A growing number of business leaders and countries recognize that economic health, whether of individual companies or national economies, isn't in conflict with environmental quality - it thrives on it. Not content to fight regulations, many companies are moving ahead of government and the non-government environmental movement

British Prime Minister, Tony Blair, recently said it is time to: *"reawaken the environmental challenge as part of the core of British and international politics . . . . We should see protecting the environment as a business opportunity"*. [14]

3M United Kingdom Plc
In 1975, 3M established a formal environmental policy. 3M adopted its voluntary Pollution Prevention Pays (3P) program because pollution prevention is both an environmental and a competitive/financial strategy.[15] 3P projects in the UK (1995)[16] resulted in annual elimination of 5578 tonnes of air pollutants and 3383 tonnes of sludge and solid waste, with savings since 1977 of £78.7 million.

Dow Chemical Company
Dow's Waste Reduction Always Pays program challenged employees to propose waste reduction initiatives offering greater than 100% per year return on investment. 1982 brought 24 projects that averaged 178% ROI. In 1993 140 WRAP recommendations had an average ROI of 298%! The cumulative record over more than ten years--204% ROI, and annual savings of $110 million.

Xerox Europe uses eco-efficiency to satisfy customers' requirements for environmental and functional benefits, while improving its own operational efficiency with waste free products, waste free plants and waste free offices. Xerox's environmental goal is for zero waste.

Systems thinking makes understandable the subtlest aspects of the learning organisation – the new way individuals perceive themselves and their world. At the heart of a learning organisation is a shift of mind – from seeing ourselves as separate from the world to connected to the world, from seeing problems as caused by someone else or something 'out there' to seeing how our own actions create the problems we experience. [17]

Our public and private debates must focus on beliefs and behaviour, since behaviour will not change without first changing the motivating beliefs. We must be ready to help one another through the pain of discarding beliefs that seem to help us survive, but only serve to perpetuate cycles of pain and stagnation. We must learn to live in true community with other people on this planet we call home and share with all life.

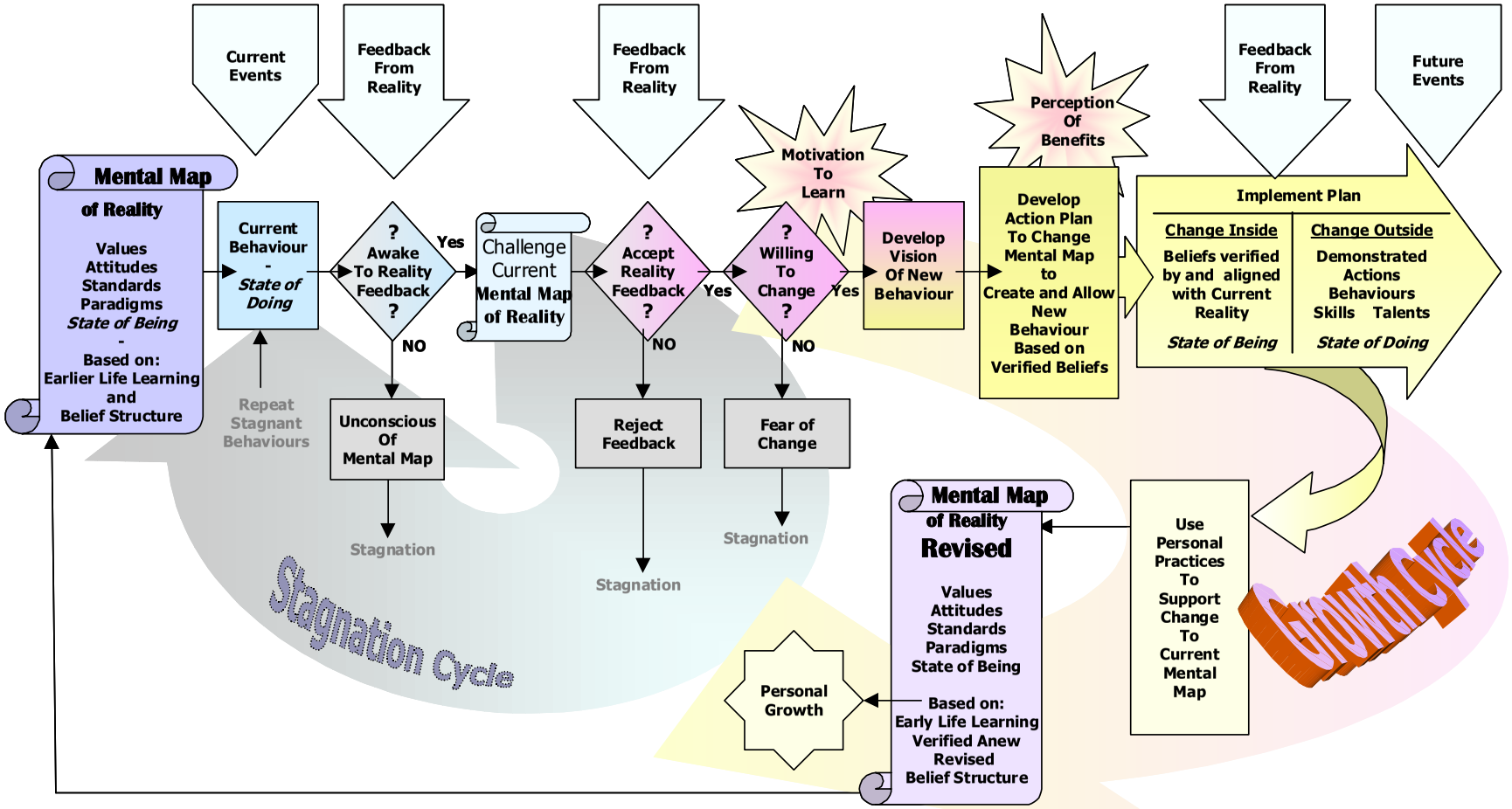

Figure I. **Mental Map & Behaviour Change For Personal or Organisational Growth**

Endnotes

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