HOW TO THINK LIKE AN ENTREPRENEUR:
RECOGNIZING OPPORTUNITIES FOR IT TRANSFORMATION

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Introduction

In general, technology has been viewed as trending towards commoditization and more widely available for purchase. Simple example include the purchase of a FC Switch, organizations can directly purchase from a vendor online. With organizations becoming more knowledgeable about technology, they begin to become more capable at self-prescribing technology solutions and specifications for their business problems or acquire technology that can provide such capability. However, technology business decision-makers should proceed with caution; although acquisition of technology is increasingly less expensive, the strategic business value is a result of the organizational business practices which are enabled by the implemented technology. Individuals and teams within organizations that can create economic value from IT innovation implementation are in short supply, and the competitive advantage in the market is developed by those organizations who continuously innovate alongside the pace of incremental shifts of technology capabilities.

The IT management mindset for strategic advantage in the early 2000's was captured in an influential article published by the Harvard Business Review titled "IT Doesn't Matter" (Carr 2003). Summarizing the guidelines, the author suggested that companies should a) spend less, b) follow, don't lead, and c) focus on vulnerabilities, not opportunities. Essentially, prescribe a defensive IT management approach by monitoring economic costs and avoiding risk. Although IT organizations have been the darling of CFO's for over a decade by leading productivity, driving efficiencies, and doing more with less, businesses are increasingly turning to IT organizations to drive innovation as a source of competitive advantage.

While innovation is required for organizations to create economic value, IT organizations are being overlooked as drivers of innovation. The *InformationWeek* 2012 IT Perception Survey (Lundquist 2012) sampled 382 business technology decision-makers and found that that most business professionals (non-IT) consider their IT teams as a support or maintenance organization rather than enablers for innovation. Most organizations do not currently help IT professionals develop the skills to aid innovation. Yet, they believe the value of technology is needed more than ever to achieve strategic advantage in their markets. What can EMC Proven Professionals do to kickstart the innovation engine in their IT organizations? They must begin with recognizing opportunities for IT Transformation.

This article will not to dive into financial metrics (NPV, ROI, TCO) that would convincingly influence the decision to acquire technology for transformation impact, nor will the it outline a

business plan that supports solution fit within the organization's strategy and structure. Not to devalue their importance, but there are thousands of references that can be better suited for those interested in these general business topics. This article focuses on the role of the EMC Proven Professional as an agent for IT Transformation, how they can better develop an entrepreneurial mindset toward recognizing IT Transformation opportunities, and lead effective transformation implementation within their organizations.

The article suggests a strategy for understanding the stakeholders within and external to the organization that will help guide transformation within the organization and realize benefits.

The EMC Proven Professional will be better able to:

- Understand how shifts and changes within the organization's external environment influences opportunities for IT Transformation.
- Recognize their inherent and valuable knowledge of target users as their customers, and how to satisfy business needs.
- Develop skill set for using pattern recognition to aid in opportunity recognition.
- Champion Transformation opportunities within the organization by developing an opportunity realization plan and building business partner relationships.

What Does Entrepreneurship Mean? Why does it Matter to IT Organizations?

Organizations across industries are looking for IT heroes to initiate and implement innovation within their organizations. But how does innovation activity begin? One of the most influential innovation-based economists of the 20th century, Joseph Schumpeter, points out that entrepreneurship is the source of innovation (Schumpeter 1942). Further, in order to conduct entrepreneurial activity, opportunities are the first thing that individuals must be able to recognize (Shane and Venkataraman, The promise of entrepreneurship as a field of research 2000). If IT organizations are to become a source of innovation, we have to become better at recognizing opportunities for IT Transformation.

The different views of entrepreneurship have been defined many ways. This article adopts the opportunity-discovery view of entrepreneurship based on seminal entrepreneurship theory and research. Shane and Venkataraman (2000) and Venkataraman (1997) define entrepreneurship as "an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organizing markets, processes, and raw materials

through organization efforts that previously had not existed". The context or settings for which such entrepreneurship activities occur is unlimited. As an example, academic entrepreneurship focuses on commercializing opportunities from university faculty research and technology transfer of intellectual property (licensing, startup companies). Meanwhile, corporate entrepreneurship, or intrapreneurship, suggests that entrepreneurship behavior remains an activity of large established firms as the means for developing new products or services to market. Regardless of the setting, the core of entrepreneurship is that it exists at the nexus of an individual and opportunity.

Entrepreneurship activity can be demonstrated within IT. The same leadership capabilities and innovation mindsets that business entrepreneurs share, their capability to marshal resources to create value in the marketplace, exists within IT organizations. Within IT however, the business opportunity takes a different form. It is common to think that external environment changes in technology, government, regulation, and industry open market opportunities for startup companies to be formed and provide a new product or service that address customer needs, either current or anticipated.

These same external environment shifts and changes are the source for IT Transformation opportunities. IT Transformational opportunities are presented when an individual (business professional or IT professional) recognizes that a new IT service, or modification of existing IT services, can satisfy customer needs better than is currently being done, with the capacity to generate economic value – profit. Opportunity recognition is the cognitive process through which individuals conclude that they have identified an opportunity. This is the initial step in a continuing entrepreneurship process and distinct from detailed evaluation of feasibility of the economic value, and the activity involved in exploiting opportunity. (Ardichvili, Cardozo and Ray 2003)

Similar to previous EMC Knowledge Sharing articles, and EMC white papers (EMC Corporation 2008) (Llano, et al. 2012), this article adopts IT Transformation as an innovation program (collection of projects and initiatives yielding desired business benefits) for IT organizations transitioning from being perceived as cost centers, support, and maintenance departments by the business, to being recognized as an economic value generator and IT service provider for their business. IT Transformation is not about technology alone, but the impact technology has in influencing people- and process-related business practices. IT Transformation impacts the end user experience by means of infrastructure and applications. In order to execute IT

Transformation, EMC Proven Professionals need to understand the sources of IT Transformation opportunities in order to best recognize them.

The EMC Proven Professional as an agent for Entrepreneurship

Not all IT professionals in industry recognize opportunity the same way. Entrepreneurship requires variance among individuals, meaning that various people have access to different sources of information in the environment, and they each cognitively process information (learn) in a different manner (Corbett 2005). Some people recognize opportunities better than others because of different access to resources or information, and prior knowledge and experience. Given that EMC Proven Professionals operate closely with their end-users of IT services, and are essentially in the trenches of providing, and implementing those services, it is reasonable to conclude that they have access to knowledge that not many in their organization or industries have. It stands to reason that individuals not exposed to such sources of opportunity would less able to cognitively recognize IT Transformation type of opportunities.

IT organizations across industries find themselves competing for business with external service providers. These forces are influencing how IT internal organizations deliver IT services, and their ability to demonstrate effectiveness, and business relevancy and value. This demand for change is influencing internal IT organizations to think and become organized as service providers. The EMC Proven Professional can be an agent for entrepreneurship and innovation behavior, specifically recognizing, evaluating, and exploiting opportunities for transformation in their IT organizations. Given their relative access to their business end users, and consumers of the services IT organizations provide, EMC Proven Professionals are at the heart of IT Transformation and are in best position to recognize IT Transformation opportunities.

Changes in External Environment Creates Opportunity

Entrepreneurial opportunities exist due to shifts in technology, political activity, regulatory standards, social and demographic changes, and changes in industry structure. These environment changes that are external to the organization influence the need for firms to innovate and maintain competitiveness and value in their markets. With the developing trends in IT consumption by organizations extending business and communication services to their organizations (Wood, Hewlin and Lah 2011), IT departments find themselves competing with service providers to meet the needs of business leaders who are looking for capabilities that may not be able to be provided by their internal IT. As a consequence, these forces are influencing IT and business leaders to reconsider existing IT service portfolios, innovate, and

demonstrate operational and strategic relevance to the business. Consequently, entrepreneurial mindset and leadership has never been more important to a firm's competitive advantage than it is today.

The external environment has direct influence on every organization. It is important to understand how these changes influence various departments. For example, industry is observing that external environment changes are significantly impacting marketing function across organizations in every vertical. The agenda for Forrester's Marketing Leadership Forum 2012 (Forrester Research 2012) suggests that although marketing business professionals know their craft, their performance is relying more heavily on technology that will deliver business benefits. Changes in technology and markets are influencing how transactional customer feedback is captured and analyzed to help make real-time decisions that impact customers. In general, marketing professionals lack the technology background needed to develop the roadmap needed to support their organization (Friedenberg 2012). By the EMC Proven Professional becoming more cognizant of changes in external environment forces on their organizations and target users of their general IT services (i.e. marketing automation, web development, business intelligence and analytics, and social tools) they are in better position to recognize transformation opportunity and lead its effective implementation realizing anticipated business benefits.

The two most important forces for an EMC Proven Professional to master are the development and changes in technology in the market, as well as knowledge of the customer. To stay current on changes and trends, published industry reports such as "Managing Storage: Trends, Challenges, and Options (2012-2013)" (Shrivastava and Gnanasundaram 2012) extend tremendous insight for Proven Professionals on the current state of technology and impact of Transformation enablers such as virtualization and cloud computing. Another interesting source for technology changes in the environment is to get a pulse on new venture community and acquisitions in IT industry. These firms recognize technology opportunity in the market and they propose solutions that anticipate customer need. They are executing on solution opportunities that have real business needs through different ways than the current marketplace is providing. They are likely seeing the environment market trends and direction of organizations five years out.

Important questions to consider about the organization and external environment forces:

- How is my organization currently impacted to change by the external environment?
    - Are there new industry regulations? Loss of market position? Are business customer needs changing?
- How is my organization responding to changes in the external environment?
    - Has there been change in leadership or strategy in the organization?

Knowledge of End User Needs Shape Valuable IT Transformation Opportunities

Environment changes and their implications to the business are important for EMC Proven Professionals to understand so that IT Transformation opportunities can be discovered. However, within the context of IT Transformation, an equally significant factor in recognizing opportunity is knowledge of your customer, in the case of IT Transformation the business users that consume organizational IT services. The difference between a business idea and a business opportunity is understanding the value the service will bring to fit the needs of your customer. Although environment changes lead to emergence of entrepreneurial opportunities, not all individuals are able to recognize them. The process of recognizing opportunities is a function of an individual's willingness to search for them (Venkataraman 1997), knowledge of technology, customer problems, and ways to serve customers. (Shane 2005)

EMC Proven Professionals are more likely to have access to, and an understanding of, end user needs better than other agents of the business. It is often the case that end users have a problem, pain point, or issue that prevents effective productivity of the value for which they are accountable. More so, end users realize that they can be more effective if a valuable capability or feature can be created. It is important for the Proven Professional to understand that incremental improvements to existing IT services is a more straightforward activity than evaluating end user preferences for transformational opportunities.

Proven Professionals should be aware of how their target user groups adopt innovation. Despite for how long transformational technologies have existed in the market, end user groups within organizations may not readily comprehend how it satisfies their problems, or realize business capability. The agent for change and IT Transformation within the organization needs to understand the context that the IT service will be used so that good "fit" with end users is understood. Knowledge of end user business problems and desired capabilities is a requirement for an individual to recognize IT Transformation opportunity. EMC Proven

Professionals are in a unique position in the organization because of their access to the end user, knowledge of their problems, desired capabilities, target user adoption behavior, and ability to effectively implement IT transformation that meets their needs.

Entrepreneurship research suggests that prior knowledge of customer needs and ways to meet them enhances an entrepreneurs' ability to provide innovative solutions to these problems. Consider these questions when conversing with your customers.

What are your customer's perceptions of existing IT services?

- Over the course of discussions with your end users, or your customers, are they satisfied with the status quo IT services being provided?
- Where are your customer's expectations and perceptions of IT services falling short?
- Are your customers content with IT initiatives and workarounds that have been conducted and executed in the past?

How well would your target user groups receive IT transformation initiatives?

- Do they openly share best practices?
- Would their group learning orientation foster adopting innovation and change?
- Are they engaged in productive dialogue if assumptions are challenged?
- Are they knowledgeable / attentive to external environment benchmarks and trends?

Finding the Gap: Using Pattern Recognition to Recognize Opportunity

The core of opportunity recognition is to find the gap between the anticipated benefits, current state problem, or desired business capability, and the end state realization of those benefits, solutions, and capabilities. This is a classic IT / business problem that occurs in every organization. The probability of success for exploiting the opportunity would be determined by decreasing the level of uncertainty involved in achieving the end state. Let's consider Figure 1 below. Two components are displayed; the first component is knowledge of current state problem, anticipated benefits, and desired business capabilities. The second component are uncertain conditions over time would only dictate that benefits were realized, capabilities developed, and problem resolved. The gap between these two states is the opportunity.
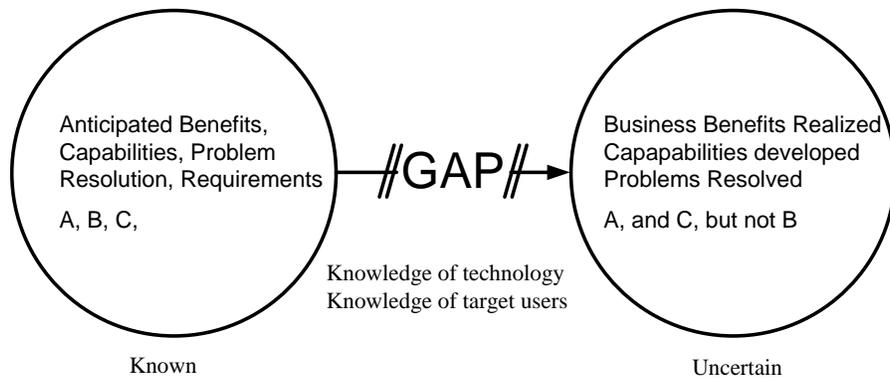
Figure 1: Finding the gap to recognize opportunity

Recognizing that the gap exists and the means to successfully realize the end state would only come from purposeful knowledge acquisition, having access to information, and the learning ability that occurs by individuals or groups by processing that information makes opportunity recognition possible.

Those who may not be as keen to recognize opportunities are satisfied with status quo means of IT services being delivered, as well as the relative dissatisfaction of customer needs not being addressed nor capabilities being developed. Of the external environment forces, this article suggests that although an understanding of all of them is important, EMC Proven Professionals should be most knowledgeable of technology advances in the market, and knowledgeable of their target end user groups (customers) who consume their IT services (their problems, pain points, desired features, capabilities and priorities). This will help recognize opportunities for IT Transformation and lead innovation.

To better illustrate the model, consider a firm that internally developed a business concept using IT services to create an organizational capability. Initially the business concept is anticipated to address needs A, B, and C. It happens too often that problems A and C were addressed, but the solution did not address problem B. Worse yet, the possibility of other problems surface that were unknown at the time the solution was crafted, creating 'new problem D'. You can substitute "Problems A, B, and C" in the general model for pain points, desired features, or capabilities. The gap exists because of lack of technology knowledge, or insufficient knowledge about the target user groups. However, uncertainty decreases and probability of success increases by EMC Proven Professionals becoming more cognizant of these opportunities and leveraging their knowledge of technology advances and their customer user groups. As a result, they are better at anticipating the unknowns and recognizing the gaps that need to be filled so that organizational benefits are realized.

It is likely that the needs are already perceived to be known by stakeholders in the organization. The benefit of the EMC Proven Professional and their contribution is to provide visibility, to help recognize the unknown needs, and communicate an awareness of them. EMC Proven Professionals will be better able to contribute to recognizing opportunities by developing pattern recognition abilities as a form of processing information about their environment, technology, and needs of their target user group customers. The next section draws from pattern recognition frameworks as the means for explaining why some stakeholders and not others are able to recognize these opportunities.

Most attention within entrepreneurship theory research has extended influence of opportunity recognition based on three important attributes: individuals are actively engaged in searching for opportunities; individuals are alert to recognizing opportunity when they become known; and they have prior knowledge of market, industry, or customers. Management research suggests that pattern recognition integrates these attributes and helps entrepreneurs become more proficient at discovering opportunities (Baron 2006).

Pattern recognition is the cognitive process where an individual perceives complex and seemingly unrelated events, trends, and changes as constituting identifiable patterns (Shane 2000). Two models of suggested pattern recognition that individuals employ are prototype models and exemplar models (Baron 2006). A summary is provided here of these models, but the reference articles can be reviewed for more detailed explanation. The prototype model for pattern recognition suggests that "prototypes are idealized representations of the most typical members of a category (a class of objects or events that seem to belong together)…newly encountered events or trends are compared with existing prototypes to determine whether they belong to specific categories or can be seen as being connected in some manner." (Baron 2006, 109). Essentially, an individual would reference the most typical pattern when observing unrelated events or changes in environment. The second model of pattern recognition is the exemplar model. In contrast to the prototype model, where the most typical or idealized pattern is observed, the exemplar model draws from an individual's specific knowledge. Exemplar models "suggest that as individuals encounter new events or stimuli, they compare them with specific examples (exemplars) of relevant concepts" (Baron 2006, 109).

There is no one model better than the other for opportunity recognition. Their relevance to this article is to recognize that individuals employ various cognitive processes that may lead some stakeholders to recognize opportunities and not others. It is very possible that opportunity is not

recognized within an organization because the dominant pattern recognition of the group is adopting a prototype modeling approach. However, an individual adopting an exemplar model would reference a one-time experience or encountered event that permits the opportunity to be immediately recognized that others may not have been able to connect. Complex processing would have to have been derived for those adopting the prototype model of pattern recognition to arrive at a similar connection.

The relevance of pattern recognition models to recognizing IT Transformation opportunities will be better illustrated following the introduction of Venn diagram innovation.

Using Venn Diagrams to Map IT Transformation Opportunities

Venn Diagram Innovation is a great visual diagram technique to aid in IT Transformation opportunity recognition. Stephen Todd introduced this concept and its utility to assisting product innovation (Todd 2009). This technique begins with outlining two known components, coupled by a third unknown component. Todd labels these components as the customer sphere, the sphere of expertise, and an adjacent sphere. "Innovation occurs when one successfully combines the three spheres in such a way as to create an overlap that uniquely solves a customer problem." (Todd 2009, 24). This diagram technique would hold valid with implications for recognizing IT Transformation opportunities. Todd outlines the utility of the technique and examples for when the spheres of expertise and adjacent technologies are known, yet the customer needs are unknown (Blue Sky Innovation), as well as when spheres of expertise and customer needs are known, yet adjacent technology is unknown (Customer Need Innovation).

Although the Venn diagram innovation technique is demonstrated within the context setting of high-technology product innovation, the principles have relevance for adoption within an IT services innovation setting. In Figure 2, the IT services knowledge of EMC Proven Professionals are bounded by the Sphere of Service Expertise. The Sphere of Adjacent Services is the general sphere for considering cloud, virtualization, IT as a service, and big data analytics. IT Transformation opportunity is recognized when the combination of spheres realize development of business benefits. The purpose of developing visual representation of opportunity in terms of knowns, needs, and unknowns, assumes more importance as a catalyst for collaboration than the diagram itself.
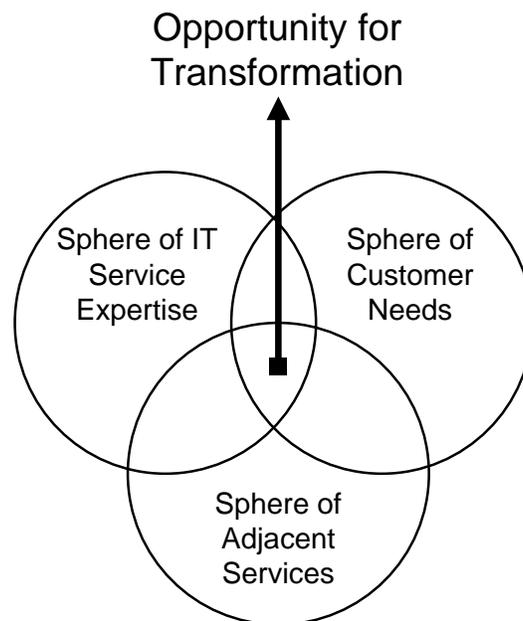
Figure 2: Venn diagram innovation for recognizing transformation opportunity. Adopted from Todd (2009)

Integrating Pattern Recognition

When two of three spheres are known, and the third is unknown, EMC Proven Professionals should lean on pattern recognition models to facilitate opportunity recognition. It doesn't matter which model the EMC Proven Professional adopts, each has its strengths. What is more important is realizing that not every stakeholder will see the connection equally. Given their access and knowledge of the target users and technology, the EMC Proven Professional would arguably have better ability to exercise exemplar pattern recognition when compared to other IT professionals. If exemplar models don't hold utility reference—perhaps because the agent has limited prior knowledge or experience—the agent should be cognizant enough to realize what they don't know. They would better understand what questions to ask and seek guidance from someone who does. Otherwise, it would be sensible to begin with prototype modeling and, after enough experience, exemplar models would emerge.

Championing the Transformation Opportunity

Developing the Opportunity Realization Plan

The most important part of recognizing the opportunity for IT Transformation is to understand the business benefits that are expected to be realized. Organizational benefits have typically been communicated in terms of cost efficiencies and process automation. However, example

benefits framework for transformation opportunities should be tailored around how the innovation will enable the organization to:

- drive business growth
- increase speed to market
- improve productivity
- enable faster decision making
- improve service levels
- secure enterprise data
- increase agility

When thinking of the opportunity, consider the staffing and skill sets challenges with regard to IT operations. Find ways to influence implementing innovation in months, not years. As a champion for transformation, you want to demonstrate favorable examples and set expectations that a phased approach to transformation is preferred over the big-bang change. As a part of the plan for transformation, you should include the means for experimenting with the opportunity. Look to leverage internal resources to test use cases, and also consider reaching out to external business partners to perhaps leverage their labs.

Developing Opportunity Building Relationships

When the Proven Professional realizes that they have recognized valuable opportunity for IT Transformation that satisfies an end user need, or solves a problem, interest in the solution and the business benefits needs to be heralded by key organizational stakeholders. An understanding of the process of promoting the solution is required in order to allow the opportunity to progress from recognition to evaluation, and gaining social awareness and support.

Although knowing how to promote is important, even more important is to know whom to promote the solution to within the organization. A fantastic practitioner-based article was published in the Harvard Business Review, titled "The End of Solution Sales" (Adamson, Dixon and Toman 2012). While the article was written for sales professionals that provide solutions to businesses, the advice on identifying stakeholders within organizations holds true for EMC Proven Professionals who are actively looking to recognize IT Transformation opportunities and lead innovation within their organizations. As you come to understand your target users across business divisions, take note of these critical stakeholder profiles. Some may more favorably influence innovation activity than others (Adamson, Dixon and Toman 2012, 65):

1. **Go-Getters** Motivated by organizational improvement and constantly looking for good ideas, Go-Getters champion action around great insights wherever they find them.
2. **Teachers** Passionate about sharing insights, Teachers are sought out by colleagues for their input. They're especially good at persuading others to take a specific course of action.
3. **Skeptics** Wary of large, complicated projects, Skeptics push back on almost everything. Even when championing a new idea, they counsel careful, measured implementation.
4. **Guides** Willing to share the organization's latest gossip, Guides furnish information that's typically unavailable to outsiders.
5. **Friends** Just as nice as the name suggests, Friends are readily accessible and will happily help you network with other stakeholders in the organization.
6. **Climbers** Focused primarily on personal gain, Climbers back projects that will raise their own profiles, and they expect to be rewarded when those projects succeed.
7. **Blockers** Perhaps better described as "anti-stakeholders," Blockers are strongly oriented toward the status quo.

The takeaway for the EMC Proven Professional is that these stakeholder profiles have no association to which function/role/title the individual has within the organization. Agents that are actively seeking to recognize and execute IT Transformation in their organization should focus their relationship building with those stakeholders which can influence consensus for Transformation.

The allies for Transformation will be clustered around the Go-getters, Teachers, and Skeptics profiles within the organization. The article considers them "Mobilizers" who would help drive opportunity realization. During your opportunity building relationships ask your Mobilizers if they would mind sponsoring a meeting with their higher-level manager to see if they are interested in the opportunities being discussed.

Although Guides, Friends, Climbers, and Blockers are not grouped as Mobilizers, that does not mean their relationships lack significance. These stakeholder profiles are a great source of information, but just unlikely to build consensus needed to drive effective Transformation. Figure 3 is adopted from the HBR article and is displayed here to better understand how to identify them in your organization.

Gauge Stakeholder's response to IT Transformation Opportunity

Healthy Skepticism Do they engage with the idea, asking hard questions?

YES → **Interested in Greater Good** Is their priority the organization ("We") or themselves ("Me")?

NO → **Do they share useful information?**

"WE" → **Communication Style** Do they speak in terms of facts and tasks or of stories and opinions?

FACTS & TASKS → Go-Getter

STORIES & OPINIONS → Teacher

Skeptic

MOBILIZERS

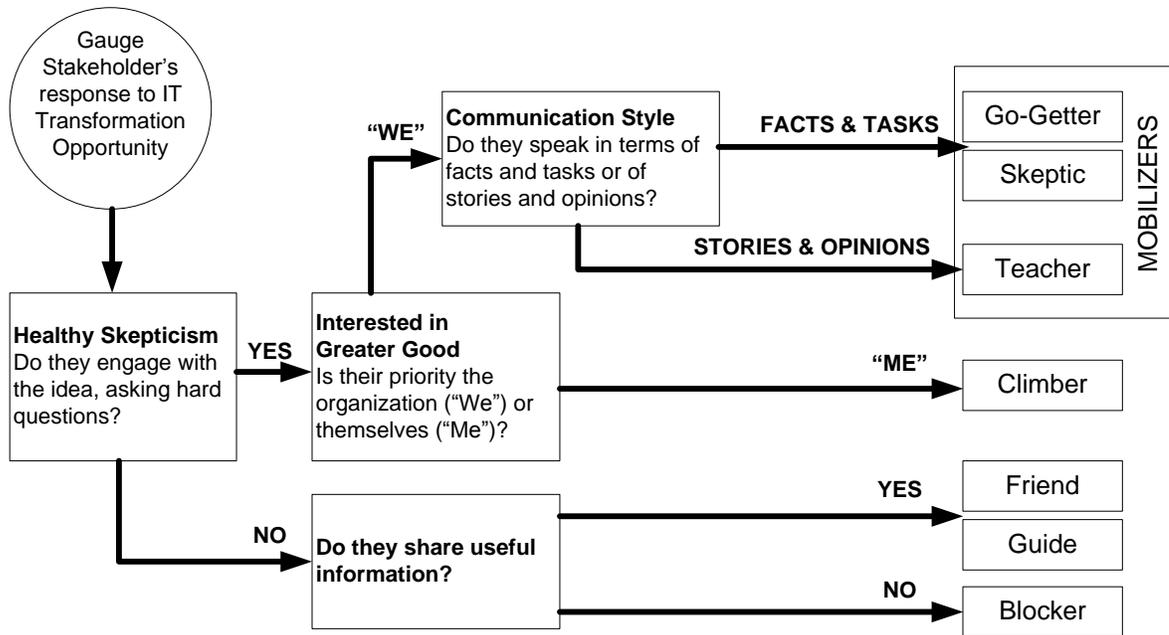"ME" → Climber

YES → Friend

Guide

NO → Blocker

Figure 3: Recognizing Stakeholder Profiles. Adapted from (Adamson, Dixon and Toman 2012, 66)

Agents for innovation within organizations should continuously develop opportunity-building relationships with stakeholders. There is no better complement that your internal customers expressing when they value you as a trusted business partner. In every interaction with stakeholders, you should engage in entrepreneurial conversation (Rogoff, Corbett and Moffitt 2005) by following these three components:

1. **Think** about your stakeholder's priority and goals more than yours and understand what issues and topics are important to them.
2. **Listen** and ask thoughtful questions. Uncover mutual purpose and beneficial goals. Understand the feedback they are providing, with regard to problems and desired capabilities. This is a valuable source for learning what areas need better integration and is the most influential part of recognizing opportunities for IT transformation.
3. **Speak** effectively about your ideas and be honest about your skills and commitment to long-term relationships.

The goal is not necessarily the successful realization of one opportunity. That will come with time, and there will be many people involved for it to be executed. The goal is to establish long-term, mutually beneficial business partner relationships where innovation has the ability to grow and become a continuous part of the overall organization. As a result, your communication skills will have improved and you become better connected as an agent for transformation with the

business. Don't become discouraged that opportunities aren't getting traction. Not every opportunity will come to fruition, but the experience you gain in evaluating and exploiting opportunities will better develop your entrepreneurial skill and influence your ability to recognize future opportunities. In the process, you will be a better Proven Professional as an entrepreneurial agent and better able to lead your IT organization to Transformation.

Conclusion and Contributions

There is a profound need of business professionals for IT organizations to jumpstart their innovation capacity. The source of innovation begins with recognizing opportunity. After a decade of IT organizations focusing more on vulnerabilities than opportunities, they find themselves competing with external service providers. Existing frameworks fall short for skill development in recognizing transformation opportunities and exploiting those opportunities.

This Knowledge Sharing article offers a roadmap that leads EMC Proven Professionals to recognizing opportunities for Transformation. The paper outlines how shifts and changes in external environments create opportunities for IT Transformation. EMC Proven Professionals have valuable knowledge of target users as their customers and, consequently, know how to satisfy their business needs. Pattern recognition skill set can be developed to aid in opportunity recognition. Further, upon recognizing opportunity, suggestions for championing Transformation within the organization by developing opportunity building relationships are summarized. Not only would EMC Proven Professionals be better able to recognize opportunities, but also have the ability to develop a cogent plan and take action.

Contributions to EMC Proven Professional Body of Knowledge

This EMC Knowledge Sharing article is essentially a pivot of existing management research and practitioner knowledge of entrepreneurship and opportunity recognition aimed specifically to benefit the development of IT professionals, resulting in them becoming an initiator of innovation within their organizations. From the entrepreneurship theory and research, the article focuses on identification of specific opportunities within IT organizations to transform how they provide services to their business users and extend value to business customers.

The pivot from entrepreneurship theory suggests that instead of providing a new product or service to businesses or markets for consumption, entrepreneurship principles are drawn on to provide perspective for the EMC Proven Professional in terms of providing IT services to their target end user customers at a group level within the organization. By providing this view at the

end-user group level within the organization, opportunities for transformation are immediately in position to continue toward effective transformation implementation.

From management practitioner literature, the Harvard Business Review article originally aimed to focus on extending "insight solution selling" from a vendor-to-customer perspective. This Knowledge Sharing article builds on the HBR article's message to enlighten EMC Proven Professionals with a better understanding of the value that the Mobilizing agent can have on developing Transformation opportunities within organizations. This change agent is attracted to financial improvements, organizational efficiencies, and business revenue drivers achieved through innovation. The Mobilizing agent is motivated by constantly improving the organization and is an initiator of recognizing IT Transformation opportunities. Upon recognizing this stakeholder in the organization, the EMC Proven Professional should build a collaborative partnership with the Mobilizing agent and together, actively search for the means to realize transformation benefits for the organization.

IT professionals are of significant value to their firm when they openly share their insights. Being a facilitator in recognizing, evaluating, and exploiting transformation opportunity is a sought after skill that not many IT professionals have. Advice from a transformation agent of the firm is important for validating the known requirements of solutions and their opinions of the unknowns are critical in effectively realizing the business benefits. Most importantly, EMC Proven Professionals realize that they should adopt the role of constructive skeptic during the course of recognizing and evaluating opportunities. Whether the IT professional is the opportunity champion or part of the team evaluating opportunity, they should be cognizant of understanding perceived benefits being expected by end users and the business, and exercise a critical thinking approach to asking the tough questions and testing assumptions. Questioning the technology means for realizing end-state transformation improves the validity of realizing business benefits, either addressing business needs, addressing the problem, or developing the desired business capability. These are stakeholder profiles which the Proven Professional is advised to develop business partner relationships with.

Second, this article adopts the Venn Diagram Innovation technique as a means to illustrate how opportunities for transformation are recognized at the intersection of spheres of IT service expertise, customer need, and adjacent IT services. This extends the ability of the technique to be generalized to illustrate opportunity beyond product innovation and to include IT service innovation.

Finally, this article builds on previous Knowledge Sharing art9icles as it relates to implementing effective transformation. The human factor was a significant enabler that facilitated effective IT Transformation. Even so, for effective IT Transformation to take place, organizations require the combination of technology innovation, a strong climate for transformation, and good transformation-values fit perceived by target user groups within the client organization. Very few client organizations fit this optimal condition. The primary assumption—and limitation—of the article is the pre-existing condition of the organization's decision to adopt technology innovation and its implementation. This article recognizes the value that entrepreneurship theory has on influencing the organization's IT Transformation decision. EMC Proven Professionals within organizations that have weak climates for transformation require knowledge of the entrepreneurial process and behavior in order to hurdle organizational support challenges and influence IT Transformation and business decision to adopt IT innovation.

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