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“Make it Happen with Momentum”

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Developing and Presenting the Workshop
"Make it Happen with Momentum"
by

Stavros Michailidis

An Abstract of a Project
in
Creative Studies

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Masters of Science

Fall 2009

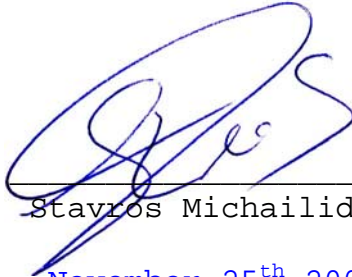
Buffalo State College
State University of New York
Department of Creative Studies

ABSTRACT OF PROJECT

*Developing and Presenting the Workshop
"Make it Happen with Momentum"*

The "Make it Happen with Momentum" workshop is a 90 minute interactive experience developed for the 11th Annual European Conference on Creativity and Innovation. It was first presented on October 29, 2009 in Brussels, Belgium by Stavros Michailidis and Donald M. Drost, Phd. The workshop was well received and selected amongst the best workshops of the conference.

The purpose of the workshop is to introduce participants to the Momentum Framework, developed by Stavros Michailidis to diagnose and nurture the successful implementation of creative works. Work to date includes a formula for momentum, a diagnostic tool for assessing momentum and basic strategies for building momentum.



Stavros Michailidis

November 25th 2009

Date

Buffalo State College
State University of New York
Department of Creative Studies

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Student



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I'd like to humbly recognize the many people who helped build momentum for this idea. Without them and their support it would have never progressed this considerably. I am particularly grateful to John Cabra for helping me organize and capture my foundational thoughts about momentum. Likewise, I am indebted to Don Drost for generously giving his time to refine and advance the Momentum Framework and for his valuable company in Brussels. Finally, I'd like to acknowledge our families, friends and colleagues for their inspiration, patience and encouragement. Without them nothing would be possible.

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Section 1 - Introduction

When I began my studies at the International Center for Studies in Creativity at Buffalo State College I was very curious to understand why some creative works were fruitfully realized while others, though equally noteworthy, were never successfully implemented. For example, I facilitated three sessions in the months after my training in the Creative Problem Solving Process that resulted in suitable action plans that were never pursued to completion. In follow up interviews with these clients I asked why progress had halted and was simply told, "The project just lost momentum."

I was familiar with this feeling. As an entrepreneur, involved in dozens of projects myself (many of which never got off the ground), I knew the countless obstacles that could get in the way of a new undertaking. Conversely, I was also very familiar with success having had the pleasure of being involved in projects that effectively overcame these obstacles and progressed past the difficult moments of implementation. I came to realize that there is a fundamental difference between initiatives that are able to endure the trials of actualization and those that are brought to a stop by these impediments. Some, like the three clients mentioned above, refer to this difference as *Momentum*.

I began to ask myself, what exactly is momentum, what might be all the ways to ensure that projects have momentum, and how could I learn about momentum and successful implementation? To explore this issue I embarked on an independent study in the spring semester of 2009 under the guidance of Professor John Cabra, PhD. In particular, Dr. Cabra encouraged me to focus on a

particular parallel which I articulated between the momentum of implementing creative works and that of moving objects as defined by the science of physics. The notion of momentum, after all, was identified by physicists to capture the phenomenon that objects in motion will remain in motion unless affected by outside forces.

To explore this link I conducted a series of interviews with Donald M. Drost, PhD, a physicist and professor at the University of the Virgin Islands. Dr. Drost and I discussed the structure and behavior of matter, the laws of motion, and the formula used in physics to define and measure momentum. It is these concepts that were translated into a framework for implementing creative works and subsequently it was this translation that served as the foundation of the new diagnostic tool, the Momentum Matrix, which was the culminating product of the independent study (We will explore this framework and the Momentum Matrix further in Section 3).

As the independent study neared completion the European Association for Creativity and Innovation was requesting proposals for workshops for their upcoming conference. The theme for the 11th European Conference on Creativity and Innovation was implementation and a framework for assessing and nurturing momentum appeared to be a natural fit. A proposal was submitted under the title "Make it Happen with Momentum" and it was subsequently accepted by the conference committee for presentation in Brussels on October 29th 2009.

The purpose of my master's project was to refine the momentum framework, and to develop and present the

90-minute workshop at the conference. The workshop is arranged into five sections. The first section poses the momentum parallel and provides a theoretical explanation of the physical concept of momentum. The latter part of this section was presented by Dr. Drost who accompanied me on the trip to Belgium. The second section of the workshop is an activity that reinforces the theoretical learning by providing participants an opportunity to experiment with momentum by exploring the effects of changing each underlying factor of momentum independently. The third section is a step by step translation of these physical concepts into the Momentum Framework used for understanding the momentum of implementation. This section includes a new momentum formula for implementation and an in-depth look at the Momentum Matrix complete with case studies and examples. It also introduces some basic strategies that can be used to increase the momentum of implementation. The fourth section of the workshop is a facilitated activity that allows participants to use the Momentum Matrix and the generic strategies to build momentum for a personal project that appears to be waning in momentum. Finally, the fifth and last section of the workshop includes time to recapitulate, debrief, conduct Q & A and discuss possibilities for further exploration.

This document captures the essence of the workshop presented in Brussels. I begin by reviewing literature pertinent to implementation and establishing relevancy for the Momentum Framework. In section 3, I present and review the physical concept of momentum with examples that illustrate how momentum works and how it is measured. Furthermore, I explore and explain the

development of the Momentum Framework, the Momentum Matrix and the basic strategies for building momentum. Section 4 describes the final outcome of my master's project, the "Make it Happen with Momentum" workshop. I continue in section 5 by discussing key learnings, and areas for further exploration. In the conclusion I summarize the experience of developing and presenting the momentum framework and discuss the current status of my work. Finally, the appendix includes 29 speaker sheets from the actual presentation. Each sheet includes a picture of the related slide and highlights the speaking points associated with that portion of the workshop.

Section 2 - Literature Review

As with most issues in creative studies it is appropriate to begin a literature review with a working definition of creativity. The most widely accepted definitions of creativity include both aspects of originality and appropriateness (Davis, 2004). One such example comes from Puccio, Murdock and Mance (2007), "Creativity is clearly about doing something in an original way that is at the same time useful" (p.21) In addition to meeting the two qualifiers, the above definition also implies action.

Furthermore, the authors posit that "facets (person, process and environment) interact to yield creative products" (p.23). In fact, many definitions of creativity include a resulting product as a requirement. May (1959) defined the creative process as one concerned with "bringing something new into birth." Perkins (1988) defined a creative person as "one who regularly produces outcomes in one or more fields that appear both original and appropriate." Perhaps Barron (1988) said it most directly, "It (creativity) is essentially the ability to bring something new into existence purposefully" (p. 80). Moreover, assessments like the *Inventory of Creative Activities and Accomplishments* (Hocevar, 1978) evaluate creative people based on the creative acts they have performed or achieved. Other theorists give merit to achievement and self actualization as a valid measurement of creativity as well (Bull & Davis, 1980; Holland, 1961; Lees-Haley, 1978; Maslow, 1971; Moustakis, 1967; Okuda, Runco, & Berger, 1991; Plucker, 1999; Rogers, 1962).

Clearly, many academics, practitioners and theorists in the field of creative studies have emphasized the importance of achieving results through the creative process. Likewise, the Creative Problem Solving process has evolved, throughout its iterations, to increase the chances of successful implementation.

Osborn (1953) first introduced Creative Problem Solving as a three phase process including: Fact-finding, Idea-finding and Solution-finding. Having found an original and appropriate solution however is not the same as putting it into practice, so Parnes, Noller and Biondi expanded the Creative Problem Solving process by adding two more phases: Problem-finding and Acceptance-finding. (Noller, Parnes & Biondi, 1976; Parnes, Noller & Biondi, 1977). "The Problem-Finding stage was developed to discover the broad perspective of the situation; and Acceptance-Finding allows individuals to consider how an idea or option will succeed or fail." (Wheeler, 2009) Although the addition of these two phases helped in identifying more appropriate challenges and tailoring more suitable solutions, the Creative Problem Solving process clearly ended before these refined solutions were implemented.

To further aid preparation for execution of solutions generated using Creative Problem Solving, VanGundy (1988) introduced the use of an implementation checklist. This checklist includes adequate resources, motivation, procedures, structures, policies, risk tolerance and climate as requirements for successful implementation. Additionally, VanGundy cautions against power struggles, clashes and resistance, and includes these items on his checklist as things to mitigate

before attempting to execute the solution. Although VanGundy's checklist is beneficial in planning for successful implementation it is still limited to a preparatory nature.

Further advancements were developed by Isaksen, Dorval and Treffinger (1994) and Vehar, Firestein and Miller (1999) who adapted a six phase version of Creative Problem Solving. This refined process is organized within three distinct components:

"Understanding the Problem," "Generating Ideas" and "Planning for Action." It is clearly observable that Creative Problem Solving continued to be concerned with implementation as more focus was placed on this final stage. For example, Isaksen et al. (1994) generated an implementation checklist that contains questions categorized across six general areas ("Relative advantage", "Compatibility", "Complexity", "Trialability", "Observability" and "Other questions to help gain acceptance of your plan") to aid in preparing for successful implementation. However, it is also clearly observable, from the title of the last component, that it is limited because it draws only from a planning perspective. Again, the Creative Problem Solving process is merely concerned with planning for implementation and not with actual implementation.

Puccio, Murdock and Mance (2005, 2007) developed the thinking skills model of Creative Problem Solving. They describe their version of Creative Problem Solving as being "comprise(d) of three conceptual stages, six explicit process steps with six repetitions of divergence and convergence within each, and one executive step ... to guide them all" (2007, p. 35). The

last of these three conceptual stages is named "Implementation." Again, the authors clearly realize the importance of successful implementation to the completion of creative process. This final stage consists of two sub-processes called "Exploring Acceptance" and "Formulating a Plan." To properly conduct the groundwork for implementation Puccio et al. (2007) introduce concepts like contextual and tactical thinking, and they present tools including "Assistors and Resisters", "Stakeholder Analysis", "How-How Diagram" and "Sequencing". Although these are additional advancements in preparing for implementation, once more each of these tools is predominantly concerned only with prepared for implementation. Once again the Creative Problem Solving process comes to an end before actual implementation begins.

One tool designed for use during actual implementation is "Performance Dashboard" (Senge, Kleiner, Roberts, Ross, Roth & Smith, 1999). Its purpose is to monitoring progress toward some goal during active implementation. In broad terms this tool involves developing some type of visual aid to provide feedback for tracking progress. Although this tool does not directly aid in successful implementation, it does highlight the important intermediate step of monitoring and examining progress.

Another advancement toward the inclusion of actual implementation as part of the creative process came from *Simplex*, an adaptation of Creative Problem Solving developed by Min Basadur. This process includes a fourth stage named "Solution Implementation". The purpose of this fourth stage is described as "creating options in

the form of actions that get results and gain acceptance for implementing a change or a new idea," (Basadur, Pringle, Speranzini & Bacot, 2000, p. 61) and includes two sub-steps named "Sell Idea" and "Action".

The inclusion of this fourth stage lays the groundwork for explicitly including the generation of results as part of the iterative Creative Problem Solving process, however much work remains to be done. The present opportunity is for the development of strategies, tactics, tools, techniques and meta-cognitive thinking methods to successfully monitor and modify implementation. It is particularly important to note that this type of advancement is particularly meaningful to organizations and to the study and practice of leadership. The very purpose of organizations is to coordinate the collective efforts of individuals to achieve some mutual intention. Likewise, the role of leadership is to harmonize these efforts into a fluid and seamless process. It was with these concerns in mind that I began to develop the Momentum Framework as a meta-cognitive framework to support implementation.

The following section will describe the Momentum Framework and elaborate on its origin and development. It is important to highlight before we continue however how this framework is unique. The Momentum Framework is not a phase or a step to be added to the Creative Problem Solving process. It is a meta-cognitive process which serves to diagnosis and nurture the implementation of solution.

Section 3 - Process

The Momentum Framework introduced in the following pages is intended to aid in the monitoring, assessment and modification of implementation. In particular, it can be used directly with an Action Plan resulting from the Creative Problem Solving process.

The concepts used to develop this framework are drawn from a mechanical understanding of momentum and from a thorough comprehension of the laws of motion. First, a "mathematical" formula was created to better understand momentum in the context of implementation. Then an implementation tool followed based on this formula. Finally a set of basic strategies were developed to help build momentum in implementation.

Momentum in Physics

Physics is the study of the structure and behavior of matter. A sub-section of physics is mechanics, the study of motion. Mechanics defines momentum as the quantity of motion in a moving body measured by the product of its mass and its velocity.

Figure 1. - Momentum Formula in Physics

$$\vec{p} = m\vec{v}$$

Momentum is expressed in a simple formula where momentum (\vec{p}) is equal to mass (m) multiplied by velocity (\vec{v}). Plainly stated, mass describes how much matter is moving and velocity describes the manner in which it is

moving. More specifically, velocity has two separate components: magnitude and direction. Velocity's magnitude may be understood as the speed and is a measure of how fast the mass is moving. For example an object may be traveling at 25 miles per hour or 30 meters per second. Velocity's other component, direction (indicated by an arrow), makes velocity a vector describing which way the mass is traveling within a system, 25 miles per hour south or 30 meters per second down. It is important to note that because velocity is a vector inclusive of a direction so is momentum.

Another way to understand momentum is to consider how difficult it is to stop a moving object. According to physics, an object's momentum is equal to the force that must be applied to stop it. A physical example is provided here to demonstrate mechanical momentum. The catcher on a baseball team can easily stop a ball traveling at eighty miles an hour toward home plate, but he or she cannot stop a truck barreling at them at the same speed. This is because the truck has much more mass than the ball and therefore more momentum. The nature of the motion is the same, but the amount of mass in motion is much greater. Similarly, creative initiatives that are embraced by many people and supported by large amounts of resources are much more difficult to stop, and therefore more likely to succeed. They have more mass, and therefore, more momentum.

To understand the velocity components of momentum consider a similar example using the same baseball catcher that illustrates variations in speed. Again, the catcher can easily stop the ball traveling at eighty

miles an hour toward home plate, but can't stop the same ball if it is traveling at eight hundred miles an hour. The mass of the ball hasn't changed, the direction remains the same, but its speed has increased dramatically. The increase in speed consequently results in an increase of momentum. Similarly, creative initiatives that are being executed quickly are recognized as having momentum. They are difficult to stop because of the overwhelming amount of progress that is being incurred in a given snapshot of time.

The last aspect to consider is direction. A catcher can only stop the ball if he or she is in the right place. If the baseball is traveling at eighty miles an hour, but not thrown toward home base (as in the case of a misdirected throw called a wild pitch), then the catcher in all likelihood won't be able to stop it. Similarly, creative initiatives that are aimed toward an agreeable direction gain support and momentum and in all likelihood have a better chance of meeting their projected target, namely the strike zone and ideally (for the sake of this example) a batter's strike.

Translating the Momentum Formula

As we stated earlier, mechanical momentum is concerned with physical motion. Momentum in creative problem solving, however, relates to implementation. Therefore in this context momentum cannot be measured in the same terms. Mass and velocity need to be translated to concepts that are useful for creative circumstances.

Resources as Mass:

What is the mass of implementation? When measuring the momentum of a body in motion, mass is a measure of how much matter is moving. Likewise for implementation the question of mass addresses **who** and **what** is involved in moving the initiative forward. The execution of every plan requires the commitment of resources (financial, human, intellectual, technological or otherwise) to realize a transformation. If the adequate resources are put in motion then the execution of the action plan gains momentum. However, if adequate resources are not accorded, then the action plan's progress may be thwarted or stalled completely.

Two aspects of Velocity: Speed and Direction:

As stated earlier, velocity is best understood as two separate components, speed and direction. Speed is a measure of how much change is taking place in a snapshot of time, or the rate of results. Some creative works are implemented with great speed and progress is achieved in a timely manner, while others have little speed and advancement is slow. When analyzing speed, questions regarding **when** and **how** are the most important to make an effective assessment.

The second component of velocity, direction, addresses the quality of the change and subsequently the results. "Are results being generated along the intended course, or are we not getting the results we originally desired?" To gain a better understanding of direction important questions to ask can be along the lines of **where** and **why**.

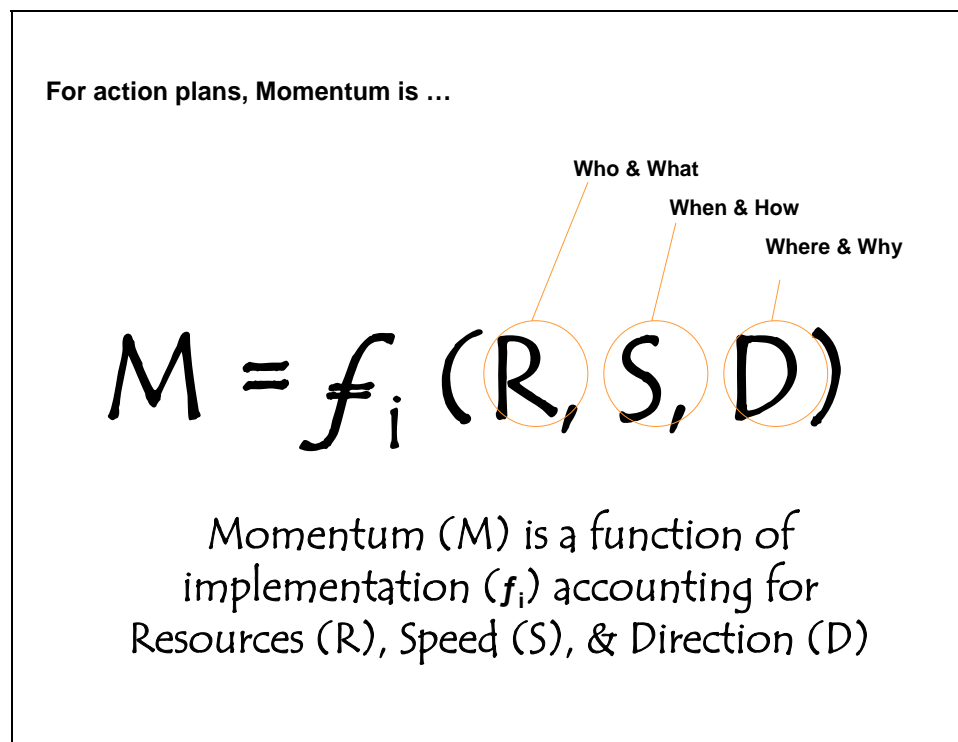
Momentum and the Action Plan

It is particularly amiable that the three components identified above (resources, speed and direction) work nicely with what is usually the final product of a Creative Problem Solving session, the action plan. The action plan includes information about required resources (resources), action steps and deadlines (speed), and an overriding goal (direction).

A New Formula:

Using the underlying mechanical formula of momentum as inspiration, namely that resources are represented as mass and speed and direction as the two components of velocity, the following "mathematical" formula is proposed for the momentum of creative initiatives:

Figure 2. Momentum Formula for Implementation



For action plans, momentum is a function of implementation that takes into account resources (R), speed (S) and direction (D). These three criteria systematically capture and categorize the elements of momentum, but how specifically, can this information be applied to the implementation of action plans?

A New Tool

As an initial way to use this information and this new momentum framework I am proposing the use of a qualitative diagnostic tool. The purpose of this tool is to assess the current momentum of an implementation initiative and to identify which, if any, of the individual components are wavering and could stand to be improved.

First, three columns are created. The first column is for resources, the second for speed and the last is for direction. Then each of these is assessed qualitatively to determine if adequate quantities of each are present for successful implementation. For example, the question "Are all the resources required present?" may be applicable. If the answer is "yes" a plus (+) is documented to denote adequacy of resources. If the answer is "no" a minus (-) is recorded to represent inadequacy. The process is repeated for each remaining component.

Figure 3 represents all the possible scenarios varying pluses and minuses in each column. Each scenario is unique in that it affectively feels different than the rest. Furthermore, even though there are multiple scenarios that denote less than optimal momentum each is quite individual in the way that it is

experienced and potentially overcome. This matrix of scenarios is referred to as the Momentum Matrix.

Figure 3. The Momentum Matrix

<u>Translating the Physics</u>			
<i>A Diagnostic Tool: The Momentum Matrix</i>			
<i>Resources</i>	<i>Speed</i>	<i>Direction</i>	<i>Momentum</i>
+	+	+	<i>Optimal Momentum</i>
+	+	-	<i>Chaos</i>
+	-	+	<i>Slow Growth</i>
-	+	+	<i>Boot Strapping</i>
+	-	-	<i>Stagnation</i>
-	+	-	<i>Busy Work</i>
-	-	+	<i>Good Intentions</i>
-	-	-	<i>No Momentum</i>

The first scenario is characteristic of 'Optimal Momentum' when resources, speed and direction are adequate for successful implementation. The next scenario denotes a situation in which there is adequacy of resources and speed but not in direction. This means that all the necessary resources are present and action is being taken in an expedient manner, but the results generated are not consistent with the goal. This situation can feel 'Chaotic' and overwhelming as participants may feel consumed but not rewarded because of the lack of progress. This scenario calls for a review of direction in order to increase the momentum of the initiative.

A third, and different, scenario exists when resources and direction are met adequately but not speed. This situation is characterized as 'Slow Growth' and is experienced as painstaking progress. Attainment of the goal appears to be a distant prospect and momentum is threatened. This type of scenario requires an increase in the speed of progress to obtain optimal momentum. Examples of ways to increase speed include increasing effectiveness through additional training or technology, or the reduction of contrary forces, like bureaucracy, that may be slowing progress down.

The fourth scenario is characterized as 'Bootstrapping' and is present when adequate resources are not. Many entrepreneurial and innovative ventures are representative of this type of situation where significant progress is made on very limited resources. This circumstance is strenuous over time and long term momentum is threatened. Significant efforts must be made to amass greater resources and establish optimal momentum.

The next three scenarios represent the inadequate presence of two out of the three components necessary for optimal momentum. 'Stagnation' defines a situation where only resources are present in adequate capacity. Subsequently, these are largely motionless as progress is not being made in any significant direction or at any meaningful rate. 'Busywork' is characteristic of a situation that is defined by inadequate resources and direction, but high in the rate at which results are being generated. These results remain relatively meaningless as they are not aligned with any specific goal or backed by any substantial resources. Finally,

'Good Intentions' typify a situation where the only thing available in abundance is direction. Even if such a direction is identified and defined it is relatively inconsequential without the resources or development necessary to actualize these intentions.

It is important to realize that although these three components are separate from one another one situation can often lead to another. For example a situation characterized as one of 'Slow Growth' may quickly become one of only 'Good Intentions' as resources are reallocated to areas of greater progress. Eventually hopes of achieving this outcome may wane altogether and the state of 'No Momentum' might be reached.

This is true because outside forces will continue to be present and these will have an effect on the momentum of a given implementation initiative. Conversely, forces can also be used to nurture momentum. These forces can be utilized to build momentum for a new initiative or reinvigorate momentum for a floundering one.

Basic Strategies for Building Momentum

The above examples illustrate how momentum reacts to influence from the environment. In physics, this change of momentum is a reaction caused by the application or removal of forces. Similarly the momentum of implementation reacts to forces as well. Figure 4 presents a set of basic strategies that can be used to build momentum for implementation initiatives. These strategies are intended to be simplistic and can be used as the foundation for ideation on tactics.

Figure 4. Basic Strategies for Building Momentum

Translating the Physics

Strategies for Building Momentum

Building momentum via **RESOURCES**

- Apply forces to attract resources
- Eliminate forces that repel resources
- Decrease distance to desired resources

Building momentum with **SPEED**

- Apply forces to increase speed – effectiveness
- Eliminate forces that impedes speed – friction

Building momentum by focusing on **DIRECTION**

- Define your space and your trajectory
- Apply forces that propel you in the right direction
- Eliminate forces that send you in the wrong directions

The first group of strategies is concerned with building momentum via resources. One approach is to attract additional resources dedicated to the specific implementation initiative. Another way is to remove forces that are repelling resources such as conflict and competing priorities.

The next set of strategies aims to build momentum with speed. Adding forces that will increase speed will increase momentum. This can be done by increasing effectiveness to make greater progress. Tactics like training new skills and the use of technology are just a few that can be employed to utilize this strategy. Conversely, another strategy that can be employed is to remove forces that are inhibiting speed. Friction can slow down moving objects in the physical universe. Likewise, friction can slow down the progress of

implementation as well. Tactics to reduce friction can involve making things easier and more efficient.

The final set of strategies is focused on building momentum through direction. The first strategy in this set is not concerned with adding or removing forces but with understanding the current position and trajectory of the change initiative within its given system. Subsequently, forces can be exerted that further implementation in the intended direction or forces can be removed that turn action in unintended directions.

These basic strategies can be used to develop tactics that will help to nurture and build momentum. Nurturing momentum is crucial to the sustained progress of change initiatives via the successful implementation of the action plan and to the overall completion of the creative process.

The momentum framework is intended to be a meta-cognitive structure for the final phase of Creative Problem Solving, actual implementation and the generation of results. The Momentum Matrix and the basic strategies serve to diagnose and nurture momentum in a continuous process of implementation.

Section 4 - Outcomes

The culmination of the work performed for this master's project was the 90-minute "Make it Happen with Momentum" workshop presented at the 11th European Conference on Creativity and Innovation in Brussels, Belgium on October 29th 2009. I made this presentation with the help of Donald M. Drost, PhD. Dr. Drost is a professor of physics at the University of the Virgin Islands and he presented the physics portion of the presentation to the workshop participants.

The appendix includes the 29 'speaker sheets' used for each slide of the presentation. Each sheet highlights the strategic purpose of the slide, provides a miniature copy of the slide to serve as a visual aid, and outlines the speaking points for that portion of the presentation. Additionally, two 'speaker sheets' include instructions for facilitating the activities that correlate with their slides.

This section provides a review of each section of the presentation and serves as a general overview of the workshop. It is organized into sequential sections that correlate with the progression of the workshop.

Setting up the room

The "Make it Happen with Momentum" workshop was designed for approximately twenty participants. The room used for this workshop was large enough for a group of this size. The room included a projector and a projection screen for the presentation portion of the workshop. As the participants entered the first slide of the presentation was already displayed on the

projection screen at the front of the room. Additionally, the room was also equipped with movable desks and chairs so that it could be utilized effectively for the activity portions of the workshop as well. As participants entered the room and took their seats they were greeted by both presenters. Low volume, upbeat music played to generate ambiance in the room and to engage the participants prior to the official start of the workshop.

Part 1 - Starting the workshop

Once everyone was in attendance, I began the workshop by standing in front of the room. I introduced myself and Dr. Drost once again, and highlighted the essence of the workshop before proceeding to the second slide. The next couple of slides and their correlating speaking points established relevancy for the material included in the workshop. Additionally, I highlighted the objectives of the workshop and relinquished the floor and the projector's remote control to Dr. Drost.

Dr. Drost discussed with the participants the physical concept of momentum as it relates to the motion of objects (similar to the review in the previous section). He provided multiple examples, including, a tennis ball, a car and a cruise ship, that demonstrate how momentum is measured and what its significance is. Dr. Drost placed significant focus on the momentum formula for physical objects ($p=mv$) and on the ways in which each of these components contributes to and affects momentum. Finally, Dr. Drost introduced the concept of force as a means to alter momentum.

Part 2 - Activity # 1; Momentum Football

Activity # 1 is a game that provides participants the opportunity to experiment with the concepts they just learned from Dr. Drost. Basically, all participants stand around in a circle and kick different objects back and forth.

First, the game begins with a simple soccer ball. Next the concept of speed is introduced as participants are asked to kick the ball harder and softer paying attention to how the ball moves faster and slower respectively. Then, direction is incorporated as well. Participants are asked to name the person that they intend to kick the ball to.

Then the soccer ball is replaced with a football. Participants are asked to continue to name the intended recipient of their kick but they soon discover that the awkward shape of the football makes this a much more difficult task.

Finally the concept of mass is addressed by changing the football with a more massive, 6 lbs. medicine ball. Then again the object is replaced with a very low mass balloon. While this happens participants are engaged in a discussion about the momentum of the object and their strategies for interacting with it.

To summarize, this activity was designed to accomplish three parallel goals. Primarily it gave the participants an experiential interaction with the physical concepts of momentum. Additionally, however it also helped participants become more comfortable with each other by serving as an ice breaker. This began to happen as soon as participants were asked to name the intended recipient of the object they kicked. In

addition to making participants more comfortable with each other, this activity also served to engage them in the workshop by activating both their minds and their physical bodies. The fact that participants were having fun was apparent as the laughter continued throughout the activity.

Part 3 - Translating the Physics

The third portion of the workshop is the heart of the innovative material presented in this workshop. This section introduced the momentum framework in the context of implementation, by translating the physical formula of momentum. Then the Momentum Matrix was introduced and the basic strategies were discussed (Similar to the previous section of this write-up).

The translation between the two formulas was performed in an incremental manner which allowed participants the opportunity to comprehend the interpretation of mass and velocity into resources, speed and direction. The Momentum Matrix was presented in a fashion which provided the conceptual circumstance, specific industry examples and time for reflection on personal experience.

Optimal momentum, the state of having adequate resources, speed and direction during implementation, was presented first. This was displayed by placing a "+" in each column of the Momentum Matrix (see Figure 5) and describing this type of momentum conceptually. Toyota's initiative to develop and introduce the Prius hybrid was used as the particular example in this case. I described how Toyota's financial commitment, effectiveness and focus generated optimal momentum

during implementation. Finally, I asked the audience if they could relate to this type of experience and if they have encountered this type of momentum personally and how it felt affectively.

I continued by cycling through the rest of the Momentum Matrix and demonstrating how each type of momentum resulted in a different type of implementation experience. I also demonstrated how some companies had managed to change momentum by providing one of the missing ingredients. I used examples that included Nestle, SAAB, and Onehen.org amongst others. I attempted to locate and provide examples that catered to a more international audience since this conference was held in the capital of the European Union.

Finally, I discussed the use of force and generic strategies that can be used to build momentum. In this portion I highlighted strategies similar to the ones discussed in Section 3 of this write-up. Upon completion of this introduction to strategies I continued to the second and final activity of the workshop.

Part 4 - Activity # 2; Make it Happen

The intention of the second activity is to provide participants the opportunity to use the Momentum Matrix and the basic strategies to diagnose and build momentum for a particular initiative that they are implementing at the moment. Participants were asked to split up into sub groups. Each group was given an allotted portion of time to discuss various goals or change initiatives which they are each in the process of implementing or which they have abandoned implementing at the current

time. They are asked to each select one that they are most interested in building momentum for.

Next the participants were given a portion of time to diagnose momentum for their initiative using the Momentum Matrix. I provided some guidance for the groups by posing general questions which they should each attempt to answer in their subgroups using each other as sounding board partners. After the allotted time expired we reconvened as a whole group and asked for volunteers to share their diagnosis. For each of these the entire group helped brainstorm tactics using the basic strategies.

Part 5 - In Closing

The last part of this workshop began with a debriefing of the previous activity. Participants discussed what they found useful and difficult. Additionally, time was allotted to recap the material presented in the workshop and for a questions and answers session. The last portion of this section reviewed opportunities for further exploration. These are discussed in more detail in the next section.

Overall the workshop was well received. We were selected amongst the best of workshops and were asked for an encore presentation.

Section 5 - Key Learning

Overall developing and presenting this workshop has been an extremely rewarding experience. Most rewarding have been the responses from participants. In practice sessions and in the final presentation participants found the framework relevant and useful. This perception was reinforced by my co-presenter Dr. Drost.

Dr. Drost organized a practice session with a diverse group of his students. He included in this test group working students who are taking classes in the evening, some of his brightest students and some of the students who are falling behind in his class. What Dr. Drost found most impressive was the level of engagement by this last group of students. He was pleasantly surprised with their level of participation and interest in the workshop. In fact, it was many of these students who remained after the practice session was complete to discuss momentum in greater detail.

Developing this workshop has also highlighted the very next steps that need to be taken to advance the Momentum Framework. Three of these topics were discussed in the last section of the presentation as areas for further exploration. These include quantifying the momentum of implementation, defining the space in which implementation occurs and developing advanced strategies for building momentum.

The first area that requires more exploration is the possibility of quantifying momentum by developing a set of metrics for resources, speed and direction. The benefits of actually being able to measure the momentum of the implementation of initiatives are many. This would allow us to perform operations similar to those in

physics that predict the behavior of objects. We could use this information to more accurately affect the momentum of implementation as well as calculate whether or not obstacles are likely to slow down or stop implementation entirely. Individuals and organizations could also compare implementation initiatives side by side to decide which has a greater chance of success.

Quantifying momentum however will probably prove to be very difficult. Each component will require a type of unit by which to measure it. How might we measure resources, speed and direction? Some units to consider may be dollars, energy, milestones per quarter, etc. Measuring these components will require a significant degree of investigation.

Of these three components the one I find most interesting is direction. Direction is indicative of the position the initiative holds within a creative system. How is one location in this system different from another? How many dimensions exist in this system? I believe that once we understand more about the space within which we create we will understand more about our creations as well.

Finally, a third area of further exploration is the generation of advanced strategies. It became clear in working with this framework that each of the three components were interrelated. Advanced strategies would involve the application of forces that affect multiple components. Within this work, we can also continue to explore more parallels with physics, such as electromagnetic force which bonds mass, or the bending of space-time which creates gravity.

In total the work documented in this final write up encapsulates almost an entire year of my effort. The lessons I learned this last year are much greater than what is captured in a general overview of the momentum framework. I had the opportunity to watch this creative idea evolve and build in momentum. I had the opportunity to utilize this framework in order to develop it, a truly confusing task. The intricacies and nuances that I became aware of will serve as the inspiration for many years of work to come.

Section 6 - Conclusion

I believe that significant benefits can be achieved by continuing to develop the Momentum Framework. I find that I use this framework daily to make progress on my implementation objectives and that many others I share this with adopt it as well. In the spirit of using the Momentum Framework, I will use it here to diagnose the current momentum of the Momentum Framework by investigating each of the three components.

Resources

In the beginning the primary resource committed to this project was my own time. I have been devoted to this project and am interested in continuing to pursue it so there is little chance that I will be lost as a resource. Along the way Dr. Cabra and Dr. Drost also contributed their time and intellect as resources to the Momentum Framework.

Moving forward, Dr. Drost has expressed interest in continuing to develop the Momentum Framework and interest from the creative community has been growing. From this perspective implementation is gaining momentum in terms of resources. Additional resources that could be solicited might include the support of more members of the academic community and participants to conduct more extensive research.

Speed

To date the progress of this initiative has been satisfactory. In hindsight, I am very impressed with the amount of work that has been achieved. I am making substantial progress on current tasks and am ahead of

any deadlines that I must meet. This project will be submitted on time and there is no need to expedite progress.

Moving forward I believe we will continue to make sufficient progress with this initiative. It is a significant enough priority that several hours a week are dedicated to moving it forward. It is important to consider at this juncture others who have become involved and the coordination of efforts to maintain the current rate of progress. It is a physical phenomenon that when an object increases in mass it will slow down unless forces are applied to maintain or increase its speed.

Direction

Defining the direction in which this initiative is heading is crucial. Other than the few next steps that have been defined the long term vision for this initiative is a little vague at the moment. Not because of lack of options but because of an abundance of them. Recently, while working on this document, I have spent some time diverging on possible next steps. With the completion of this paper the time for convergence has arrived once again.

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Appendix

Appendix

Speaker Sheets

Appendix

Slide # 1 – Opening Image



Objective:

The purpose of this slide is to officially start the workshop. It gives the presenters a chance to introduce themselves to the participants and to highlight the essence of the workshop.

Image Reference: © imagination.co.uk

Speaker: (Stavros Michailidis)

Speaking Points:

1. Introduction of presenters:
 - a. Stavros Michailidis – Student at ICSC & serial entrepreneur
 - b. Donald M. Drost – Physicist & professor at UVI
2. Purpose of the workshop:
 - a. To discuss and compare momentum in physics and momentum in organizational settings.
 - b. To draw attention to the lessons that can be learned from this comparison

Slide # 2 – Momentum Cartoon

Objective:



The purpose of this slide is to transition into the discussion about momentum and set the tone for a friendly atmosphere / conversation. The cartoon provides the opportunity to discuss preconceived notions about momentum and to shift the conversation to the back story of the development of the Momentum Framework.

Image Reference: © [Naf](#)

Speaker: (Stavros Michailidis)

Speaking Points:

1. Have you ever had a good idea, and then nothing happened?
 - a. These gentlemen had a good idea, but couldn't generate the momentum to make it work.
 - b. How about your good idea?
 - i. Got excited
 - ii. Nothing happened
 - iii. Why?

2. The Back Story
 - a. Stavros learns CPS at Buffalo
 - b. Stavros practices CPS with Clients
 - c. Some have success implementing Action Plan, others fail
 - d. When asked why the answer was: "The project just lost momentum"
 - e. Stavros could relate because of his experience as an entrepreneur
 - f. Stavros familiar with projects that advance thru the obstacles and those which come to a grinding halt in times of difficulty.
 - g. Stavros seeks to understand "Momentum"
 - h. Turns to physics and Donald Drost
 - i. This workshop is the product of their discussions

Appendix

Slide # 3 – Objectives



Objective:

The purpose of this slide is to outline the goals for the workshop. And to highlight the learning and experiences the participants will engage in.

Speaker: (Stavros Michailidis)

Speaking Points:

1. By the time this workshop is over you will have:
 - j. Learned a little bit more about physics
 - k. Played a game
 - l. Learned a new framework to diagnose and nurture implementation
 - m. Practiced using the Momentum Framework
 - n. Debriefed, asked questions, and learned about things to come
2. Turn the floor over to Don to recap the discussion that took place this last year

Appendix

Slide # 4 – Introduction of Co-Presenter, Donald M. Drost



Objective:

The purpose of this slide is to inform the participants about Don Drost and the setting in which the conversation between Donald and Stavros took place.

Image Reference: © bolt.us

Speaker: (Don Drost)

Speaking Points:

1. About Donald Drost
 - a. Physicist
 - b. Professor
 - c. More Info

2. About University of the Virgin Islands
 - a. This is the setting of our conversations
 - b. UVI is ...
 - c. The Virgin Islands are...

Appendix

Slide # 5 – Physics & Momentum 101



Objective:

The purpose of this slide is to begin the conversation about physics and momentum. Here, the presenter will define what physics is, what its purpose is and why it is important.

Image Reference: © spiritoffootball.com

Quote Reference: Giancoli, pg. 1

Speaker: (Don Drost)

Speaking Points:

1. Physics is the Study of the Physical Universe
2. “Physics is the most basic of the sciences. It deals with the behavior and structure of matter.” (Giancoli, pg.1)
3. The purpose of Physics is to make predictions. Physics needs to be precise in order to predict the behavior of matter.

Appendix

Slide # 6 – Mass

Mass



• "Newton himself used the term mass as a synonym for quantity of matter. ... More precisely mass is a measure of the inertia of a body. The more mass a body has the harder it is to change its state of motion."
(Giancoli, p. 77)

Objective:

The purpose of this slide is to address Mass. In order to discuss the behavior of matter as described in the definition of physics we must first understand mass.

Image Reference: © [University of Michigan](#)
Quote Reference Giancoli, pg. 77

Speaker: (Don Drost)

Speaking Points:

1. Before we can understand and predict how matter will behave, we must first understand mass
2. "Newton himself used the term mass as a synonym for quantity of matter. ... More precisely mass is a measure of the inertia of a body. The more mass a body has the harder it is to change its state of motion." (Giancoli, p. 77)
3. The following slides (# 7 - # 9) are examples of Mass

Appendix

Slide # 7 – Mass (Tennis Ball)



Objective:

The purpose of this slide is to provide an example of an object with a small mass.

[Image Reference: © Donna Smithwick, 2009](#)

Speaker: (Don Drost)

Speaking Points:

1. In physics, mass is abbreviated using (m)
2. Mass is measured in grams and kilograms
3. A tennis ball has a mass slightly over 50 grams

Appendix

Slide # 8 – Mass (Car)



Objective:

The purpose of this slide is to provide an example of an object with a greater mass than the previous example.

Image Reference: © Donna Smithwick, 2009

Speaker: (Don Drost)

Speaking Points:

1. An average car has a mass of about 1000 kilograms

Appendix

Slide # 9 – Mass (QE II)



Objective:

The purpose of this slide is to provide an example of an object with even greater mass than the previous example.

Image Reference: © [Frederico Bolognini, 2008](#)

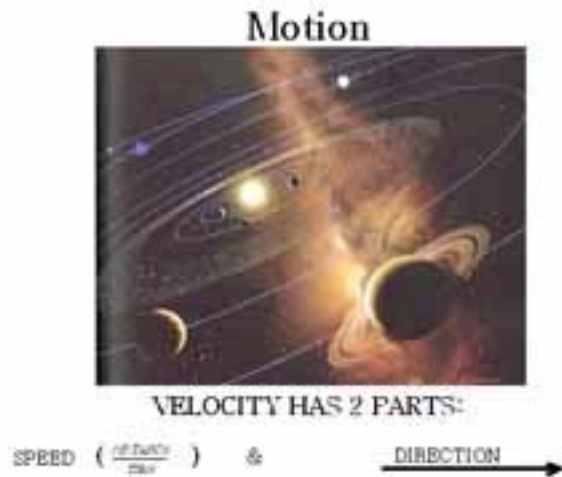
Speaker: (Don Drost)

Speaking Points:

1. The RMS Queen Elizabeth II has a mass of 70,000 tons, the equivalent of 70,000,000 kilograms.

Appendix

Slide # 10 – Motion



Objective:

The purpose of this slide is to introduce and explain the second component of understanding and predicting “how matter behaves,” motion.

Image Reference: © open.ac.uk

Speaker: (Don Drost)

Speaking Points:

1. In order to explore the behavior of matter we must also understand motion
2. Motion is described in terms of velocity and velocity has 2 parts
 - a. Speed
 - i. Magnitude
 - ii. distance over time (measured in meters per second)
 - b. Direction – Trajectory
3. Here we can see the planets moving about their orbits around the sun
 - a. Each planet has a different velocity, meaning a different speed and direction.
 - b. It is the goal of Physics to predict the behavior of each planet, that is, their location and velocity at any point in the future.
 - c. In addition to planets Physics of motion can also be used to predict the behavior of more Earthly things such as:
4. Slides 11-13 are examples of velocity

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Appendix

Slide # 11 – Motion (Tennis Ball)



Objective:

The purpose of this slide is to provide an example of velocity by adding to the first example of mass, the tennis ball. It is important to highlight both the magnitude of the velocity (ie, how fast is it traveling) and to emphasize that velocity also has direction.

[Image Reference: © Donna Smithwick, 2009](#)

Speaker: (Don Drost)

Speaking Points:

1. Now we can consider that the tennis ball is moving
2. If you are Andy Roddick, you hold the world record for fastest serve at 249 km/h, or roughly 60 meters per second
3. It is also important to remember the direction. If you are on the other side of the net, this ball might be coming right at you.

Appendix

Slide # 12 – Motion (Car)



Objective:

The purpose of this slide is to provide another example of velocity by building on the previous example of the car in slide # 8.

[Image Reference: © Donna Smithwick, 2009](#)

Speaker: (Don Drost)

Speaking Points:

1. The 1000 kg car is travelling at 40 meters per second south
2. Notice this measurement contains a magnitude and a direction

Appendix

Slide # 13 – Motion (QE II)



Objective:

The purpose of this slide is to complete the process of building on these examples by discussing the velocity of the QE II from slide # 9.

Image Reference: © [Frederico Bolognini, 2008](#)

Speaker: (Don Drost)

Speaking Points:

1. The 70,000,000 kg Queen Elizabeth II, shown here at Montecarlo, can easily travel at 10 meters per second.
2. Notice again, this measurement contains a magnitude as well as a direction


Appendix

Slide # 14 – Momentum (needs Don's input)

Objective:

The purpose of this slide is to bring together the concepts of mass and motion into the single concept of momentum.

Momentum



Momentum accounts for both the mass and the motion of an object

$$\vec{p} = m \vec{v}$$

(\vec{p}) Momentum = (m) Mass • (\vec{v}) Velocity

Image Reference: © [Killer Asteroid Project](#)

Speaker: (Don Drost)

Speaking Points:

1. Definition of Momentum
 - a. In physics the formula is $p = mv$
 - i. Momentum is the product of an objects mass and its velocity
 - ii. Velocity has direction, so momentum has direction
 - iii. Velocity has speed, so momentum has speed,
 - iv. But momentum is not complete until the magnitude of the speed is multiplied by the magnitude of the mass
 - v. This means that small objects have less momentum than larger objects if they are traveling at the same speed
 - vi. And fast objects have more momentum than slow objects if they have equal mass
2. Why is momentum important in physics?
 - a. Because momentum contains both mass and velocity, this concept helps us predict changes in behavior of objects due to external forces. Some examples are:
 - i. The impact of collisions
 - ii. Forces necessary to launch a satellite into space
 - iii. Design of a parachute
 - iv. An asteroid in the solar system that threatens to strike the earth

Appendix

3. Reiterate the formula for momentum
4. Slides 15-17 are examples of momentum calculations

Appendix

Slide # 15 – Momentum (Tennis Ball)



Objective:

The purpose of this slide is to demonstrate the calculation of momentum using the example of the tennis ball.

Image Reference: © [Donna Smithwick, 2009](#)

Speaker: (Don Drost)

Speaking Points:

1. Reiterate the tennis ball's mass
2. Reiterate the magnitude of tennis ball's velocity
3. Do the calculation
4. Highlight that the units for momentum are kg m / s
5. Remind the audience that momentum, like motion, has a direction

Appendix

Slide # 16 – Momentum (Car)



Objective:

The purpose of this slide is to demonstrate again the calculation of the momentum using the example of the car.

Image Reference: © [Donna Smithwick, 2009](#)

Speaker: (Don Drost)

Speaking Points:

1. Reiterate the vehicle's mass
2. Reiterate the magnitude of the vehicle's velocity
3. Do the calculation
4. Highlight again that the units for momentum are kg m / s
5. Remind the audience that momentum, like motion, has a direction

Appendix

Slide # 17 – Momentum (QE II)



Objective:

The purpose of this slide is to demonstrate the calculation of the momentum using the example of the tennis ball.

Image Reference: © [Frederico Bolognini, 2008](#)

Speaker: (Don Drost)

Speaking Points:

1. Reiterate the vessel's mass
2. Reiterate the magnitude of the vessel's velocity
3. Do the calculation stating the units and the direction

Appendix

Slide # 18 – Force



Objective:

The purpose of this slide is to discuss the relationship between momentum and force.

Image Reference: © [Pier O. deMarchis](#)

Speaker: (Don Drost)

Speaking Points:

1. Discuss momentum and force
 - a. Momentum can be thought of in terms of the amount of force it takes to start, stop or change the direction of an object
 - b. Kicker uses force
 - i. Highlight the relationships to
 1. Mass
 2. Speed
 3. Direction
 - c. Goalie uses force
 - i. Highlight the relationships to
 1. Mass
 2. Speed
 3. Direction
2. Transition to Momentum Football
 - a. In the example we just reviewed, the ball had a fixed mass, but what happens when you change the mass? We will now play a game that will answer that question and give you a chance to experience force and momentum first hand.

Slide # 19 – Momentum Football

Momentum Football



Experiments with Mass, Speed, & Direction

Activity Purpose:

The purpose of this activity is to engage participants mentally and physically in a game that allows them to experiment with mass, speed, and direction as it relates to force and momentum.

Additionally, this activity serves as an icebreaker, allowing participants to get to know one another.

Image Reference: © [REU Soccer Club](#)

Facilitators: (Stavros Michailidis)

Activity # 1

Activity Name: Momentum Football

Number of Participants:

- *(15 to 20) Fifteen to Twenty*

Time Required:

- *12-15 minutes*

Materials Needed:

- *Multiple types of balls:*
 - *A soccer ball*
 - *A football*
 - *A medicine ball*
 - *A balloon*

Set up: *Clear an open area in the center of the room by moving all chairs and other furniture. Ask all the participants and facilitators to gather in a circle facing each other at the center of the open space.*

Instructions:

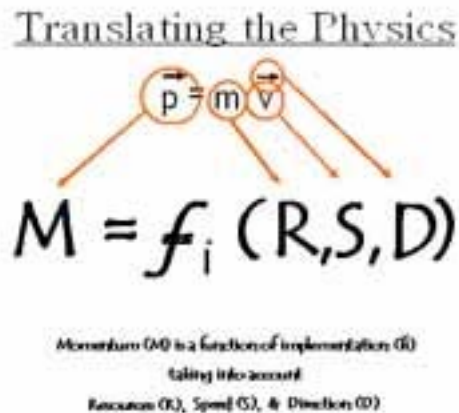
1. *Facilitator introduces a soccer ball and kicks it to a participant. Asking the participants to keep the ball on*

Appendix

the ground, he then asks them to make several more exchanges. (approximately 1 minute)

- 2. Facilitator then asks the participants to make the component of direction explicit by naming the intended recipient. The facilitator may ask probing questions about direction. Who is good at sending the ball in the intended direction, who needs practice? (approximately 2 minutes)*
- 3. Then the Facilitator asks participants to increase or decrease the speed by changing the force of their kick (reminding them to stay safe). The facilitator probes the participants regarding if it is easier or harder to stop the ball due to the change in speed. Is the ball harder to stop when it is going fast? Why won't the ball get far enough if it is kicked too lightly? (approximately 2 minutes)*
- 4. The facilitator switches the ball with the medicine ball (perhaps asking people to come closer together) to show the importance of mass, and how it feels different. Participants are asked to continue to make exchanges. The facilitator probes regarding how hard or easy it is to stop the ball with the increase in mass. How hard or easy is it to get the moving in the first place? (approximately 2 minutes)*
- 5. The facilitator then switches the ball with a balloon. Participants attempt to make exchanges while naming the intended recipient. The facilitator probes regarding why the balloon exchanges aren't working. How is the lack of mass changing the chances of success? (approximately 2 minutes)*
- 6. The facilitator then switches the balloon to the wobble ball (or football) to increase the mass, but not help the direction component. The participants are still expected to be calling out the person's name and then kicking the ball to them. The facilitator probes about direction. (approximately 2 minutes)*
- 7. The facilitator switches back to the soccer ball and allows for a few more perfect exchanges probing about how these concepts may relate to the momentum of change initiatives. (approximately 1 minute)*

Slide # 20 – Translating the Physics (The Formula)



Objective:

The purpose of this slide is to parallel momentum in physics with momentum in the implementation of projects and change initiatives in general. This slide translates the formula for physical momentum to the Momentum Framework.

Speaker: (Stavros Michailidis)

Speaking Points:

1. Establish that the purpose of this slide is to demonstrate the parallel between momentum in physics and momentum in implementation
2. Introduce the concept of Momentum as a function of transformation.
3. Parallel Mass to Resources
 - a. Mass is the “stuff” of objects
 - b. What is the stuff of implementation?
 - i. People, Time, Money...
 - c. Mass becomes Resources
4. Parallel the first component of Motion / Velocity to Speed
 - a. How much motion is going on? Are people busy?
 - b. How quickly is the implementation happening?
 - c. Are we on, ahead or behind schedule?
5. Parallel the second component of Motion / Velocity to Direction
 - a. Do we know where we are going?
 - b. Are we getting the type of results we are expecting?
 - c. Are we getting closer to our goal?

Appendix

Slide # 21 – Translating the Physics (Momentum Matrix)

Translating the Physics
A Diagnostic Tool: The Momentum Matrix

<i>Resources</i>	<i>Speed</i>	<i>Direction</i>	<i>Momentum</i>
+	+	+	<i>Optimal Momentum</i>
+	+	-	<i>Chaos</i>
+	-	+	<i>Stop Grow B</i>
-	+	+	<i>Real Struggle</i>
+	-	-	<i>Stagnation</i>
-	+	-	<i>Busy Work</i>
-	-	+	<i>Good Idea/No</i>
-	-	-	<i>No Momentum</i>

Objective:

The purpose of this slide is to showcase the Momentum Matrix as a diagnostic tool for assessing the momentum of implementation initiatives.

Participants will be given organizational examples as well as allowed the opportunity to reflect on personal life experience that

is congruent to the various types of momentum.

Speaker: (Stavros Michailidis)

Speaking Points:

1. Discuss the structure of the Momentum Matrix
 - a. The first three columns are the individual factors in the momentum framework.
 - b. The last column is a descriptive term illustrating the type of momentum (ie. This is what the situation might feel like)
 - c. One day we hope to develop metrics for better assess these individual components, but we will only consider two ratings, positive and negative.
2. Optimal Momentum
 - a. Describe the situation? (What do the +s & -s mean)
 - b. Provide an example (see Momentum Examples - **Toyota**)
 - c. Ask participants to remember a time when they experienced Optimal Momentum
 - i. What happened?
 - ii. Was the implementation successful?
 - iii. How did it feel?
3. Chaos
 - a. Describe the situation? (What do the +s & -s mean)
 - b. Provide an example (see Momentum Examples - **Nestle**)
 - c. Ask participants to remember a time when they experienced Chaos
 - i. What happened?

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- ii. Was the implementation successful?
 - iii. How did it feel?
- 4. Slow Growth
 - a. Describe the situation? (What do the +s & -s mean)
 - b. Provide an example (see Momentum Examples - **FEMA**)
 - c. Ask participants to remember a time when they experienced Slow Growth
 - i. What happened?
 - ii. Was the implementation successful?
 - iii. How did it feel?
- 5. Boot Strapping
 - a. Describe the situation? (What do the +s & -s mean)
 - b. Provide an example (see Momentum Examples - **One Hen**)
 - c. Ask participants to remember a time when they experienced Boot Strapping
 - i. What happened?
 - ii. Was the implementation successful?
 - iii. How did it feel?
- 6. Stagnation
 - a. Describe the situation? (What do the +s & -s mean)
 - b. Provide an example (see Momentum Examples - **SAAB**)
 - c. Ask participants to remember a time when they experienced Stagnation
 - i. What happened?
 - ii. Was the implementation successful?
 - iii. How did it feel?
- 7. Busy Work
 - a. Describe the situation? (What do the +s & -s mean)
 - b. Provide an example (see Momentum Examples - **Classroom**)
 - c. Ask participants to remember a time when they experienced Busy Work
 - i. What happened?
 - ii. Was the implementation successful?
 - iii. How did it feel?
- 8. Good Intentions
 - a. Describe the situation? (What do the +s & -s mean)
 - b. Provide an example (see Momentum Examples- **Wind Farm**)

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- c. Ask participants to remember a time when they experienced Good Intentions
 - i. What happened?
 - ii. Was the implementation successful?
 - iii. How did it feel?

- 9. No Momentum
 - a. Describe the situation? (What do the +s & -s mean)
 - b. Provide an example (see Momentum Examples – Monoline insurance industry)
 - c. Ask participants to remember a time when they experienced No Momentum
 - i. What happened?
 - ii. Was the implementation successful?
 - iii. How did it feel?

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Slide # 22 – Translating the Physics (Basic Strategies)

Translating the Physics
Strategy for Building Momentum

Building momentum via **RESOURCES**

- Add a force that attracts resources
- Remove a force that repels resources

Building momentum thru **SPEED**

- Apply a force to increase speed – increase effectiveness
- Remove a force that impedes speed – increase efficiency

Building momentum by focusing on **DIRECTION**

- Define your space
- Add forces that project you in the intended direction
- Remove forces that are project you in non-intended directions

Objective:

The purpose of this slide is to demonstrate the calculation of momentum using the example of the tennis ball.

Speaker: (Stavros Michailidis)

Speaking Points:

1. Remind the participants of the concept of Forces from the Physics portion of this workshop
2. All changes in momentum happen by adding or removing forces
3. Resources (introduce and elaborate)
 - a. Add a force – (like magnetism)
 - b. Remove a force – (like conflict)
4. Speed (introduce and elaborate)
 - a. Add a force – (increase effectiveness; training, technology)
 - b. Remove a force – (increase efficiency / reduce friction)
5. Direction (introduce and elaborate)
 - a. Define your Space (know where you are, where you want to go & where your current path is heading)
 - b. Add a force – (Find Intrinsic Motivation)
 - c. Remove a force – (Remove Extrinsic Constraints)

Slide # 23 – Make it Happen

“Make it Happen”

1. Select a partner to serve as your sounding board
2. A facilitated diagnoses of the situation using the Momentum Matrix
3. Formulate Tactics with your sounding board partner using momentum building strategies

Activity Purpose:

The purpose of this activity is to allow the participants to use the Momentum Framework to build momentum for a personal change initiative.

Facilitator: (Stavros

Michailidis)

Sounding Board Partner Alternate: (Don Drost)

Activity # 2

Activity Name: Make it Happen

Number of Participants:

- *(15 to 20) Fifteen to Twenty*
- *Grouped in pairs*

Time Required:

- *20-30 minutes*

Materials Needed:

- *Notepads*
- *Pencils*

Set up:

Ask participants to separate into small groups.

Instructions:

1. Inform the participants that you will be facilitating them through a brief session that will help them build momentum for a change initiative in their own lives.
2. Ask them to make a list of projects (or change initiatives) in their personal or professional lives that are currently in the process of being implemented or that they would like to start implementing soon. Ask them to include projects

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that seem to be moving along well and projects that seem to be experiencing problems. Prompt their thinking by making suggestions about where to look for ideas.

Example: Work, hobbies, at home projects, other goals...
(approximately 2 minutes)

3. Facilitate them thru narrowing down the choices on the list. Ask them to cross out any projects they are not interested in pursuing. Ask them to cross out any projects that they would not feel comfortable discussing with the group. Ask them to select from the remaining items the one that appears to be giving them the hardest time and that they are the most interested in making progress on.
4. Explain to the participants that you will ask a series of questions about resources, speed and direction. After each question you will allow a few moments for each partner to explore their issue using the other as a sounding board partner. Then they switch.
5. Begin by asking questions about adequacy of resources:
(Allow the participants several moments between sections.)
 - a. Do you have enough support for this project?
 - b. Is there any resource you need to implement this initiative?
 - c. Who or What can (or is) assist you in this project?
 - d. Who or What can (or is) resist you in this project?
 - e. Are there any forces that are inhibiting collaboration?
 - f. Are there any forces that are aiding in attracting resources?
6. Continue by asking questions about Speed:
 - a. How does progress feel? Fast, Slow, Overwhelming?
 - b. Is there a formal schedule?
 - c. Are you ahead or behind schedule?
 - d. Is there effectiveness?
 - e. Is there efficiency?
 - f. What forces are inhibiting speed?
 - g. What forces are or could accelerate speed?
7. Continue to Direction.
 - a. What is the goal?
 - b. Where are you relative to that goal?
 - c. Are your current actions getting you closer to the goal?

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- d. Which actions specifically are moving you toward the goal?
- e. Which actions are moving you away from the goal?
- f. What forces could propel you toward the goal?
- g. What forces are keeping you away from the goal?

Appendix

Slide # 24 – In Closing

In Closing...

Debrief Activity # 2

- What was your Challenge?
- What was your Diagnosis?
- How did you Build Momentum?

Questions & Answers and Feedback

Things to Come

- Metrics & Measurement
- Defining the Dimensions of Creative Space
- Case Studies & Pilot Studies

Objective:

The purpose of this slide is to initiate the conclusion of the workshop. Specifically, in this section, the participants will have the opportunity to review what they have learned by debriefing the second activity and asking questions of the presenters. Furthermore this slide

introduces topics of future investigation.

Speaker: (Stavros Michailidis)

Speaking Points:

1. Debrief Activity # 2
 - a. Ask multiple participants to volunteer individually and explain:
 - i. What their topic was
 - ii. What they learned
 - iii. What was helpful about the activity
 - iv. Their concerns about the activity and suggestions for how to overcome these concerns
 - v. How else they might use this framework
2. Give participants the opportunity to ask question and have them addressed by the presenters
3. Recap what has been discussed so far:
 - a. Momentum in Physics is $p=mv$
 - b. Momentum in Implementation is a function of RSD
 - c. Momentum Matrix as a diagnostic tool
 - d. Momentum Strategies as a way to build momentum
4. Review what was discussed at the workshop
 - a. Momentum in Physics, including a game that let the participants experiment with Mass, Speed and Direction
 - b. The translation of momentum into a framework for implementation
 - c. The Momentum Matrix as a diagnostic tool

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- d. Generic Strategies as a guideline for nurturing implementation
 - e. The opportunity to review a personal initiative through the lens of the Momentum Framework
5. A look at things to come
- a. Quantifying Momentum and establishing Metrics
 - b. Defining direction by defining the space in which implementation is occurring
 - c. Advanced strategies that involve simultaneously influencing multiple parts of the momentum framework
 - d. Transition to the next 3 slides that explain these topics further

Slide # 25 – Quantifying Momentum

**Improving Momentum Metrics to
better Quantify Momentum**

• How to

- Measure Resources?
- Measure Speed?
- Measure Direction?



Objective:

The purpose of this slide is to address the limitations of the current assessment metrics and the intention to improve the metrics moving forward.

Speaker: (Stavros Michailidis)

Speaking Points:

1. We affectively feel and understand momentum
 - a. We understand Chaos
 - b. We understand Stagnation
 - c. We understand Optimal Momentum...
2. Limitations of + / - System
3. Discussion with participants (ie. ask for ideas) on how to assess:
 - a. Resources
 - b. Speed
 - c. Direction

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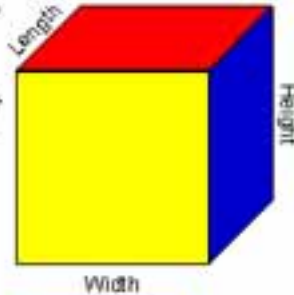
Slide # 26 – Defining Implementation Space

Objective:

The purpose of this slide is to address the need to define the space in which implementation takes place.

Defining the Space of Innovation

- Length x Width x Height (x Time)
- Example – Latitude, Longitude, Altitude
- Artificial Grid for Easy Navigation
- What are the 3 Dimensions of?
- How to Navigate this space?
- Defining a Position in this space?
- Defining distance in this space?



Speaker: (Stavros Michailidis)

Speaking Points:

1. We can navigate physical space well because we understand it and have defined it.
 - a. Length, Width & Height (such as Latitude, Longitude and Altitude) create an artificial grid that let us be very specific about physical space
 - b. There is a need for this in implementation space as well, so we can:
 - i. Specify where we are
 - ii. Plot where we want to go
 - iii. Measure the distance between two points
2. Ask the participants for their feedback and ideas

Slide # 27 – Advanced Strategies

Developing Advanced Strategies



Objective:

The purpose of this slide is to discuss advanced strategies for nurturing momentum.

Speaker: (Stavros Michailidis)

Speaking Points:

1. There are strategies that involve multiple components of the momentum framework
 - a. Resources and Direction
 - i. Creating gravity & bending space by amassing lots of resources in a single location. Ex – Attracting resources to a cause that is well accepted.
 - b. Direction and Speed
 - i. Reducing friction in a specific direction to increase speed towards that direction. Ex – government funding for green initiatives.
 - c. Speed and Resources
 - i. Going faster by changing the shape of your resources to decrease friction. Ex – converting underutilized resources to cash.

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Slide # 28 – Thank you

Objective:

The purpose of this slide is to conclude the workshop.

Thank You

Speaker: (Stavros Michailidis)

Speaking Points:

1. State that the workshop has concluded
2. Thank the participants and the co-presenter
3. Invite people to exchange contact information

Appendix

Slide # 29 – References

References

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Giancoli, D.C. (2008). Physics:
principals with applications. New
York, NY :Pearson Prentice Hall

Objective:

The purpose of this slide is to acknowledge the references used in the presentation.

Speaker: (Stavros Michailidis)

Speaking Points: (None)

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