**SOCIOECONOMIC Business Piloting Logbook**

**David M. Boje**



**Small Victory – the Clutter in front of Recycling is moved on**

**Management 448/548 Fall 2018**

Client: New Mexico State University and the State of New Mexico

Table of Contents

PART I.

Part I: Executive Summary of Spiral Consulting 6

Figure 1: True Storytelling and 17 UN Sustainability Development Goals 6

Three Main Consultant Recommendations: 6

Figure 2: Truestorytelling.org Surf Board Image 7

Figure 3 Antenarrative B’s 9

Photo 1: NMSU once employed 6 Facilities and Services workers to do its Recycling and Composting. 11

Photo 2: The absence of 3rd Floor 4-bin recycling system in Business Complex Building 12

Photo 3: The Plastic Bottle and Aluminum Can recycling receptacles 12

Photo 4” Recycling at NMSU is out of sight out of mind 13

Photo 5: In Las Cruces, residents using their blue bins are mixing contamination materials with the acceptable recycling materials. Then it has to be sorted anew (Photo from Snn News, 2018) 15

Summary of Socioeconomic Approach to Management (SEAM) 18

Figure 4 - The A-B-C TRIPLES SPIRALS OF Transformation of the business to achieve human potential (Adapted by Boje from p. 26 of Savall et. al 2008 book) 19

NMSU and State of New Mexico Operating within 9 Planetary Boundaries to prevent 6th Extinction Event 19

Figure 5 – 6th Extinction from Ignoring 9 Planetary Boundaries 19

We will focus on the 17 UN Sustainable Development Goals to TRANSFORM SMALL BUSINESS with True Storytelling and SEAM 21

Sustainable Development Goals 21

Introduction to SEAM 22

Figure 6: TFW Virus and relation of Storytelling Listening to 4-Leaf Clover Diagnosis 23

Figure 7: The SEAM Diagnostic Clover with Root Causes of Financial Situation of the Business 24

Figure 8: Student Consultants will be doing Three D-P-I-E Cycles (aka whorls) that become an Upward Spiral A of Momentum Continuous Improvement - Drawing by Boje July 6 2012 25

Figure 9: The death spiral from socioeconomic view© David Boje Aug 6, 2017 26

PART II. Report is organized in 23 Consulting Steps 29

Step 1 - DIAGNOSTIC (A-spiral) and 1st round of PNAC 29

Photo10: Things Tell a Story of the Downward Spiral of NMSU Recycling 29

PNAC (Periodically Negotiable Activity Contract) TOOL 30

Table 2: FIRST TOOL to IMPLEMENT - PNAC (Periodically Negotiated Activity Contract) 31

Table 3 – Report for MIRROR EFFECT Meeting (Required Summary Table of Costs of Keeping Going the Way its Going) 32

MIRROR EFFECT SEAM VERBATIM NOTES (required for any grade above C) 33

Step 2 Time Management Tool: Spiral B’s first tool 33

Figure 10: The Five Aspects of Time (click on the figure above to change the image) 34

Figure 11 – The Adjusted Time Results of diagnosis of 1st DPIE (Note the wedge on the pie chart should be resized to reflect your client’s situation) 35

Time Management Tool Diary Questions (ask and answer only ones that apply) 36

Step 3 - Direction (C-spiral), which is also the 1st D-question (Directionality) of D-Spiral. DO NOT OTHER ANSWER QUESTIONS HERE – this is only to give to CLINET AS OVERVIEW. ONLY DO answer to Directionality 38

Table 4 – 11 D’s of ‘D-SPIRAL’ Questions (note these occur along the 23 steps 38

Step 4 - Project planning (A-spiral) done collaboratively with your client. 39

Step 5 - Strategic Piloting Logbook tool [THIS REPORT] (B-spiral) 39

Step 6 – CHANGE PROCEDURES to change Rules of the game - (C-spiral) 40

Step 7 - D2 – Datability (D-Spiral): What are the most important datable moments in the life story of the business? 40

Step 8 - Mirror Effect meeting with client (A-spiral, part of D-P-I-E cycle) 41

Step 9 - Implement project (DPIE 1) in collaboration with your client (A-spiral) 43

Step 10 - Priority Action Plan tool (B-spiral) 43

Table 3 – Priority Action Plan Tool (adapted from Savall et al, 2008: p. 100). 43

2nd DPIE BEGINS ABOUT HERE 🡪Step 11 – Evaluate results of 1st DPIE and begin DIAGNOSIS 2 for 2nd DPIP Resource Deployment (C-spiral) 44

Step 12 - D3 and D4 (Q-Spiral: Durability and Disclosability) 44

Step 13 – DPIE 2 MIRROR EFFECT # 2 (A-spiral) – and detail your metrics, the Logbook tool (B-Spiral) indicators you have documented to date 45

Table 4 – reporting 2nd MIRROR EFFECT Diagnosis (each DPIE begins with Mirror Effect) 45

Step 14 - Competency Grid (B-spiral) 45

Step 15 - D5, D6, D7 (Spiral: Destining, Deployment, & Dwelling) 45

Step 16 – Evaluation of 2nd DPIR – (A-spiral) Evaluate Project # 2, Diagnostic, Project plan for 3rd DPIE project, and includes 3rd MIRROR EFFECT meeting with client 46

Step 17 - I/E SP (Internal/External Strategic Plan) (B-spiral Tool 5) 46

I/E SP (Internal/External Strategic Plan TOOL) 46

Step 18 - More D's (Spiral: Deseverance & Drafts) 47

Step 19 - Complete the Evaluation (A-spiral) of the 3rd project 47

Step 20 - PNAC (Periodically Negotiable Activity Contract) 47

PNAC (Periodically Negotiated Activity Contract TOOL) 48

Step 21 - technological, product market, management systems, and develop human resources C-spiral 49

Step 22 - Last D's (Spiral: Dispersion & Detaching) 49

Step 23 - Draw amazing spirals for the draining of dysfunctions and hidden cost (downward spiral) and the upward spiral momentum from the 3 DPIEs that generated revenues 49

Virtue Ethics SECTION OF REPORT 50

Figure 12 – Annotated Double Spiral from a previous report (please do your own drawings) 50

Notice how this one annotates the date-abilities, has the 3 DPIE’s in it 52

Figure 13: Annotated DPIE spiraling (Boje, 2014) - Summary of 3 DPIES done with annotation of dates of each DPIE implementation steps (again this is example of spiral you can draw and annotate for yourselves) 53

Conclusions and Recommendations 53

APPENDICES 55

Copy of Client Application 55

Copy of Confidentiality Agreement (you sign it, client does not) 55

In sealed envelop your Client’s Confidential Evaluation of your Project 55

In sealed envelopes, 360 Peer review rating of you and your teammates 55

REFERENCES 56

Website References 60

# Part I: Executive Summary of Spiral Consulting

New Mexico State University (NMSU) is stuck in the past, waiting for coal, gas, and oil to make its ‘Carboniferous Capitalism’ comeback in New Mexico. My three expert recommendations are about embracing the 17 United Nations Sustainable Development Goals (hereafter, UN SDGs). [Read more about each goals and subgoals](https://sustainabledevelopment.un.org/post2015/transformingourworld" \t "_blank)

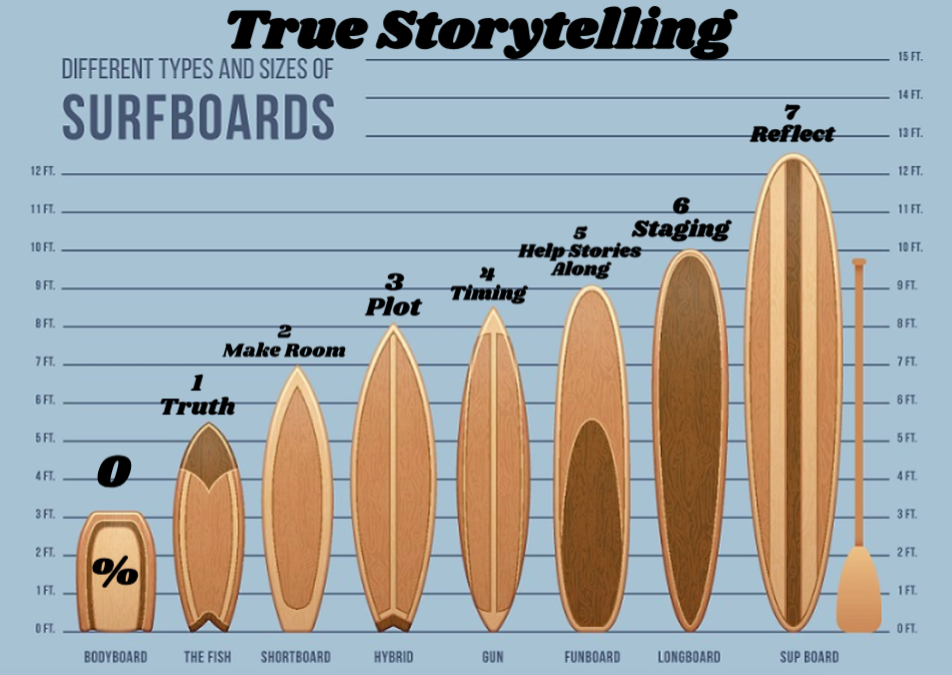


### **Figure 1: True Storytelling and 17 UN Sustainability Development Goals**

## Three Main Consultant Recommendations:

1. **First Expert Recommendation** 🡺 NMSU embrace the 17 UN SDGs in its mission as an Aggie University that does ensemble leadership in place of hierarchical leadership, in order to achieve **SDG#3 Quality Education**. Leadership in Composting would reduce Landfill waste 50%
2. **Second Expert Recommendation**🡺 The State of New Mexico embraces the 17 UN SDGs, especially **#7 ‘clean energy’** solar and water energy, while immediately weaning itself away form ‘Carboniferous Capitalism’ legislative policies that get beyond political party gridlock by enacting **#17 ‘Partnership for the 17 SDG Goals’** including **#12 Responsible Consumption & Production**
3. **Third Expert Recommendation**🡺 Las Cruces **embrace the #17 UN SDGs**, especially getting control of its **#6 water** aquifer replenishment cycle, including a move away from 86% going to ‘Big Ag’ **#15 Life on Land**: crops such as pecans, corn, and cotton that have huge water consumption rates, and switching to organically grown food crops

We can get there by doing SEAM in combination with True Storytelling:



## Figure 2: Truestorytelling.org Surf Board Image

1st True Storytelling Principle: **You yourself must be true and prepare the energy and effort for a sustainable future.**

4 Questions:

1. **Did you check it out?**
2. **Do you believe in it?**
3. **Do you have the knowledge to do it?**
4. **Can you sustain (get energized & not burn out) in long future?**

Yes, I checked it out, and I believe that NMSU can repair and improve its recycling and composting system.

**2nd Principle: Makes Space to Respect the Stories Already There!**

1. **RESPECT what is there NOW**
2. **Our INTERACTIVE ACTIVITY: Take Campus TOUR to SEE the TRUE STORYTELLING now.**
3. **Invite people there now, & include Mother Earth storyteller?**
4. **What is Mother Earth (living story) of each college’s recycling system?**

For example, there are janitors doing recycling, sorting the student’s trash. There are students volunteering to help the remaining 2 NMSU recycling employees do the 4AM to noon shift work. There are students initiating composting. There are faculty and staff serving on the Sustainability Council. There are faculty with grans in projects relates to the 17 UN SDGs.

**3rd Principle: You must create stories with a clear plot creating direction and help people prioritize!**

1. **Best Plots have a TWIST, what Roland Barthes calls “PUNCTUM”, something that really stands out in your storytelling**
2. **We are ready to plan new future that is a PATTERN BREAKER from Past, but the plans of NMSU and State of New Mexico do not meet this test**
3. **We want a good plot that is TRUE STORYTELLING, of a future direction**
   * **It has Beginning, Middle & End to be Clear Direction of Revitalizing Recycling, Composting, and a policy of Zero Waste**
   * **It tells WHY we are doing this, such as, why no more waste baskets in classroom needs to be a policy**

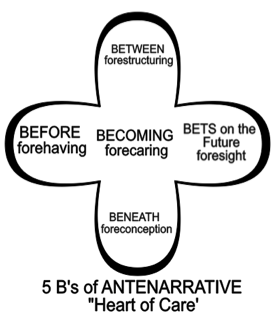
**4th Principle: You must have timing!**

1. KAIROS: place & time when conditions are right for the accomplishment of a crucial ’intelligent’ action
2. NOT the Beginning Middle End CHRONOS type of Narrative Plot we just did
3. Rather it is the fleeting RIGHTNESS of PLACE and TIME, and Material-Circumstance for an **Opportune Moment**
4. What is recyclable is changing with what Leaders and Authorities are judging chat is recyclable and what is waste for trash landfill.
5. Non-judicial elements since price of recyclables in recyclable markets (in China & locally) becomes ENTANGLED with the science (knowledge) of what is possible to recycle.

**5th Principle: You must be able to help stories on their way and be open to experiment**

****

**This is where my Antenarrative theory comes in. Antenarrative means ‘before’ and ‘bets on the future.’ It is defined as preparing in advance and making better bets on the future. It has 5 B concepts:**

****

### Figure 3 Antenarrative B’s

1. **How is NMSU preparing in advance BEFORE the future takes place?**
2. **What is in advance BENEATH in fore-conceptions?**
3. **Identify any BETWEEN the parties, in their forestructuring?**
4. **What are the BETS on the future made with foresight?**
5. **What is the entire BECOMING, forecaring?**
6. **Antenarratives are choices among FUTURES**
7. **NMSU prepares in advance for this or that Future**
8. **Antenarrative constitutes BEFORE narrative or story**
9. **Antenarrative is before, beneath, becoming, between, and bets on the future coming.**

**6th Principle: You must consider staging including scenography and artifacts!**

1. **How are material & social agents part of the staging & artifact of RESTORYING?**
2. **Restorying is creating a new story by understanding the small moments of triumph in the past, when people did go against the direction of the majority business-as-usual business model. For example, when NMSU had the most advanced recycling system, when it really merited a Gold Star in sustainability, when it really had composting, when students got university Chancellors to sign climate agreements.**

**7th Principle: You must reflect on the stories and how they create value!**

1. **Can you pull yourself up and look at the WHOLE SITUATION of the 17 UN SDGs?**
2. **Lemmings are business-as-usual, and are not REFLECTING on long-term value?**
3. **How a FAKE ‘Corporate Social responsibility’ story loses value as we approach 6th Extinction as early as 2100 impacts on human extinction will be reality?**
4. **In New Zealand, Maori tribes succeeded in having the Whanganui River and Mount Taranaki declared legal persons.**

William James (1907: 96) says, “Things tell a story.” Take this same picture in 2018 and only two workers are left to do all the NMSU recycling work. The manager was put in charge of several additional areas, and cannot be on site. The successive downsizing of staff, then faculty, and final fewer work study student positions has taken a toll on NMSU recycling. Such a system is unsustainable!

* Not just people tell stories
* **Things tell a story**
* Assemblages of things tell a story
* **Pictures tell a story**
* Stuff you carry with you tells a story
* **Things in your office tell a story**
* Things are ACTANTS mediating Human Routines in a business
* ACTANTS are things; Things are material intra-acting with Social habits & routines. Software is an ACTANT, such as Re-Pete software telling building monitors to wait a month before moving old furniture into warehouses. In Business Complex building, old furniture listed in Re-Pete has been blocking the recycling bins for 70 days and counting.



### Photo 1: NMSU once employed 6 Facilities and Services workers to do its Recycling and Composting.

After the Deloitte Consultancy charged NMSU $623,700 to do downsizing of the staff, and to reengineer the processes, only 2 do all the recycling, all the sorting, all the preparing of what does NOT go into the wasteful landfill. By under-staffing, there is a lack of productivity; a lack of quality, and untapped revenue potential is sacrificed. In addition, the interviews I did with janitorial, find that janitorial staff is under staffed, and the new replacements they did get, are not trained in recycling, nor are the building monitors for all the buildings across NMSU campus. As a result, a good deal of recyclable material is tossed into the trash bins, and in some cases, items put in recycle blue bins are put into the trash bins. Seeing this faculty are getting disillusioned and just not recycling, and actually asking building monitors to remove what they call ‘ugly’ blue bins, so as to ‘market’ to students a beautiful hall way or lobby.

****

### Photo 2: The absence of 3rd Floor 4-bin recycling system in Business Complex Building

**What is happening to NMSU recycling?** In 2007 there was Recyclemania and NMSU had competed and placed well in prior national competitions. But now the 4-bin systems are being done away, or hidden in basements, or behind the stairwell, out of sight and out of mind.

****

### Photo 3: The Plastic Bottle and Aluminum Can recycling receptacles

There are two few of them and as a result we are collecting less than an estimated 25% of what is possible. They are not located in the classrooms where most students deposit recyclable materials into large trash bins. Students mainly just toss their single-use plastic bottles and their aluminum cans in the trash bins because they don’t know any better. This is also because most students, most faculty, most staff and most administrators are not being trained in the socioeconomics and of recycling, composting, or in the 17 UN SDGs. The recycling system at NMSU is perfectly designed to fail.

Besides killing wildlife, plastic and other debris damage boat and submarine equipment, litter beaches, discourage swimming and harm commercial and local fisheries. The problem of plastic and other accumulated trash affects beaches and oceans all over the world, including at both poles. Land masses that end up in the path of the rotating gyres receive particularly large amounts of trash.



### Photo 4” Recycling at NMSU is out of sight out of mind

**Out of sight and Out of mind is Blind to all 17 UN SDGs and to socioeconomic hidden costs of such archaic practices.**

**USA is ONLY nation not ratifying international “BASEL CONVENTION ON INTERNATIONAL WASTE” treaty to stop 1st world nations from shipping e-waste to 3rd world nations.**

* [Source](https://www.usnews.com/news/articles/2016-04-22/the-rising-cost-of-recycling-not-exporting-electronic-waste) Average US household owns 28 e-goods
* US generates 3.14 million tons of E-waste yearly
* Only 16% of World’s E-waste is recycled by companies or agencies sanctioned by regulators
* The US EPA exempts E-waste as ‘non-hazardous’ despite the lead-lined cathode ray tubes, the mercury, and other heavy metals.
* 22 States, including NEW MEXICO have **not passed** E-waste laws ([source](https://eridirect.com/blog/2015/07/its-2015-which-states-have-e-waste-legislation/)).
* By Signing the [BASEL CONVENTION ON INTERNATIONAL WASTE](http://www.basel.int/TheConvention/Overview/History/Overview/tabid/3405/Default.aspx), US manufacturers would pay for E-waste recycling processing in safe working conditions, with trained workers.
* It takes hundreds of trained workers for computer companies such as Apple, Dell, HP, Sony, etc. to do Hazardous-Waste Recycling.
* **There is something missing at NMSU. There are no E-waste bins.** E-Waste contains TOXIC Heavy Metals & Nanoplastic that Poisons People, Animals, Plants, Soil…
* EXPERIMENT: GPS tracking devices placed in recycled 200 computers/printers/monitors (E-Waste), dropped in E-recycling at GOODWILL (Dell’s partner) wound up in 3rd World ‘recycling’ villages in China, Hong Kong, & Taiwan. [See YouTube](https://www.youtube.com/watch?v=n6FJJ29k8uc)
* Track the E-Waste using GPS from US recycling facilities to 3rd World village E-waste recyclers (unlicensed & unregulated); For the ANTENARRATIVE PROCESS look for the asset tags on printers/computers/monitors/laptops of US institutions, universities, prisons… Tiny amounts of lead, mercury from LCD tubes, carcinogens from printer toner, etc.
* We are told the GRAND NARRATIVE by our Computer/Printer Manufacturers that our E-Waste is being safely Recycled
* Children as young as 5 in Ghana burn the E-waste to get to the copper for recycling. They are affected by poisonous fumes creating lung cancer, poisoning water & soil

# 

### Photo 5: In Las Cruces, residents using their blue bins are mixing contamination materials with the acceptable recycling materials. Then it has to be sorted anew (Photo from [Snn News, 2018](https://www.lcsun-news.com/story/opinion/columnists/2018/03/04/recycling-our-area-jeopardy/392724002/))

* 10 Major Cities in US have Zero Waste Strategic Implementation plans by 2020 through 2050: Austin TX by 2040; and Dallas; Minneapolis 80% by 2020; NYC 90% by 2030; Seattle 72% by 2020; In CA, there is San Francisco, Oakland, Berkeley, LA, and San Diego
* **BUT NO LAS CRUCEAN Zero Waste Strategy Implementation**

**Contaminated recyclables hastens the 6th Extinction. US throws out 4.5 pounds trash per person per day.** Recycling in the US and in most developed nations is in chaos because in 2017 China stopped accepting most types of recycling, including not accepting contaminated waste, no more single-use plastic, etc. If you throw away even half the paper you use in a year instead of recycling it, you increase your climate pollution by the same amount as driving 526 miles.

* New Mexico among 1st states to feel crisis effects in 2017 (NM Recycling Coalition).
* Many NM municipalities stopped receiving rebates in fall 2017.
* There are slower line speeds, extra labor (50 new staff in Albuquerque) to meeting China’s new rules.
* Same for Las Cruces. Cities in NM beginning to see material pile up due to continuous low pricing.
* Las Cruces paying additional $40,000 a month; Santa Fe paying $540,000
* Las Cruces will inspect carts for contamination in September 2018, and issue ‘Oops’ tag. ([Waste Dive](https://www.wastedive.com/news/what-chinese-import-policies-mean-for-all-50-states/510751/))
* Globally only 14% of plastic packaging is recycled & 8M tons ends up in ocean yearly ([Washington Post, 2018](https://www.washingtonpost.com/outlook/five-myths/five-myths-about-recycling/2018/04/20/9971de66-43e6-11e8-8569-26fda6b404c7_story.html?noredirect=on&utm_term=.c0f4b35711f0))
* Electronic Waste 50 million metric tons in 2018; 25% is personal E-waste ([UN Report](http://tcocertified.com/news/global-e-waste-reaches-record-high-says-new-un-report/))
* Until 2018 China took 50% of world’s plastic & paper recycling waste; but now bans 24 types of solid waste, including various plastics and unsorted mixed papers, and sets a much tougher standard for contamination levels ([Environmental Paper Org](https://environmentalpaper.org/2018/01/theres-a-global-recycling-crisis-and-you-can-help/))
* Recycling creates about 1.25 million US jobs ([Guardian, 2017](https://www.theguardian.com/sustainable-business/2017/feb/22/plastics-recycling-trash-chemicals-styrofoam-packaging))
* We need 1.7 Planet Earths to keep up with our Production & Consumption Habits, but ***THERE IS NOT PLANET B***
* 2.12 billion tons of Waste each year, enough to fill a circle of garbage trucks 24 times
* 99% of everything you buy is Trash within 6 months
* By 2050 more plastic in ocean than weight of all the marine life
* It takes thousands of years for a plastic milk jug to decompose, a century for a single-use plastic soda or water bottle
* 300 million tons of plastic produced each year and only 2% goes into recycling, & only once, then its all waste accumulation, that never goes away

Las Cruceans – Let’s have Zero Waste INNOVATION PROJECTS!

* Find amazing alternatives to Plastic
* Diagnose the HIDDEN COSTS of Plastic Life Style
* Reduce the PLASTIC DYSFUNCTIONS by focusing on ZERO WASTE product development
* 1st begin with psycho-sociological STUDY OF THE LAS CRUCEAN,
* 2nd organize DPIE (Diagnosis, Project, Implementation, Evaluation) groups horizontally (top executives) and bottom up (vertically)
* 3rd Plenary Group meetings of all, every few weeks
* 4th put it together in a TABLE of Financial Consequences for NEXT MIRROR EFFECT

In Sum, SEAM consulting can address ‘real’ current needs of New Mexico and NMSU. NMSU is NOT catching the invisible NANOPLASTIC, or the barely visible microfiber plastics, or the microbeads of plastic & nylon, or E-Waste in its recycling STRATEGIC IMPLEMENTATION.

**I recommend the NMSU discontinue its contract with Pepsi Cola.**

* **Plastic Facts:** People in US buy half a billion single use plastic bottles of water each week. It is more than enough to circle the planet 5 times each week. US disposed of 3 million plastic water bottles an hour. Lab test decide 38 different pollutants in the nanoplastic including: bacteria, fertilizer, Tylenol, industrial solvents, cancer causing chlorination byproducts. Microplastics (plastic microfibers, nanplastic particles, etc.) leach into Pepsi from the plastic bottles sold on the NMSU campus, and in the Aquafina water from the single use plastic bottles. NMSU has healthier filtered water available for free. All it would take is a policy to give every student a refillable jug for water, and soda, and a refillable mug for coffee, to turn things into a healthier future for NMSU students. 50% of all plastic produced is used only once, and tossed; only 5% is ever recycled
* Average American tosses 185 pounds of plastic each year
* 1 Million Sea Birds & 100,000 Marine Mammals killed by Plastic in world’s oceans
* The Nanoplastic particles in just one Plastic Water Bottle break down, to potentially reach every mile of beach on Planet Earth
* 93% of Americans above age 6, have BPA contamination from plastic in their body

12 Hormone altering chemical toxins are absorbed in microplastic lint, microbeads, and in those tiny nanoplastic particles (so mall they penetrate the deepest into lungs, liver, kidney, and can enter every molecule in the human body).

Contamination leaching from the plastic in single use plastic bottles results in exposure to hormone disruptors. There is Estrogenicity leaching into the water and soda from plastic bottles that is three times higher than in glass containers. A recent study found 11 of 18 bottle water sampled induced estrogenic effects in a human cancer cell line. 93% of bottled water tested showed signs of microplastic contamination. 10.4 particles per liter were bigger than width of human hair. 314 particles of plastic were smaller than 100 microns. 1 Million seabirds and 100,000 marine mammals are dying from the 8 million tons of plastic in our oceans. Ocean plastic absorbs toxic chemicals including PCBs and DDTs in their travel through the fish food chain to our table, then leach them into the human body. At least 5.25 trillion microplastic pieces are in the ocean now, and become fragmented into billions of microscopic nanoplastic particles.

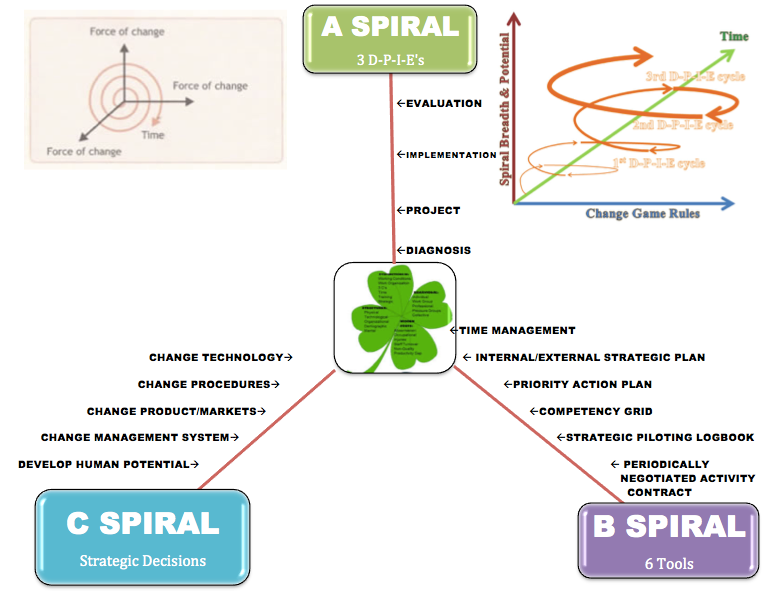
The scientific consensus is the plastic is poisoning many kinds of food chains. If there are proven health effects of Pepsi and Coke, then why does NMSU have a contract with Pepsi (and had one with Coke). Health effects include asthma, kidney problems, sugar overload, obesity, tooth decay, heart disease, reproductive issues, osteoporosis, and increased risk of diabetes. Pepsi contains 41 grams of sugar, which spikes in our students, and can result in bursting liver with insulin overload, higher blood pressure, etc. So Pepsi needs to stop selling unhealthy products in plastic containers at NMSU. NMSU Business College accepted $10,000 from Pepsi for scholarship. NMSU needs to be above this sort of thing. As Pepsi soda sales are declining, it is buying up water, turning water into commodity, and much of the fracking oil is going to making those single use water bottles.

A socioeconomic approach to consulting reveals the hidden cost of NMSU plastic consumption.

# **Summary of Socioeconomic Approach to Management (SEAM)**

We can use SEAM consulting instead of more Deloitte Reengineering/Downsizing consulting to implement the 17 UN SDGs. SEAM is used diagnose the unsustainable situation of NMSU and the state of New Mexico. ([Boje, 2018a book](https://www.dropbox.com/sh/re3q33yzopb6lpt/AAAaoXCkDM84ci4nOgW1jvpca?dl=0" \o "Download the Prepress PDF" \t "_blank)). **SEAM is a consulting intervention to unleash human potential to transform all the dysfunctions into positive ‘productive’ financial consequences, by moving away form speculative finance capitalism. Three forces of change occur as the small business consulting intervention winds its way through the spiral-axes: SPRIAL A three Diagnostic-Project-Implementation-Evaluation cycles (D-P-I-E interventions) in 16 weeks, SPIRAL B six Management Tools taught to client, SPIRAL C Strategic Decisions to change six Financial Consequences, and a SPIRAL D (which we will introduce to you below) within 17 UN SDGs.** The consulting project has three spirals: A, B, and C:

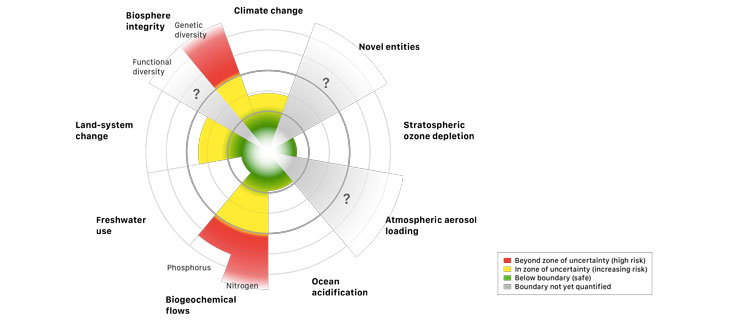
1. A is the three rounds of Diagnosis, Project, Implementation, & Evaluation (DPIE)
2. B is the 6 tools of SEAM I train clients to perform
3. C is the 5 Strategic Decisions in the Order they arise.



### Figure 4 - The A-B-C TRIPLES SPIRALS OF Transformation of the business to achieve human potential (Adapted by Boje from p. 26 of Savall et. al 2008 book)

The above three expert consultant recommendations are to be done by implementing 3 D-P-I-E cycles of improvement. This is at several levels. It is a Periodically Negotiated Activity Contract (PNAC) between consultant and client, so expectations stay eye-to-eye over course of the 3 DPIEs. Second, it is a PNAC training that you do with the client so PNAC's are used in the University and with all the State of New Mexico administrators and workers. And it is about compensation of all state employees to transition from Carboniferous Capitalism to Solar and Wind Zero-Waste Capitalism. If the students, faculty, staff, and administrations helps move the firm into spiral-updraft, into Zero growth by carbon, less waste, more composting etc., then what is going to be the reward, the payout for them? How do they participate in the metamorphosis of New Mexico energy economy? Yes it is profit sharing lowering costs to students, increasing wages to faculty and staff according to their work in this. It is also accountable for any of those six root-stems under the 4-leaf clover diagnostic tool below. The client should be familiar with all 6 tools and using them to pilot their business on the upward spiral-antenarrative path. If they are just repeating the same old business cycle, then your consulting has not worked. (Savall et al, 2008: pp. 108-112). This is the student consultant’s 3 main goals, action plans, and indicators for one semester. Teams can use the format of Table on p. 110 of Savall et al., 2008. In this way NMSU and New Mexico can begin to manage within the 9 planetary boundaries (Rockström et al., 2009).

## NMSU and State of New Mexico Operating within 9 Planetary Boundaries to prevent 6th Extinction Event



### Figure 5 – 6th Extinction from Ignoring 9 Planetary Boundaries

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| [NINE PLANETARY BOUNDARIES](http://www.stockholmresilience.org/research/planetary-boundaries/planetary-boundaries/about-the-research/the-nine-planetary-boundaries.html" \t "_blank) | \_ Boundary 1. Climate Change | \_ Boundary 2. Biodiversity Loss | \_ Boundary 3. Biogeochemical (phosphorous change | \_ Boundary 4. Ocean Acidification |
| \_ Boundary 5. Land Use Crisis | \_ Boundary 6. Fresh Water Crisis | \_ Boundary 7. Ozone Depletion | \_ Boundary 8. Atmospheric Aerosols | \_ Boundary 9. Chemical Pollution by Plastics & Heavy Metals |

## ****We will focus on the 17 UN Sustainable Development Goals to TRANSFORM SMALL BUSINESS**** with [True Storytelling](http://truestorytelling.org/" \t "_blank) and SEAM

## Sustainable Development Goals

Goal 1. End poverty in all its forms everywhere

Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 3. Ensure healthy lives and promote well-being for all at all ages

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Goal 5. Achieve gender equality and empower all women and girls

Goal 6. Ensure availability and sustainable management of water and sanitation for all

Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 10. Reduce inequality within and among countries

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

Goal 12. Ensure sustainable consumption and production patterns

Goal 13. Take urgent action to combat climate change and its impacts\*

Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

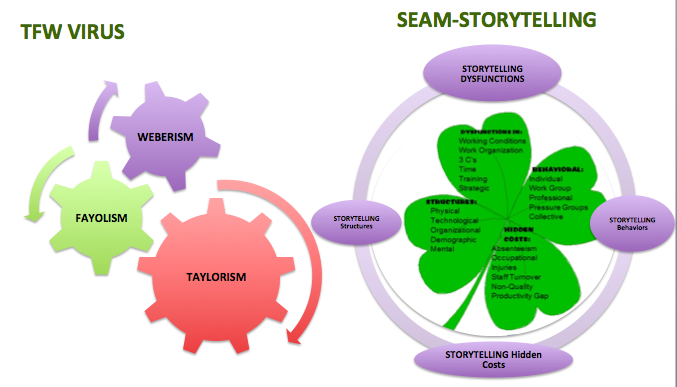
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

# Introduction to SEAM

Why does a business continue to get poor results? The accounting and management information system has HIDDEN the ‘real story’ from the decision makers and is handing over a very shallow narrative in the income statement and traditional accounting storytelling. Therefore, the consulting approach is to LISTEN to the current face-to-face, and in-action storytelling, in-order-to unearth the DYSFUCTIONS, asking questions about the HIDDEN COSTS, and the UNTAPPED REVENUE POTENTIAL so the client can LOOK In the MIRROR and see the ‘real story.’ The REAL STORY is in 6 FINANCIAL CONSEQUENCES that drive HIDDEN COSTS and RESULT FROM all the DYSFUNCTIONS**.** Business Sustainability Indicators- Include detailed storytelling, living stories of sustainability and any interventions made to implement sustainability logbook indicators

Each interview that lasts about an hour should generate at least 10 pages of hand-written verbatim notes. Please record full sentences, put quotes around each verbatim statement. Do not put things in your words, use theirs. These notes and observations of hidden casts (untapped revenues) are basis for doing your Mirror-Effect meeting with your client. Please develop qualitative and quantitative LOGBOOK metrics of SUSTAINABILITY?

The Diagnosis is 3 to 4 weeks of just listening to the stories the client tells about the 4-leaf clover. You are listening to the storytelling as your diagnosis. It is called ‘conversational interviewing.’ You ask for history, how it all began, where it is going in the future? You mostly listen and don’t ask questions about the specific working conditions, work organization, Weberism, Taylorism, etc. That would be lame. Rather, use the TFW Virus and 4-Leaf as baskets (categories) into which you sort your stories and observations (fieldnotes).



### Figure 6: TFW Virus and relation of Storytelling Listening to 4-Leaf Clover Diagnosis

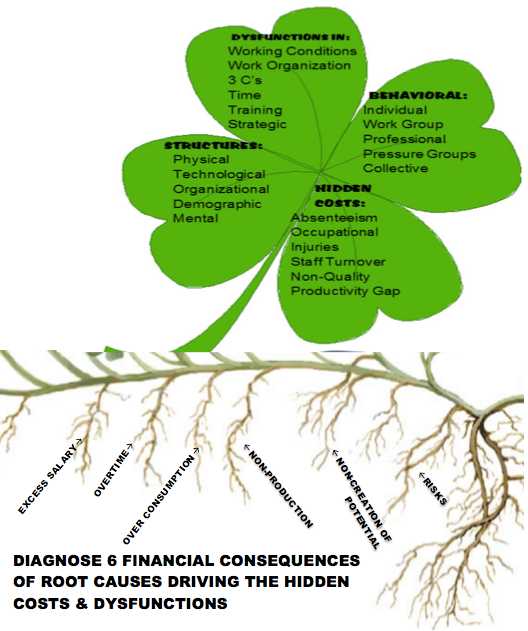
You are listening for hidden costs (costs not reported in the regular accounting system or info system of the client. When you encounter a hidden cost, ask ‘how often does it occur?’, and ‘approximately what is costing in his/her time to fill in, or in lost revenue, etc.’ Do not get shunted off to an account. We are looking for the owner’s managers, employee’s own approximations. If they don’t know what things cost, there are some major training needs.

Analysis: The TFW virus has a death-grip on the State of New Mexico and is particularly virulent at NMSU. The alternative is to enact ‘Ensemble Leadership’ (Rosile, Boje, & Claw, 2016) we are all together leading instead of grid-lock party politics, and the top-down hierarchy which is so very full of dysfunctions.

SEAM can result in implementations such as composting at NMSU, and in the State.

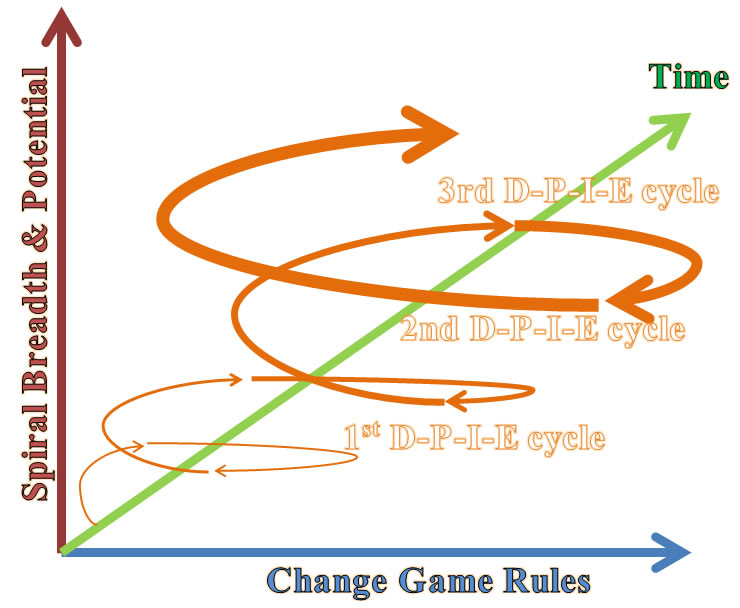
developing a hands-on learn by doing NMSU compost program.  For example, Ellie McCann and Emily Creegan are both NMSU graduate students who need our help developing what a necessary composting program in light of climate change, water conservation tactics, and sustainable campus development. They have met with Sodexo and campus facilities many times in the past 1.5 years in an attempt to develop this. They conducted a waste audit for Sodexo Taos cafeteria last year and determined that more than 50% of the total pre-consumer waste stream is organic material. Sodexo is very open to this. They think starting relatively small with Taos cafeteria pre-consumer food waste and on campus landscape materials is the best option (avoid large scale development and manure for now). They have created laminated educational materials and identified best organic waste collection bin locations in Taos (kitchen, pre-consumer organic waste only). This is already happening in the Café in Gerald Thomas. Once upon a time NMSU facilities and services did composting of its lawn and tree waste, but decided it was not profitable and stopped. However, it did not assess the hidden costs of NOT composting, how 50% of waste could be reduced to the landfill.

I compost at home, and have seen results as high as 85% reduction in landfill waste.



### Figure 7: The SEAM Diagnostic Clover with Root Causes of Financial Situation of the Business

Notice that the SEAM Diagnostic Clover has 6 Financial Consequences of Root Causes that are driving the Hidden Costs and the Dysfunctions. This is the belowground, the rhizomatic financial roots you are looking for in your diagnosis. Do not get side tracked. If client says, I need a marketing plan (maybe that is the SURFACE issue, and not the ROOTE CAUSE below ground). Initiating NMSU composting campus wide, with bins for organic waste, is a necessary step to deal with climate change.



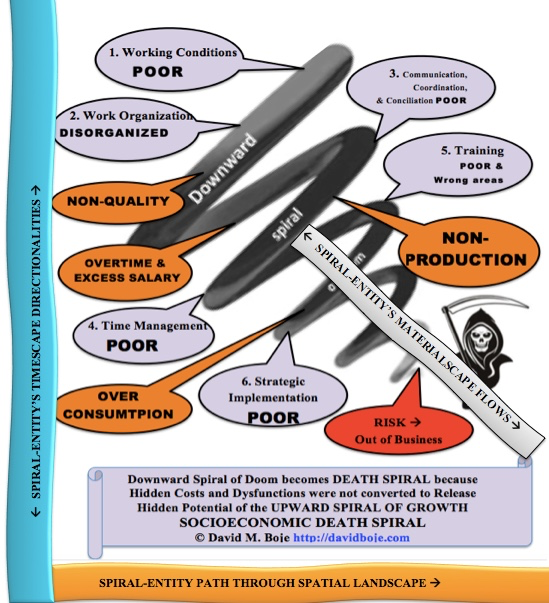
### Figure 8: Student Consultants will be doing Three D-P-I-E Cycles (aka whorls) that become an Upward Spiral A of Momentum Continuous Improvement - Drawing by Boje July 6 2012

***“Every system is perfectly designed to get the results it gets” (Hanna, 1984,1988).***

DPIE stands for the cycle of Diagnosis, Project Design, and Implementation of Project with the Client, and Evaluation of the Project. DPIE begins with a DIAGNOSIS – using 4-leaf clover categories: This begins by you asking the 6 Domains of Dysfunction, which you are to listen and make verbatim field notes OR you are to tape-record or video-record and then meticulously transcribe the verbatim answers in your Midterm and Final Report.

The Diagnosis covers the 4-Leaf Clover, beginning with the dysfunctions in upper leaf, the structures and behaviors. You are listening for areas of improving the ‘release of human potential’ and generating ‘untapped revenue potential.’ When you hear about a ‘hidden cost’ ascertain, the approximate cost of each occurrence, how many times a week, month, and year this happens, so you can generate your table of the MIRROR EFFECT.

Mirror Effect is the actual face-to-face meeting all team members have together with their client. The Mirror Effect has three components (1) your verbatim field notes, organized into types of dysfunction, structure, hidden cost observed, the root-tem associated with each; (2) the Table below where you report the individual and total combined HIDDEN COSTS & UNTAPPED REVENEUES, and (3) your three student consultant ‘expert’ recommendations. NMSU and State of New Mexico are in a downward ‘death’ spiral, without building a upward spiral of sustainable goal achievement.

****

### Figure 9: The death spiral from socioeconomic view© David Boje Aug 6, 2017

Please see SEAM BOOK: p. 55 Figure 5.2, p. 58-9, Figure 5.23 & 5.24 through p. 62 Figure 5.25.c; and in Chapter 6, p. 86 Figure 6.7, Appendix 3 & 5 for several other examples of Creation of Potential and Hidden Cost Calculation forms as templates to use in Mirror Effect if they are more appropriate.

**FINANCIAL ROOT STEM CONSEQUENCES OF THE WAY IT IS NOW (the result of all the dysfunctions and the hidden costs):**

1. **Excess Salary**
2. **Overtime**
3. **Over Consumption of Resources**
4. **Non-Production of goods and services**
5. **Non-Creation of human potential**
6. **Risks that things will get worse and worse**

**PRINCIPLE 1: Upward Spiral momentum is generated and accelerated by doing 3 DPIEs, one after the other, building upon one another. Here is an example of combining 3 DPIE loops (also known as whorls).**

You enter the client's 'Death Spiral' of accumulated dysfunctions, hidden costs, and conflicts are escalating (maybe manifest outbreaks). Co-construct an organic matrix whorl-by-whorl, one DPIE at a time, until a Spirally Coiled rate of growth takes on momentum. The rate of growth per whorl (each DPIE) is around a coiling axis, in shape of a generating spiral curve that has 'ontologic growth changes' as the small business reaches socioeconomic health. Then you do you 1st DPIE (whorl) and get a little movement, then your 2nd (whorl) gets a bigger upward spiraling, and you top it off with the 3d DPIE (whorl). Think of 3 momentum growth phases. Phase 1: you encounter and document all the dysfunctions (enter Death Spiral (if its there)). In Phase 2, co-construct with the client (never for them), 3 DPIES in a succession, building upon one another (not 3 objectives, you pre-design at get-go, that won't do the turnaround). Then in 3rd Phase you leave the client prepared to carry out their own DPIE, because they know the tools (Spiral B) and they have made Strategy moves (Spiral C).

**PRINCIPLE 2: The Double Spiral of flushing out Hidden Cost Downward Spiral converting savings to the Upward Spiral of revenue generation 3 DPIEs**. The three dimensions form the space (landscape) timescape, and materialscape. Part of this principle is the inseparability of space, time, and materiality, that is called spacetimemattering. We implement 6 tool with (not for) the client along the B-Spiral. You will have three MIRROR EFFECT meetings showing the client the hidden costs and untapped revenues that can come with the implementation of the first or next DPIE (3 in all).

**PRINCIPLE 3: The Double Spiral of flushing out Hidden Cost Downward Spiral converting savings to the Upward Spiral of revenue generation 3 DPIEs. The three dimensions form the space (landscape) timescape, and materialscape.** Part of this principle is the inseparability of space, time, and materiality that is called spacetimemattering. We implement 6 tools with (not for) the client along the B-Spiral. You will have three MIRROR EFFECT meetings showing the client the hidden costs and untapped revenues that can come with the implementation of the first or next DPIE (3 in all).

**PRINCIPLE 4: 3 Spirals, A (3 DPIEs), B (6 Tools), and C (Strategic Decisions) form the basic TRIPLE SPIRAL, which revolves around the 4-Leaf Clover model at the center.**

**PRINCIPLE 5: The worst consultants work on the symptoms of the problem. The best consultants dig deep into the financial 'root stems' beneath the hidden costs.**

**PRINCIPLE 6: Follow the 23 steps and you will succeed**

The student consultants do three Mirror Effect meetings, one for each DPIE. It includes a face-to-face meeting with client, reading back verbatim notes categorized by the 4-Leaf categories, and a Table showing the hidden costs, untapped revenues. Mirror Effect is holding this mirror up to client so they see how to save hidden costs and get at untapped revenues by doing the 3 DPIE cycles.

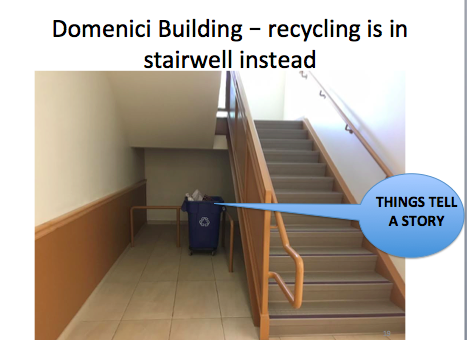
Implementing the mirror effect in an actual face-to-face meeting with the client where direct quotes from manager, employees, customers, and suppliers are displayed and discussed to diagnose areas that made need fixing, particularly stem-roots which are the cause of surface problems that the client is talking about. You report on this meeting at mid-term. With the mirror effect, you are able to use this diagnosis to come up with solutions and recommendations. Using direct quotes from the client, you can tell them reference them back to the problem and then what the underlying cause may be. This is helpful when giving recommendations because they are better able to see why you are recommending that solution. There are three components to mirror effect: presentation of direct ‘storytelling’ quotes (verbatim) sorted by managers, employees, customers, & suppliers; (2) a table of hidden cost and revenue calculations, and (3) the student consultant observations and recommendations.

# PART II. Report is organized in 23 Consulting Steps

In this section of the Piloting Logbook I will detail the 23 steps followed to produce the movement on axes A, B, & C in Figure 2.

## Step 1 - DIAGNOSTIC (A-spiral) and 1st round of PNAC

I began the diagnostic by having students in the NMSU classes I teach inventory the recycling situation in the campus buildings, visiting the recycling center (speaking to the two remaining facilities and services employees), talking with Art Lucero who manages recycling along with several other functions (e.g. janitorial workers) from another building, and the building monitor for all three Business College buildings (Business Complex, Guthrie, and Domenici Hall).



## Photo10: Things Tell a Story of the Downward Spiral of NMSU Recycling

## PNAC (Periodically Negotiable Activity Contract) TOOL

PNAC is between consultants and client change over course of this semester. Be sure to manage expectations between all parties. The job of the consultant is to coach and mentor, not to be a slave or assistant to the client. We consult by listening, observing, and working with client to generate solutions.

### Table 2: FIRST TOOL to IMPLEMENT - PNAC (Periodically Negotiated Activity Contract)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PNAC (Periodically Negotiated Activity Contract) Date of Contract: Aug./22/2018 CONSULTANTS NAME: David M. Boje NAME OF CLIENT: NMSU & State of New Mexico INSTRUCTIONS: First check**  **particular Goals and Boundaries Consultants & Client are most interested in. Then fill in Client’s Main Business Development Objective, and Outline 3 DPIE’s with your client.** | | | | | | |
|  Goal 1. End poverty in all its forms everywhere | |  Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture | |  Goal 3. Ensure healthy lives and promote well-being for all at all ages | |  Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all |
|  Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development | | **CLIENT’s MAIN OBJECTIVE: To mediate the conflicting demands of new faculty, new students, and new workers at NMSU, with the grid-locked New Mexico Legislature**  **Consultant/Client ’s 1st DPIE: Recycling Revival**   * **When: August 2018** * **Where: Business College** * **Who is involved: Mgt448/548 & Mgt388 students & faculty** * **What resources: the Big Blue Bins & the plastic/can receptacles** * **Why: Recycling system is underfunded, undermanaged, and not a priority of the administration, faculty, staff or students in the aftermath of the five years of budget deficits, the downsizing & reengineering by Deloitte consultants has left the university in a downward spiral towards 6th Extinction!**   **CONSULTANT/CLIENT’S 2nd DPIE: Plan for the Groundwater Crisis of NMSU, Las Cruces, and State of New Mexico**   * **When: Happening now** * **Where: All over NM** * **Who is involved: Every human, all plants, and animals** * **What resources: Need to start measuring groundwater levels in all wells, decrease plastic leaching toxics into NM water** * **Why: The rate of consumption exceeds rate of replenishment, due to Big Ag, thoughtless planning, and nostalgia for Carboniferous Capitalism that is not coming back**   **CONSULTANT/CLIENT’S 3rd DPIE: Climate Change**   * **When: Begin Now** * **Where: State of New Mexico** * **Who is involved: Legislature** * **What resources: NM has best solar circumstance in US** * **Why: Solar tax credits for transitioning to post-carbon** | | | |  Goal 5. Achieve gender equality and empower all women and girls |
|  Goal 6. Ensure availability and sustainable management of water and sanitation for all |
|  Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels | |  Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all |
|  Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss | |  Goal 8. Promote sustained, inclusive and sustainable economic ZERO-growth, full and productive employment and decent work for all |
|  Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development | |  Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation |
|  Goal 13. Take urgent action to combat climate change and its impacts | |  Goal 12. Ensure sustainable consumption and production patterns | | |  Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable |  Goal 10. Reduce inequality within and among countries |
| **NINE PLANETARY BOUNDARIES:** |  Boundary 1. Climate Change | |  Boundary 2. Biodiversity Loss | | ☐ Boundary 3. Biogeochemical (phosphorous change | ☐ Boundary 4. Ocean Acidification |
|  Boundary 5. Land Use Crisis |  Boundary 6. Fresh Water Crisis | |  Boundary 7. Ozone Depletion | |  Boundary 8. Atmospheric Aerosols |  Boundary 9. Chemical Pollution by Plastics & Heavy Metals |

### Table 3 – Report for MIRROR EFFECT Meeting (Required Summary Table of Costs of Keeping Going the Way its Going)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Dysfunction, Structure, Behavior, Hidden Cost OBSERVED** | **Frequency of Each** | **Estimated Cost of each Occurrence** | **SUBTOTAL of Cost & or Untapped Revenue per person** | **Reasons for Each in the Narratives told** | **IDENTIFY ROOT-STEM: DOWNWARD ECONOMIC PERFORMANCE Downward SPIRAL of NMUS & Las Cruces** |
| 1. HC: Absenteeism & Turnover of NMSU janitors, new faculty, etc. | 3 times a week | $5000 | $15000/week | Had to have owner do job of absent printer | Excess Salary because upper level doing jobs of missing lower level people |
| 2. Dysfunction: Time Management of Collection of Recyclables | Evert day each week | $10000/day | $70000/week | Printers wasting time | Overtime of the 2 remaining Facilities & service employees when there were once 6 |
| 3. Behavior: Conflict of Plastic Life style & Zero Waste Life style | Daily each week | $5000/day | $35000/week | Behavior: two operators are fighting | Overconsumption of Waste to Land Fill, under performance of recycling |
| 4. HC: non-quality of the Communication from Top of a Zero Waste commitment | 5 times a week | $5000 | $15,000/week | Dysfunction: the communication of specs for the job from clerk to printer was wrong | Nonproduction of Zero Waste since if top cares less, so does the bottom, if faculty care less so do students care less |
| 5. Behavior: Professional Categories, of not being trained in sustainable practices | 1 time a day | $4000 | $28000/week | Dysfunction: Work organization | Noncreation of Human and Loss of potential Revenue of Zero Waste Arrowhead business development |
| 6.  Dysfunction: Integrated Training in Zero Waste | Once a day | $100,000 | $700,000/week | New people just dump contaminates into blue bins, and janitors untrained dump it to trash | Risk Spiral: THERE IS NO PLANET B, but we now need 1.7 planets of natural resources to keep up; Risk of Plastic Contamination to Water, Air, and Soil of Las Cruceans |
| **TOTALS: WEEK MONTH YEAR TOTAL** |  |  | **$868,000 /week $3,472,000/month/  $41,664,00 /year in hidden costs** |  |  |

## MIRROR EFFECT SEAM VERBATIM NOTES (required for any grade above C)

*Direct Quotes*:

Janitorial worker: *“Most [NMSU] students just toss plastic bottles and cans into the trash. I go through the trash and put it into the recycling. It is not part of my job description.”*

Recycling Executive: *“We lost about 25% of our staff during the [Deloitte consulting] reorganization and the budget deficits [by State of New Mexico]. I wrote a report and gave it to my boss, and to the administration, but nothing has happened. No one responded.”*

Building Monitor: *“The new faculty is demanding we put the recycling [big blue] bins out of sight. They find them ugly and not suitable for attracting new students. You and older faculty want the bins in plain sight…. I have to treat faculty as customers, and if they don’t want the recycling, then I had to move it to the 1st floor stair well [in Business Complex building]… The reason furniture and big metal shelves are blocking the recycling in the 1st floor stairwell is I am required to use Re-Pete system [posting each item for 28 days, before it can be moved to warehouse]. I have to follow the [bureaucratic] rules” (bracket additions, mine).*

Assistant Professor in Ag College: *“My department head told me I have to focus on publishing, and therefore I cannot take up the ‘Greening The Curriculum’ role.” FYI: after several calls by email and meetings to find someone in Business College, turned to ACES college, with no luck, then to the remains of the Sustainability Council, and again, no takers. Finally, in desperation I put out a call with pictures of the Recycling and Re-Pete situation for a successor, and the University Architect, chimed in on how important this is, but alas, as yet, not takers.*

## Step 2 Time Management Tool: Spiral B’s first tool

**Purpose of Cycle Time Redesign -** The whole purpose of cycle time is to reduce the variances in-order-to decrease production time cycle, which in turn lowers personnel, inventory, and order costs (decreases returns), and up to a threshold, will increase product quality, increase production, and thereby increase goods available for sale. It is important to notice the unsustainability variances, those disturbances, delays, and human errors that extend cycle time of transition from Carboniferous Capitalism to Solar Capitalism beyond what it could be in New Mexico. Reducing variance gets rid of non-value-added (NVA) tasks and steps, to streamline the production cycle.

First part of Time Tool - inventory every cycle in the business, and this will get you to an understanding of how from cycle-to-cycle, each time there is a difference, and that difference can be good, an improvement, such as upcycling, a value-added time, a quality time. Or time cycles can be very bad, lots of dysfunction, something at variance such as low quality, non-production, wasteful materials, higher costs, nonsustainability, such as downcycling. You will have to observe, cycle after cycle, not just measuring time on the clock, but the value-added of activities in a production cycle, a marketing cycle, inventory cycle-turns, cash-to-cash cycles (see Boje’s 2001 book, Quantum Spirals for Business Consulting).

Second part of Time Tool - based on your observations and interviews with lots of folks, figure out how management is using their time. Fill in the following chart, and put in quotes, stories you wrote down or recorded in the answers to D-questions. The last two D-questions and the one on Datability are good ones for this part of your report.

### Figure 10: The Five Aspects of Time (click on the figure above to change the image)

**For example, the new time management after 3 interventions could look like this**

### Figure 11 – The Adjusted Time Results of diagnosis of 1st DPIE (Note the wedge on the pie chart should be resized to reflect your client’s situation)

1st DYSFUNCTION: (Shift in Function) REDIRECT EXCESS TIME that is definitely not adding value to the business (its sales or services, its strategic outcomes); tasks or functions that need to be abandoned, transferred, DELEGATED, or eliminated.  The client’s answers to D-questions (Dispersion & Detaching processes no longer needed) can be included here. This is where you get the time needed to do 3 to 5.

2nd DYSFUNCTION: (Regulation of Dysfunction) DEFICIENCY TIME – Time spent correcting mistakes such as rework, due to dysfunctions that could be resolved in production, marketing, cash-to-cash (i.e. time it takes to convert inputs to cash flows), inventory, ordering time, etc.. This includes lack of good habits of action. This is also where by resolving deficiencies in quality and productivity you get more time to do 3 to 5. 1st and 2nd Dysfunctions get resolved so that ...

3rd is More Value Added Time is available: Savall et al., (2008) calls it ‘Day to Day Management’– Time that adds value to the production of goods and services, to necessary functions. Teach clients to maintain these value-added habits of action.

4th is Prevention of Dysfunctions by pro-active use of tools (Time management, logbook of indicators, PAP, I/ESP, PNAC, & Spiral Updraft) and making the strategic and political choices (main directions, rules of the game, etc.) so 1st and 2nd dysfunction do not happen. Distracted owners who forget to prevent 1 (excess dysfunction) and 2 (deficient dysfunction) are spinning their wheels, putting out fires instead of preventing them. This also needs to become a habit of action.

5th is Creating Revenue Potential – Time on the Middle Path: This is two things. First, it is tending to the stem-roots of the business (Excess Salary, Overtime, Risks, Non-production, Over-consumption, & Non-creation of Potential Revenue). Second, it is the C-spiral, shaping the future with strategies that enhance revenue potential: main directions, rules of the game, expand the market, build capacity, advertise, market, etc.  It is an investment of time in the future that a small business cannot do without, if 1 and 2 and 4 are out of control, or no #3 (value-added) is consistently happening. It is oftentimes the most neglected area, because there is no time left to do it, if 1-4 are out of control. Again, this needs to become a habit of action. Practice the reducing 1 & 2 in your own life so you have more time for 3, 4, and 5. Then teach it to your client.

### Time Management Tool Diary Questions (ask and answer only ones that apply)

**1st DYSFUNCTION: EXCESS TIME ON WRONG STUFF**

1. How much time do you spend putting out fires? 80%, with no time to plan
2. How much time do you spend doing things others could be taught to do? 60% because of the politics of reaccreditation and budget deficit distraction are infecting the university
3. How much time do you spend doing other people’s jobs that don’t show up? Since there is no successor for Greening the Curriculum nor anyone qualified to carry on the sustainability courses I have taught for 22 years, this is all my time spent giving it one last college try.

**2nd DYSFUNCTION: DEFICIENT TIME**

1. How much time do you spend correcting mistakes others make? 10%, I go through the trash in my classrooms, and fish the plastic and aluminum out of the wastebaskets. There ought to be no wastebaskets, and only recycling sorting bins, because then this would not be a problem.
2. How much time do you spend because materials are not right? 70% because the entire waste management system is in chaos, and lacks the investment of a proper Aggie university.
3. How much time do you spend in rework? 10% because the plastic markers are always out of ink, there are never batteries are in the clickers, there are not recycling bins in the places people mindless toss what is recyclable into the waste bin. Definitely on material mindless path to 6th Extinction.

**3rd More Value Added Time**

1. How much time do you spend that is adding value in the long-term? Hardly any. The tide is moving the other way.
2. How much time do you spend expanding your market? At home I have solar power, I recycle, and compost, and have reduced my personal plastic consumption. I am not at Zero-waste but I could get there.
3. How much time do you spend innovating? 80%, 7 days a week, I read and watch everything about Zero-waste, solar, and ways to go Zero-Growth.
4. How much time do you spend implementing strategic moves? I am retiring, to go to work with Europe and New Zealand universities that take this transition from Carboniferous Capitalism to Post-Carbon Solar/Wind Capitalism that is No Growth, seriously.

**4th PREVENTING DYSFUNCTIONS**

1. How much time do you spend training so dysfunctions do not happen? Every course lecture is on this topic.
2. How much time do you spend creating systems that work well so dysfunctions don’t keep happening again and again? I do this at home, because the hierarchical organization of the university, the gridlocked political system of the state of New Mexico, provides little freedom to do otherwise.
3. How much time do you spend listening to people you work with so you learn together to stop dysfunctions before they happen? 15%, and the story is the same: we are on our wy to 6th Extinction acting like ostriches with our head in the desert sand.

**5th CHANGING THE STRATEGIC DECISION TIME**

1. How much time do you spend changing the direction of this enterprise, so you get results you want to get? About 80%
2. How much time do you spend changing the rules of the game (procedures, policies)? Like to spend more, but I have 0 percent impact.
3. How much time do you spend redeploying resources needed to get job done right? 3%
4. How much time do you spend developing new technology processes to get it done right every time? 4%
5. How much time do you spend developing the kind of flexible, agile management system that stops the bureaucracy, so you getting to success? 1% since I work in a Panoptic University of surveillance and time-wasting distractions
6. How much time do you spend developing human potential? 90% of time in my class teaching events
7. How much time do you spend developing a sustainable business (profit, people, & planet)? As much as I have left on this earth.

## Step 3 - Direction (C-spiral), which is also the 1st D-question (Directionality) of D-Spiral. DO NOT OTHER ANSWER QUESTIONS HERE – this is only to give to CLINET AS OVERVIEW. ONLY DO answer to Directionality

### ****Table 4 – 11 D’s of ‘D-SPIRAL’ Questions (note these occur along the 23 steps****

|  |  |  |
| --- | --- | --- |
| **11 D's** | **Q to ask your client** | **Where it helps you Client Consultation** |
| Directionality | 1. What is the directionality of the business processes; to what future are they headed? | Axis C: Direction. This is not compass direction to Solar; it is strategic direction, arriving from the future🡺present. But the foot-dragging to maintain business-as-usual is beyond belief |
| Datability | 2. What is the datability of the business process developments? | 4-Leaf Structures: Important pivotal dates where technical processes, physical and other structures were acquired; 1850 industrial revolution; 1950 plastic revolution; 2010 Fracking; 2018 age of denial |
| Duration | 3. What is the duration of various business processes? | Axis C: Strategic Choices - helps sort out how long various strategies have been in effect; they are cumulative |
| Disclosability | 4. What is the disclosability of the future business processes revealed to you? | Axis A - projects that disclose a future, Axis B - PAP and I/ESAP; SI in top leaf. The future is 6th Extinction, and is arriving into the present, presenting a set of potential futures that are less and less desirable for humanity, in the choice points in Axis C |
| Destining | 5. What is the destining of the processes unfolding in ways you can foretell? Follow up, in fore-caring, fore-structuring, fore-having, fore-conceiving. | Axis B: PAP & I/ESAP; Axis C - all items. This is weak destiny, where even where the is momentum and carved channels in the market, there are also choice-points among futures |
| Deployment | 6. What is the deployment of business processes, in-order-to, for-the-sake-of? | Axis B: PAP & I/ESAP; Axis C - all items. Look at existing processes of production, distribution, & consumption. How are these processes deployed? How could they be? Its all for the sake of Carboniferous Capitalism |
| Dwelling | 7. What is the dwelling, in-place in the world of business processes? | Knowing place in the market, in the state, etc. lets them sort out Axis B: PAP & I/ESAP; Axis C - all items. The market is Carboniferous and there is a refusal to close it and move on |
| De-severance | 8. What is the de-severance (de-distancing) of space-time-mattering? | De-severing space is bringing something far close, such as solar. De-severing time can be bringing a future potential into the path of SAP and I/ESAP and the Axis C choice-points. We are moving past the tipping point |
| Drafts | 9. What are the drafts, updraft, and downdraft, into tighter (down) orbits, or into more open outer orbits (up), and the turning points from one draft to another? | Axis A, B, & C. This is where the client and consultant sort out strategic choice points, moving into more updraft spiral-antenarratives, ascending into more potential; the updraft could be solar and wind, but its not happening |
| Dispersion | 10. What is the dispersion of processes, too diverse, or consolidating them? | This can free up resources to invested in more strategic processes, letting go of low-value added activities; we need to free up solar and wind resources quickly |
| Detaching | 11. What is the detaching from being drawn into they-ness, they-relations, they-self and finding a path of ownmost authentic potentiality-for-Being-a-whole-Self? | Following the they-crowd is not great strategy. Developing into whole-Self potentiality fits well with Axis C – NMSU and New Mexico are not detaching from coal, gas, oil or plastic. |

**The D’s** It is a downward death spiral leading to 6th Extinction, a narrative of nostalgia for the oil rush days, a legislature in denial, a governor appointing Regents-in-denial, who hire university administrators-in-denial, while an Aggie university becomes assimilated into corporate Big Ag business, and the Aggie university is run like a business on market steroids.

## Step 4 - Project planning (A-spiral) done collaboratively with your client.

Step 1 is the diagnose the recycling debacle at NMSU and the State. Step 2. Teach the D-P-I-E of A-spiral to my students, and get ready to do three DPIEs. Each should last about 2 to 3 weeks, do we have time for three.

## Step 5 - Strategic Piloting Logbook tool [THIS REPORT] (B-spiral)

**I have just begun** creating indicators with your client so you can measure progress (qualitative, financial, and quantitative indicators help to pilot the direction). Indicators are as simple as deadlines, mileposts, number of new customers, number of web hits, etc. Add in some sustainability indicators: power usage (a simple indicator is the electric bill, the water bill), power waste (lights left on, water wasted), power sources (find some sustainable ones), and cut the waste by recycling, reducing, reusing, etc. You won't know where you are going or if you have arrived, unless you create some indicators. Don't leave it to the accountant. Do some ABC or your own (Activity Based Costing) by figuring out the hidden costs of the business doing as it has been doing on all those four leaves of the clover. Your storytelling notebook has entries about how to track things and serves as your SPILB. Develop 5 types of indicators (include qualitative & quantitative) for IESAP, PAP, etc. pp. 126-129 in Savall et al (2008) book. The piloting of a small business depends on reading indicators to know if the spiral is upwards or downwards, if the business is making or losing money, if customer returns and rework is decreasing or increasing, and so forth.

**Type 1: EVERYDAY PERFORMANCE INDICATORS for SPL:**

* 1. Internal Activity - e.g. volume of activity in a given day, week, month, or year. Examples: number of products, deliveries, repairs, amount of waste, delays, and each of the root-downsurge-spirals (excess salary, overtime, overconsumption, nonproduction, non-creation of potential, & risks) (see p. 33).
  2. External Activity - e.g. scanning the business environment, being vigilant about competitors and the quality of materials from suppliers, new technologies, and other items on Axis C.
  3. The Immediate Results - Quantitative indicators like costs, revenues, direct sales revenue, costs of repairs, dysfunction costs (absenteeism, occupational injuries/diseases, staff turnover, nonquality, & direct productivity gaps) (see. p. 33).

**Type 2: CREATION OF POTENTIAL - INDICATORS for SPL:**

* 1. Evolution Activity - e.g. Two lists: First a list of actions that implement the IASAP in this period of PAP by specifying schedule and who will do what when, and why. Second, a list of dysfunctions to be prevented based on Axis A Diagnostic. There is a multi-skilling going on here where people in the small business are learning to identify dysfunctions and root-stem-downsurge-spirals and to implement value-added TM, and to be vigilant with SPL. This relates to the CG tool, since some of these competencies must be learned. It it relates to Axis C, which is all about evolution activity of scanning the environment and making changes.
  2. Activity Linked to PAP - e.g. Make a list with your client of developmental actions (above evolution activity list and dysfunction list\_ and specify what is to be implement by whom, when, and why on the PAP chart (see chart below).
  3. Activity directly Creating Potential - e.g. indicators of qualitative or quantitative nature of how potential is being created, how dysfunctions are being prevented, how downsurge-spirals are being up-rooted, and how employees are being multi-skilled in SEAM tools, including TM, SPL, and PAP.

## Step 6 – CHANGE PROCEDURES to change Rules of the game - (C-spiral)

Business is a game and it is time to change the 'rules of the game.' There are choice points in the political and strategic decision making of every business. What game is being played in action, in the weaving of actions among the actors and the actants (things, technologies, equipment, mattering)? Who is making the game rules? How can rules be changed (ethically, See Aristotle 350 BCE, Virtue Ethics on line)? Are the rules of the game ecologically sustainable?

## Step 7 - D2 – Datability (D-Spiral): What are the most important datable moments in the life story of the business?

Student consultants transcribe and put here those living stories of what is emerging, unfolding in the Now, not just the rote narrative of the past. Record them by tape and or video. This can be done on the first field visit. Most students don't pay attention to the first set of life stories the client says in that first interview. I think students have been trained not to pay attention to living stories, and look instead for the quick solution, and thereby miss the spiral altogether. A life story is primordial, from birth to death, and you are in the middle of yours, not dead yet, still alive, and already born, on some sort of pathway, even if you never thought about it. There are datable moments in your future, such as graduation, the next job, perhaps a wedding, children, etc. Datable moments are happening in your future, and arriving in your present, just as much as the datable moments from the past are arriving in the Present. People always capitalize the Present, but not the past nor the future. I think they know that with each newness in the Present, that emergence opens up a rehistoricizing of datable moments past, and opens up futuring so what you think will be the milestones shift in your landscape, and new ones are beckoning you to approach.

## Step 8 - Mirror Effect meeting with client (A-spiral, part of D-P-I-E cycle)

**W**here you feedback the living stories and quotes sorted by stakeholders, present a hidden costs and untapped potential revenues chart based on questions asked in the 4-leaf diagnosis; and make 3 consultant observations and recommendations. This is a long meeting, a meeting about the text, the scripts you collected from employees, clients, suppliers, and whomever you could access. And it is your observations put into field notes on all those visits. Not a note taker? OK, get a good tape recorder, one with dual microphones (stereo microphones), and start recording conversations, in meetings, in interviews, wherever you have permission. By the time your mid-term arrives, you are advised to have the Mirror Effect face-to-face meeting with your client. It is where you point out the costs and lost revenues of behaving, structuring, etc. and how much dough they can have, and peace of mind, if they find what Aristotle (350 BCE) calls the middle path, the one between excess and deficiency, which is by the way the definition of all those dysfunctions you analyzed in the upper leaf of the 4-leaf.

*Mirror Effect (Diagnosis)* – And it is most important section in mid-term & final report where you put in all your posted entries from your [team] LOGBOOK (5 by mid-term, 5 more by final). Please use storytelling standpoint methodology. You collect the stories (verbatim dialogue) and you tell the stories in a Mirror Effect meeting with your client. They listen because you also share the costs and lost revenues that are happening by continuing to do just as they are doing, and all the lower costs and untapped revenue potential that comes from doing a project with you.  *Mirror Effect* (Savall et. al, 2008: pp.66, 149) is defined as the direct quotes and the storytelling recorded from stakeholders (copied out of your *individual Notebook* interview & observation verbatim quotes), your own Expert Opinions (ibid, p. 66), & hidden revenue/hidden cost. I will give two examples.

**It’s all about repetition and difference:** The whorls occur in repetition but the whorls are each full of difference. Spiral is a concept, a representation of the shape and form of the whorls. Spiral is also an Idea, what and how it does ‘difference and repetition’ of the spiral happen? Concept and Idea of spiral are not independent, and do interact.

**Making a Difference is Opposed by Overcoming Indifference:**

**The Difference that ‘Makes All the Difference’:**

## Step 9 - Implement project (DPIE 1) in collaboration with your client (A-spiral)

Good advice, but many a student consultant has ignored it. Implementing a Project that the client is not on board with will lead to many headaches, even hard feelings. Clearly the spiral updraft is tugging you in a more amenable directionality. You did the Diagnostic, the Project plan, and now it is time to Implement and collaboratively, please. You are not here to be a slave. You are consulting, so they can do this on their own, with their own resources. This is first of three Projects (check your PNAC, and may be time to renegotiate, so you have three small changes in projects that are doable).

## Step 10 - Priority Action Plan tool (B-spiral)

Please lay out three goals and action plan and who implements what for the next year (Savall et al, 2008: pp. 95-98). Goal 1 could be the first project, you have some basis for setting the PAP in motion. Doing (by workers) and Thinking (by owners) can become separated. The result of this sort of division of labor is a deterioration of “intellectual… virtues” of workers (Marx, 1867, Vol. 1, Chap 14, P. 362). As Marx puts it “division of labor … is an effect of past, and a cause of future progress” (ibid, p. 363).   We don’t want linear PAPs. We want spirals of uplift of profits and revenues. Savall et al (2008) recommend involving workers in the PAP process, which in turn sharpens their Planning and Thinking in relation to their Doing. This way the spiral starts uplift by involvement by the ‘spurring of energy, decentralization, synchronization, while of course, enhancing vigilance.

### Table 3 – Priority Action Plan Tool (adapted from Savall et al, 2008: p. 100).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| STRATEGIC AXES | OBJECTIVES | PRIORITY ACTIONS | PEOPLE CONCERNED | JAN | FEB | MAR | APR | MAY | COMMENTS |
|  | **1.** |  |  |  |  |  |  |  |  |
|  | **2.** |  |  |  |  |  |  |  |  |
|  | **3.** |  |  |  |  |  |  |  |  |
| PRINCIPLES: | *Spurring Energy* | | *Decentralization* | *Synchronization* | | | | | *Enhancing Vigilance* |

## 2nd DPIE BEGINS ABOUT HERE 🡪Step 11 – Evaluate results of 1st DPIE and begin DIAGNOSIS 2 for 2nd DPIP Resource Deployment (C-spiral)

This will **c**ome from making priorities, cutting back here, and expanding in the implementation of project (step 9). PAP gets implemented with the cost savings and enhanced revenues you promised in the Mirror Effect meeting. Deployment is part of the Q-Spiral set of questions, so go back and listen to your recording.

## Step 12 - D3 and D4 (Q-Spiral: Durability and Disclosability)

Ask about durability of the various processes of production and distribution. Then ask about disclosability of the future arriving at their doorstep, to tell what sort of processes need to be fore-structured.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Dysfunction, Structure, Behavior, Hidden Cost OBSERVED | Frequency of Each | Estimated Cost of each Occurrence | SUBTOTAL of Cost & or Untapped Revenue | Reasons for Each | IDENTIFY ROOT-STEM: DOWNWARD ECONOMIC PERFORMANCE SPIRALS |
| 1. Dysfunction:  Work conditions | **3 x/wk** | **$25** | **$75** | **Time and energy spent accessing items in disorganized office** | **Overtime (extra time spent doing non-value producing activity)** |
| 2. Dysfunction: Communication-coordination-cooperation | **4 x/wk** | **$20** | **$80** | **Failure to or miscommunication of expectations to assistant** | **Excess salary (time is spent clarifying or communicating instead of producing)** |
| 3. Dysfunction: Work organization | **3 times a year** | **$3,000** | **$9,000** | **Not having enough staff to increase client volume** | **Nonproduction (potential clients lost due to lack of staff)** |
| 4. HC:  non-quality | **2 times a year** | **$3,000** | **$6,000** | **Website needs to be dynamic in order to catch people’s attention** | **Nonproduction (potential clients lost due to refined image)** |
| 5. Dysfunction: Time management | **10 x/wk** | **$10** | **$100** | **Time spent transitioning between unrelated tasks** | **Nonproduction (time spent doing nonrevenue creating activities)** |
| 6.  Dysfunction: Strategic implementation | **2 times a year** | **$4,000** | **$8,000** | **Failure to capitalize on investors looking to buy very low priced housing** | **Nonproduction (loss of potential buyers)** |
| *TOTALS: Weekly Annual*  *YEAR TOTAL* |  |  | ***$ 255 $  23,000   $36,260*** |  |  |

## Step 13 – DPIE 2 MIRROR EFFECT # 2 (A-spiral) – and detail your metrics, the Logbook tool (B-Spiral) indicators you have documented to date

Then renew the Diagnostic, and Project # 2 gets planned, and implemented. And do 2nd Mirror Report for Project # 2 as part of that diagnostic.

### Table 4 – reporting 2nd MIRROR EFFECT Diagnosis (each DPIE begins with Mirror Effect)

PUT YOUR VERBATIM FIELD NOTES HERE FOR 2nd DIAGNOSIS, and REPORT ON 2nd MIRROR EFFECT MEETING RESULTS

## Step 14 - Competency Grid (B-spiral)

It is time to assess existing competencies of each person in the firm, and do a second grid of what competencies are needed to get the business in uplift to their PAP and 2nd Project Implementation. This also gets them set for the longrange strategy coming up. (Savall et al, 2008: pp. 98-100). Develop a grid of people by their existing competencies, and a second one show the competencies needed to implement the PAP and IESP.

## Step 15 - D5, D6, D7 (Spiral: Destining, Deployment, & Dwelling)

Time to ask the big quantum questions: What destining are they courting? How are they deploying to meet it? What is their place (dwelling-in-the-market-place and in sustainability with the Natural environment)?

## Step 16 – Evaluation of 2nd DPIR – (A-spiral) Evaluate Project # 2, Diagnostic, Project plan for 3rd DPIE project, and includes 3rd MIRROR EFFECT meeting with client

And get into Implementation where the client is implementing and you are doing quite little activity.

## Step 17 - I/E SP (Internal/External Strategic Plan) (B-spiral Tool 5)

Now that you have 2 projects completed, and a 3rd underway, it is time to take a turn in the path (Savall et al, 2008: pp. 93-5). Make a chart similar to PAP but over longer time horizon. This is a five year strategic plan with three long term objectives, action plans, who does what when, with more logbook indicators set up to measure their progression. The PAP was one year of the 5 years. This is the big game change, and it’s a way to get things to spiral instead of repeating same old stuff. Objectives are about sustainability, products, technology, developing human potential, market expansion, etc.

### I/E SP (Internal/External Strategic Plan TOOL)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OBJECTIVES** | **2016** | | **2017** | | **2018** | | **2019** | | **2020** | |
| Spring | Fall | Spring | Fall | Spring | Fall | Spring | Fall | Spring | Fall |
| ***OBJECTIVE 1:*** |  |  |  |  |  |  |  |  |  |  |
| ***Actions to fight against depletion of resources*** |  |  |  |  |  |  |  |  |  |  |
| ***OBJECTIVE 2:*** |  |  |  |  |  |  |  |  |  |  |
| ***Actions to increase human potential*** |  |  |  |  |  |  |  |  |  |  |
| ***OBJECTIVE 3:*** |  |  |  |  |  |  |  |  |  |  |
| ***Actions that create SUSTAINABILITY*** |  |  |  |  |  |  |  |  |  |  |

## Step 18 - More D's (Spiral: Deseverance & Drafts)

OK the de-severance removes distance so the far in space and time and mattering are near (ready-to-hand in the business processes). Drafts are force fields in the upon the spiral-antenarrative. It is like a glider-plane, where you float looking for new updrafts, and avoid the downdrafts. If the business has been in a downdraft, descending, then they will welcome the updraft. Your job is to help the client find the updrafts, and make the moves in the processes to get in place, to take that uplift pathway.

## Step 19 - Complete the Evaluation (A-spiral) of the 3rd project

Adjust the Logbook indicators, PAP, and Competency Grid, so there is a smooth passageway to the I/E SAP. E.g. The three main recommendations are the organization of the home office, the development and implementation of integrated lists for organization as well as implementing time blocking so Laura can better utilize her time. By implementing these strategies, the Laura Reynolds Group has access to more time that is spent assisting current clients and developing relationships with potential clients. The hidden costs and unrealized revenues of these three activities are around 13,260 dollars a year, and if Laura and her assistant lost one average sized commission enacting these changes, their net gain would still be roughly 10,260 dollars.

## Step 20 - PNAC (Periodically Negotiable Activity Contract)

A-spiral. This is at several levels. It is a PNAC between consultant and client, so expectations stay eye-to-eye over course of the 3 projects. Second, it is a PNAC training that you do with the client so PNAC's are used in the business with all the employees. And it is about compensation. If the employee helps move the firm into updraft, into more money, more customers, more revenue, less waste, etc, then what is going to be the reward, the payout for them. How do they participate in the good times? Yes it is profit-sharing, but also accountable for any of those six root-stems under the 4-leaf. By now the client should be familiar with all 6 tools and using them to pilot their business on the upward spiral-antenarrative path. If they are just repeating the same old business cycle, then your consulting has not worked. (Savall et al, 2008: pp. 108-112). This is the student consultant’s 3 main goals, action plans, and indicators for one semester. Teams can use the format of Table on p. 110 of Savall et al., 2008.

It is likely time to fill out a new PNAC (in case the workload expectations of client are different than when project begain).

### PNAC (Periodically Negotiated Activity Contract TOOL)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **PNAC (Periodically Negotiated Activity Contract) Date of Contract\_\_\_\_/\_\_\_\_/2018**  **STUDENTS NAMES:**  **NAME OF CLIENT’S BUSINESS:**  **INSTRUCTIONS: First check** ☐ **particular Goals and Boundaries Team & Client are most interested in. Then fill in the Client’s Main Business Development Objective, and Outline 3 DPIE’s with your client.** | | | | | | | |
| ☐ Goal 1. End poverty in all its forms everywhere | | ☐ Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture | | | ☐ Goal 3. Ensure healthy lives and promote well-being for all at all ages | | ☐ Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all |
| ☐ Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development | | **CLIENT’s MAIN OBJECTIVE:**  **TEAM’s 1st DPIE:**   * **When** * **Where** * **Who is involved** * **What resources** * **Why**   **TEAM’s 2nd DPIE:**   * **When** * **Where** * **Who is involved** * **What resources** * **Why**   **TEAM’s 3rd DPIE:**   * **When** * **Where** * **Who is involved** * **What resources** * **Why** | | | | | ☐ Goal 5. Achieve gender equality and empower all women and girls |
| ☐ Goal 6. Ensure availability and sustainable management of water and sanitation for all |
| ☐ Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels | | ☐ Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all |
| ☐ Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss | | ☐ Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all |
| ☐ Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development | | ☐ Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation |
| ☐ Goal 13. Take urgent action to combat climate change and its impacts | | ☐ Goal 12. Ensure sustainable consumption and production patterns | | | | ☐ Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable | ☐ Goal 10. Reduce inequality within and among countries |
| **NINE PLANETARY BOUNDARIES:** | ☐ Boundary 1. Climate Change | | | ☐ Boundary 2. Biodiversity Loss | | ☐ Boundary 3. Biogeochemical (phosphorous change | ☐ Boundary 4. Ocean Acidification |
| ☐ Boundary 5. Land Use Crisis | ☐ Boundary 6. Fresh Water Crisis | | ☐ Boundary 7. Ozone Depletion | | | ☐ Boundary 8. Atmospheric Aerosols | ☐ Boundary 9. Chemical Pollution by Plastics & Heavy Metals |

## Step 21 - technological, product market, management systems, and develop human resources C-spiral

Time to make some choices, some are political and others are strategic. To change C-spiral is also lead Q-Spiral (which is also the 11th D of Quantum Storytelling) is quite the accomplishment.

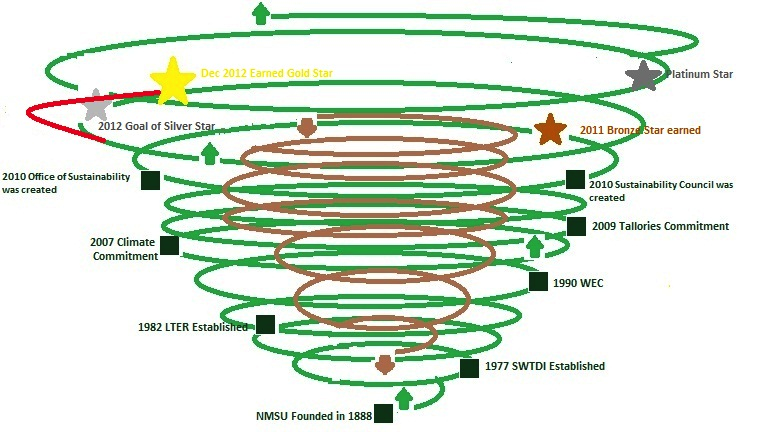
## Step 22 - Last D's (Spiral: Dispersion & Detaching)

As the business enters new up-paths then there is dispersion of processes, some of which are not all that helpful in the road ahead. And you as a consultant are detaching, getting ready to end your gig with the client. And the client is achieving potentiality-for-Being-a-whole-Self, not imitating competitors, not doing the ‘they-self’ walk. Fining that unique sense of freedom in the updraft, is a major result that you and your client can be proud of.

# Step 23 - Draw amazing spirals for the draining of dysfunctions and hidden cost (downward spiral) and the upward spiral momentum from the 3 DPIEs that generated revenues

Student consultants submit their final Report to client and instructors. What value-added did your work with the client lead to in terms of updraft-Spiral? You are done. Make your presentation; get along on your pathway. Be sure to draw some Spirals with bridges, off-shoot-fractals, and not those lame looking f-spirals with single line looping this way and that.

# Virtue Ethics SECTION OF REPORT



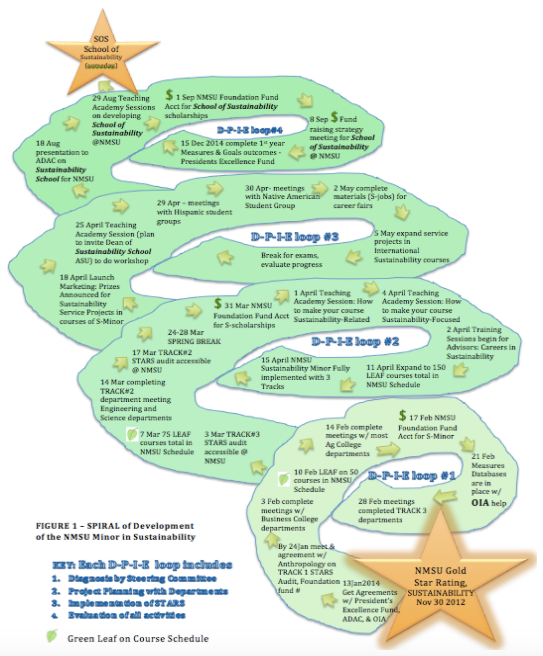
### Figure 12 – Annotated Double Spiral from a previous report (please do your own drawings)

Draw something like this and annotate the upward and downward spiral whorls.

Show how your client moved the spirally coiled shell through the socioeconomic landscape, timescape, materialscape.

Again your challenge is to make your own drawing and make it amazing!

## Notice how this one annotates the date-abilities, has the 3 DPIE’s in it



### Figure 13: Annotated DPIE spiraling (Boje, 2014) - Summary of 3 DPIES done with annotation of dates of each DPIE implementation steps (again this is example of spiral you can draw and annotate for yourselves)

# **Conclusions and Recommendations**

**Wrap up your report in a few pages and talk about the spiraling processes you did to bring about change and the small business’ spiraling-antenarrative development, as you see it.** You need to put in your own original Spiral Drawings This is a good program to use <https://sketch.io/sketchpad/>

NMSU and the State of New Mexico are hanging onto a narrative of the past that has outlived its socioeconomic usefulness. Allow NMUS venders, such as Pepsi, to sell their soda and water in single-use plastic bottles, when the science says there are health consequences is not a sound strategic policy for any institutions let alone one of higher learning.

There are proven ways NMSU can unleash human potential and generate needed revenues by fixing the many dysfunctions identified in this report. Everyone at NMSU needs training in what is recyclable, how to refuse single-use plastic, what to substitute for wasteful production and consumption practices. NMSU is pumping 3 million gallons of groundwater from the aquifer, when there is global warming, and the water is not being replenished as fast as NMSU and agricultural uses are pumping it out. This is a result of a contract for water use that is based on how much you use, one period to the next. The incentive is to use more water than allocated, in order to get a larger allocation in the next time period.

When I retire from NMSU and become Emeritus, there is no one stepping up to continue the Greening the Curriculum project, which has developed several sustainability undergraduate minors, a graduate minor, and a certificate in sustainability (https://greening.nmsu.edu). This is explainable by the downsizing, people being overwhelmed with doing the work of their own and those who left without replacement.

There are tired old antiquated systems of recycling that do not include assessing the hidden costs of vendor contract, for their long run costs, their long run health consequences. NMSU could easily improve the health of students by stopping the sale of Styrofoam plates and beverage cups. NMSU could save millions of single-use plastic bottles each year by not allowing them to be sold on campus. Events such as conferences and entertainment can sell their beverage in reusable containers for coffee, soda (if they must), and water. There are so many ways NMSU is a leader in sustainability, such as it s water chiller plant, its work on climate change science, etc. But we need to have an e-waste bin system, a compost bin system, and get rid of trash waste baskets in class rooms. Instead of out of sight out of mind, NMSU can have in sight, and mindful refuse, reduce, repair, reuse approach before recycling enters the picture, and get to a zero waste approach.

Most of all, NMSU could be leading the State of New Mexico out of its dependency on fossil fuel tax base for funding Education, and lead a True Storytelling socioeconomic future in the solar and wind energy. This will mean training economists at NMSU in zero-waste, zero-growth economics. The two party gridlock of NMSU legislature means very little is getting done to prevent New Mexico from entering 6th Extinction, much faster than other states who are doing proactive practices. We cannot call ourselves Aggies, if we are trading our state’s future for plastic life styles.

# APPENDICES

## Copy of Client Application

## Copy of Confidentiality Agreement (you sign it, client does not)

## In sealed envelop your Client’s Confidential Evaluation of your Project

# In sealed envelopes, 360 Peer review rating of you and your teammates

Finally, please include references to material used to write your report.

## REFERENCES

Plastic Science

Baldwin, A. K., Corsi, S. R., & Mason, S. A. (2016). Plastic debris in 29 Great Lakes tributaries: relations to watershed attributes and hydrology. *Environmental science & technology*, *50*(19), 10377-10385. <https://pubs.acs.org/doi/full/10.1021/acs.est.6b02917>

Eriksen, M., Mason, S., Wilson, S., Box, C., Zellers, A., Edwards, W., ... & Amato, S. (2013). Microplastic pollution in the surface waters of the Laurentian Great Lakes. *Marine pollution bulletin*, *77*(1-2), 177-182. <http://wedocs.unep.org/bitstream/handle/20.500.11822/17932/Microplastic_pollution_in_the_surface_waters_o.pdf?sequence=1&isAllowed=y>

Free, C. M., Jensen, O. P., Mason, S. A., Eriksen, M., Williamson, N. J., & Boldgiv, B. (2014). High-levels of microplastic pollution in a large, remote, mountain lake. *Marine pollution bulletin*, *85*(1), 156-163. [http://home.fredonia.edu/sites/default/files/section/earth/PDF/High-levels%20of%20microplastic%20pollution%20in%20a%20large%2C%20remote%2C%20mountain%20lake.pdf](http://home.fredonia.edu/sites/default/files/section/earth/PDF/High-levels%20of%20microplastic%20pollution%20in%20a%20large,%20remote,%20mountain%20lake.pdf)

Graney, G. (2015). Slipping through the cracks: how tiny plastic microbeads are currently escaping water treatment plants and international pollution regulation. *Fordham Int'l LJ*, *39*, 1023. <https://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/frdint39&section=29&casa_token=ymmuCQr_5VsAAAAA:R95bTp98eoOv2Aun-GXMTeGrQhSpobBkCJndA8EPBcRdk5Z76OOLv53WpgcU_kvQkBLdmeJR5g>

Mazurais, D., Ernande, B., Quazuguel, P., Severe, A., Huelvan, C., Madec, L., ... & Zambonino-Infante, J. (2015). Evaluation of the impact of polyethylene microbeads ingestion in European sea bass (Dicentrarchus labrax) larvae. *Marine environmental research*, *112*, 78-85. <http://archimer.ifremer.fr/doc/00279/39057/37621.pdf>

Sruthy, S., & Ramasamy, E. V. (2017). Microplastic pollution in Vembanad Lake, Kerala, India: the first report of microplastics in lake and estuarine sediments in India. *Environmental pollution*, *222*, 315-322. <https://www.researchgate.net/profile/Shini_Sruthy/publication/312222906_Microplastic_pollution_in_Vembanad_Lake_Kerala_India_The_first_report_of_microplastics_in_lake_and_estuarine_sediments_in_India/links/5af164e1aca272bf4255b7ca/Microplastic-pollution-in-Vembanad-Lake-Kerala-India-The-first-report-of-microplastics-in-lake-and-estuarine-sediments-in-India.pdf>

Zhang, K., Xiong, X., Hu, H., Wu, C., Bi, Y., Wu, Y., ... & Liu, J. (2017). Occurrence and characteristics of microplastic pollution in Xiangxi Bay of Three Gorges Reservoir, China. *Environmental Science & Technology*, *51*(7), 3794-3801.

MORE REFERENCES

Aristotle (350 BCE). ***Nicomachean Ethics***. Translated by W. D. Ross. On line version <http://classics.mit.edu/Aristotle/nicomachaen.html> or use 456k text-only version is [available for download](http://classics.mit.edu/Aristotle/nicomachaen.mb.txt).

Bakhtin, M. M. (1993). ***Toward a Philosophy of the Act***. Written as unpublished notebooks written between 1919–1921, first published in the USSR in 1986 with the title *K filosofii postupka*; 1993 English V. Liapunov, Trans.; V. Liapunov & M. Holquist, Eds.). Austin, TX: University of Texas Press.

Benjamin, Walter. (1928/2016). ***One-way Street***. Original 1928, this edition with Preface, 2016. Translated by Edmund Jephcott, edited with intro by Michael W. Jennings, and preface by Greil Marcus. Cambridge, MA, London: The Belknam Press of Harvard University Press. Vol. 966. Penguin UK.

Benjamin, Walter. (1936/1968). The Storyteller: Reflections on the Works of Nikolai Leskov was first published in 1936 (Orien Und Okzident); 1968 is the English translation included in Hannah Arendt (ed.), ***Walter Benjamin Illuminations*** (pp. 83-109). In referencing, I use section numbers. See [http://ada.evergreen.edu/~arunc/texts/frankfurt/storyteller.pdf](http://ada.evergreen.edu/~arunc/texts/frankfurt/storyteller.pdf" \t "_blank)

Boje, David M. (1991). The storytelling organization: A study of story performance in an office-supply firm. ***Administrative Science Quarterly***, 106-126.

Boje, David M. (1995). Stories of the storytelling organization: A postmodern analysis of Disney as “Tamara-Land”. ***Academy of Management Journal***, *38*(4), 997-1035.

Boje, David M. (2001).***Narrative Methods for Organization and Communication Research*.** London: Sage.

Boje, David M. (2008).***Storytelling Organizations*.** London: Sage.

Boje, D. M. (2011). ***Storytelling and the Future of Organizations: An Antenarrative Handbook***(Routledge Studies in Management, Organizations and Society). London: Routledge.

Boje, David M. (2012). Reflections: What does quantum physics of storytelling mean for change management? ***Journal of Change Management***, *12*(3): 253-271.

Boje, David M. (2014). ***Storytelling Organizational Practices: Managing in the quantum age***. London: Routledge.

Boje, D. M. (2016). ***Organizational Change and Global Standardization: Solutions to the Standards and Norms Overwhelming Organizations***. London/NY: Routledge.

* [Boje's (2018a) new book](https://www.dropbox.com/sh/re3q33yzopb6lpt/AAAaoXCkDM84ci4nOgW1jvpca?dl=0" \t "_blank)**[TRUE STORYTELLING THE RISE AND FALL OF GLOBALIZATION](https://www.dropbox.com/sh/re3q33yzopb6lpt/AAAaoXCkDM84ci4nOgW1jvpca?dl=0" \t "_blank)**

* [Boje's (2018b) new Routledge book draft on](https://www.dropbox.com/s/7p3ug2xb7dzn12c/BOOK%20Organizational%20Research-%20Storytelling%20In%20Action%20Mar%2030%202017.docx?dl=0" \t "_blank)**[STORYTELLING RESEARCH METHODS](https://www.dropbox.com/s/7p3ug2xb7dzn12c/BOOK%20Organizational%20Research-%20Storytelling%20In%20Action%20Mar%2030%202017.docx?dl=0" \t "_blank)**[:](https://www.dropbox.com/s/7p3ug2xb7dzn12c/BOOK%20Organizational%20Research-%20Storytelling%20In%20Action%20Mar%2030%202017.docx?dl=0" \t "_blank)***[Storytelling in Action](https://www.dropbox.com/s/7p3ug2xb7dzn12c/BOOK%20Organizational%20Research-%20Storytelling%20In%20Action%20Mar%2030%202017.docx?dl=0" \t "_blank)***[(on line until the August 2018 publication of the book)](https://www.dropbox.com/s/7p3ug2xb7dzn12c/BOOK%20Organizational%20Research-%20Storytelling%20In%20Action%20Mar%2030%202017.docx?dl=0" \t "_blank)

Boje, David M.; Ford, Jeffrey; Oswick, Cliff. (2004). Language and organization: the doing of discourse. ***Academy of Management Review***, 29.4: 571-577.

Boje, D. M., Haley, U. C., & Saylors, R. (2016). Antenarratives of organizational change: The microstoria of Burger King’s storytelling in space, time and strategic context. ***Human Relations***, *69*(2), 391-418.

Boje, D. M., & Henderson, T. L. (Eds.). (2014). ***Being quantum: Ontological storytelling in the age of antenarrative***. Cambridge Scholars Publishing.

Boje, D. M.; Larsen, Jens; Brunn, Lena. (2017). ‘True Storytelling. How to succeed with your implementation’, working paper. <http://oldfriendsindustries.com/?page_id=1048>

Boje, D. M., Svane, M., & Gergerich, E. M. (2016). Counternarrative and antenarrative inquiry in two cross-cultural contexts. ***European Journal of Cross-Cultural Competence and Management***, *4*(1), 55-84.

Boundas, Constantin V. (2010). Virtual/Virtuality. Pp. 300-302 in in Adrian Parr (ed.). The Deleuze Dictionary Revised Edition (1st edition 2005). UK: Edinburgh University Press.

Davis, Gerald F. (2016), ***The vanishing American corporation: Navigating the hazards of a new economy***. Oakland CA: Berrett-Koehler Publishers.

Deleuze. Gilles. (1990). ***Logic of Sense***. NY: Columbia University Press. French 1969 (Les Editions de Minuit).

Deleuze, Gilles. (1991). ***Bergsonism***, Hugh Tomlinson and Barbara Habberjam (trans.), New York: Zone Books.

Deleuze, Gilles. (1968/1994). ***Difference and Repetition***, Paul Patton (tr. From French 1968), English in 1994. NY: Columbia University Press.

Deleuze, Gilles. (1997). ***Essays critical and clinical***, trans. D.W. Smith & M.A. Greco. Minneapolis: University of Minnesota Press.

Deleuze, Gilles; Guattari, Felix. (1987). ***A Thousand Plateaus: Capitalism and*** ***Schizophrenia***. Translation & foreword Brian Massumi. University of Minnesota Press.

Deleuze, Gilles; Guattari, Felix. (1994). ***What is Philosophy***. Translated by Hugh Tomlinson & Graham Burchell. NY: Columbia University Press.

De Landa, M. (1999). Immanence and transcendence in the genesis of form. Pp. 119–34. in I. Buchanan (Ed.), ***A Deleuzian century***. Durham, NC: Duke University Press.

Henderson, Tonya L.; Boje, David M. (201*6*). ***Managing Fractal Organizing Processes***. NY/London: Routledge.

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., & Lambin, E. W. et al. (2009). Planetary boundaries: exploring the safe operating space for humanity. *Ecology and Society*, *14*(2), 32.

Roffe, Jonathan. (2010). Multiplicity. Pp. 181-2 in Adrian Parr (ed.). The Deleuze Dictionary Revised Edition (1st edition 2005). UK: Edinburgh University Press.

Rosile, G. A., Boje, D. M., Carlon, D. M., Downs, A., & Saylors, R. (2013). Storytelling diamond: An antenarrative integration of the six facets of storytelling in organization research design. ***Organizational Research Methods***, 16(4), 557-580.

Sartre, Jean-Paul. (1986).'***Critique of Dialectical Reason' Vol. I, Theory of Practical Ensembles*** (Chicago: University of Chicago Press).

Savall, H., Zardet, V., & Bonnet, M. (2008). ***Releasing the untapped potential of enterprises through socio-economic management*** (No. halshs-00780720). Online at [http://davidboje.com/448/SEAM\_BOOK/SEAM\_BOOK\_2008.pdf](http://davidboje.com/448/SEAM_BOOK/SEAM_BOOK_2008.pdf" \t "_blank).

Savall, H., Zardet, V., Bonnet, M., & Péron, M. (2010). Contribution of qualimetrics intervention-research methodology to transorganizational development (No. halshs-00749946).

Savall, H., & Zardet, V. (Eds.). (2011). ***The qualimetrics approach: Observing the complex object***. IAP.

Savall, H., Zardet, V., & Péron, M. (2011). 22 The Evolutive and Interactive Actor Polygon in the Theater of Organizations. Storytelling and the future of organizations: An antenarrative handbook, 366.

Savall, H., Zardet, V., Péron, M., & Bonnet, M. (2012). Possible Contributions of Qualimetrics Intervention-Research Methodology to Action Research. International ***Journal of Action Research***, 8(1), 102-130.

Savall, H.; Péron, Michel; Zardet, Veronique; Bonnet, Marc. (2018). ***Socially Responsible Capitalism****. With Preface by D. M. Boje.*London: Routledg*e.* (No. hal-01140272).

Sele, K., & Grand, S. (2016). Unpacking the dynamics of ecologies of routines: Mediators and their generative effects in routine interactions. ***Organization Science***, 27(3), 722-738.

Stubbs, W., Higgins, C. and Milne, M. (2013), “Why do companies not produce sustainability reports?”, ***Business, Strategy & the Environment***, Vol. 22 No. 7, pp. 456-470.

Worley, C. G., Zardet, V., Bonnet, M., & Savall, A. (2015). ***Becoming agile: How the SEAM approach to management builds adaptability***. NY: John Wiley & Sons.

## Website References

Boje - Double Spiral images <https://davidboje/448/double_spiral_for_final.html>

Boje – Quantum Energy Works <http://davidboje.com/shamanic/quantum_world.htm>

Boje – Fractal study guide for Henderson and Boje (2016) and Boje (2016) <http://davidboje.com/fractal/> and <https://business.nmsu.edu/~dboje/690/What_is_Fractal_Storytelling.htm>

Boje All about Spirals <https://davidboje.com/448/spirals.html>