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VIDEO TRANSCRIPT

Corporate Sustainability Programs series: “No Clothes” to a “New Suit”- Part 3 of 3

1 - Intro Slide:

Welcome back, I’m Dr. Mitch Kennedy, owner of Design with Nature. In this final part of this series on the current status of Corporate Sustainability Programs – I show how the Emperor can go from “No Clothes” to a “New Suit” that provides great opportunities for the savvy manufacturer.

2 – Impacts on Resource Demand

Amory Lovins, one of the fore-fathers of energy efficiency, said if you are going to save energy, you still have to promise people two things: cold beer, and hot showers. And if you think about this, it’s quite true. Any lasting improvements must either maintain or increase our living comforts. People do not want to have less light in their homes at night, or be told they can’t drive as often as they want. We don’t live in a Draconian society so we can’t expect commands from above to work as a solution to our Sustainability issues. So **what do we do?**

3 – Population vs. Oil Reserves

The problem was not an issue 200 years ago, when there were only about 1 billion people on the whole globe. But on October 31, 2011 we officially had 7 billion people, and population will swell to 9 billion by 2030. Ironically, scientists say this is also the period when climate changes will be in full force. I think its pretty safe to say that most people in the world would love to live the life that many Americans already have, and consume the same level of energy, food and goods.

4 –

So this would of course increase current world demand for all forms of energy, including liquid fuels (such as gasoline, kerosene, diesel, heating oil). According to the US government’s estimations, by 2030 there will be a 60 million barrel a day “gap” between the supply of liquid fuels and demand.

The first response I usually get from this slide is –“Well, what about the Marcelles shale and other natural gas shale beds, and tar sands?” According to the US Geologic Survey’s own findings, the amount of fuel in the shale beds is 66% less than originally thought. This is 6 -7 years supply instead of 27 years supply. Furthermore, the extraction rate is lower than traditional “easy” wells – meaning

what is in there doesn't come out quickly. And NOAA has recently completed surveys showing methane leaks from the fields cancel out any "green" advantage.

So then what? How are we going to give 9 billion people cold beer and hot showers? **This is** where the opportunity sits.

5 –

In order to take advantage of the confluence of population growth, resource constraint and climate instability, we must think differently. For years people, governments and companies have focused on "getting by". But now we need lasting solutions, which achieve multiple benefits and synergies. We need a systems approach. For those of you not familiar with Systems Thinking, I encourage you to find the book by Donella Meadows, "Thinking in Systems", and the "5th Discipline" by Peter Senge (the new edition). These will help your organization to change on a whole new scale.

6 – An Example of Systems Thinking

The Chicken is a great example of a system. What do you think of first when you see the word chicken? Is it meat? eggs? clucking? Did you know there are five other uses of chickens. They can till your garden, weed it, and remove plant pests. They provide fertilizer and feathers. Some farmers collect the manure and use it as fuel to heat their greenhouses. It would appear the chicken is a tiny system of farming and creating food.

Simply using the chicken for eggs is a waste of its full potential – AND if we did not know about the other things it can do and provide we would have to expend extra energy weeding the garden our selves, spraying pesticides, adding synthetic fertilizers and paying for heat or electricity for the greenhouse. THIS is what happens when we IGNORE systems.

A tree, for instance, cleans water, sequesters carbon, provides oxygen, wood for shelter, and shade for cooling. ALL species have value.

7 - Carbon: Bad in the Air or Water but Good in Soil

We also need to change our perspective on the carbon problem. It really belongs in the ground, not in the air. The Carbon Cycle is the transfer of carbon from the atmosphere to vegetation and oceans, and the release of carbon into the air by mammals through breathing, and decomposition of vegetation. Adding extra carbon to the air from underground (oil and natural gas deposits) and land use practices (clear cutting, paving, forest fires) has thrown this system out of balance.

So any solution that gets carbon gets out of the air, or puts it into the soil represents opportunities for products and services.

8 - Population: not a "Problem" but a:

- Wellspring of Creativity
- Instrument of Progress
- Motivated Participant

Similarly, we need to change our views on population and our relationship to other species on the planet.

Encouraging a diversity of ideas, inventions, and actions is the only way we will overcome the global challenges facing us.

9 – Looking Forward

Given the population growth, resource constraints and changing climate, we will need a whole new way of thinking about how our resources are allocated; supply chains work, and wastes are re-used.

It's easy to see that we need to address multiple customers – it has been called the “Triple Bottom Line” – a phrase coined by Andrew Savitz, author of the book by the same name. This counts the benefits to society, the planet and the corporate bottom line. Now, where can we start?

10 – Commitment to Sustainability

Would you please look closely at the 5 items with the arrows? Making changes to these areas will serve the Triple Bottom Line **AND** open opportunities for new products, customers and markets.

11 – The US Economy

The following facts come from the book “Re-Inventing Fire” by Amory Lovins.

Just looking at the stats of how much waste there is should start questions in your brain about what can be done differently.

The US economy consumes 20x our body weight in raw materials per person per day. 93% of that is lost or wasted... AND then, 85% of the products made are discarded before or after 1 one use.

One way to address this is to combine the concept of Systems Thinking with the design principles of Life Cycle Analysis. Here the impacts of a product are considered in relationship to the system across its entire life.

12 – FACTOR 10 – combining Systems Thinking with Life Cycle Assessment in the design phase of projects.

Factor 10 Engineering does just this, and is named for the goal to produce our current output with only 10% of the environmental & energy impacts, so that the rest of the developing world has the chance for cold beer and hot showers.

There is \$400 Billion/yr in energy expenditures for buildings – more than half is wasted / lost.

With over \$200 billion in the US being wasted EVERY year in the field of energy, I often wonder where we come up with the money to squander like this!

Investing just one year's wasted money into building efficiency could yield \$1.4 Trillion in net savings by 2050.

Clearly, there is **no lack of opportunity** to save money, reduce risk and slow the growth of greenhouse gasses.

14 – So Let's Get Started

We have seen this opportunity first hand, having helped hundreds of companies save over \$180 million dollars / year. We have worked in 23 industrial sectors on 4 continents. I am SURE we can help You.

14 - Won't you give us a call?

Thank you for watching.

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