

# Encyclopedia of E-Business Development and Management in the Global Economy

In Lee  
*Western Illinois University, USA*

Volume II

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Printed at: Yurchak Printing Inc.

Published in the United States of America by  
Business Science Reference (an imprint of IGI Global)  
701 E. Chocolate Avenue  
Hershey PA 17033  
Tel: 717-533-8845  
Fax: 717-533-8661  
E-mail: [cust@igi-global.com](mailto:cust@igi-global.com)  
Web site: <http://www.igi-global.com/reference>

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#### Library of Congress Cataloging-in-Publication Data

Encyclopedia of e-business development and management in the global economy / In Lee, editor.  
p. cm.

Includes bibliographical references and index.

Summary: "This research book is a repository for academicians, researchers, and industry practitioners to share and exchange their research ideas, theories, and practical experiences, discuss challenges and opportunities, and present tools and techniques in all aspects of e-business development and management in the digital economy"--Provided by publisher.

ISBN 978-1-61520-611-7 (hardcover) -- ISBN 978-1-61520-612-4 (ebook) 1.  
Electronic commerce. 2. Electronic commerce--Management. I. Lee, In, 1958-  
HF5548.32.E518 2010  
658.8'7203--dc22

2009036871

#### British Cataloguing in Publication Data

A Cataloguing in Publication record for this book is available from the British Library.

All work contributed to this book is new, previously-unpublished material. The views expressed in this book are those of the authors, but not necessarily of the publisher.

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## Chapter 48

# Teams of Leaders Concept (ToL) and E-Business Operations

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### GLOBALIZATION 3.0

Information Technology (IT), and the subsequent broad acceptance of Information and Knowledge Management (IM/KM) methods revolutionized the way business is thought of and practiced. With e-business facilitating the ability to do more, more, faster, at a wider range, and to influence ever larger and more diverse consumer groups, the impact of technology on commerce, finance, and global economy has been frequently compared to the “paradigm shift” that Kuhn (1970) proposed as the essence of scientific revolution. Yet, despite the transformational influence of modernity on the ancient art, the fundamental principles of business have not changed: overreliance on the *facilitation* of business operations as the substitution for the adherence to the *soundness* of their conduct fuelled

rampant growth of corporate *laissez faire*, and already twice brought the world to the brink of economic disaster (Stiglitz, 2003; Steingart, 2008).

Ultimately, a new realization begins to emerge: e-business makes cut-throat competition, winning at any price, and “devil take the hindmost” philosophy (Chancellor, 1999) not only obsolete but perceived by the increasing number of business leaders as harmful if not even dangerous (e.g., Greenwald and Kahn, 2005; Mittlestaedt, 2005; Prahalad and Ramaswamy, 2004). Instead, the notion that “we are in this boat together” is gaining an ever wider acceptance: under the influence of technology the world has, indeed, changed (e.g., Canton, 2006). It started to converge, and now some even conceive it as “flat” (Friedman, 2005.) In reality, the world is probably not “flat” but far more three-dimensional and textured than it has ever been before. Technology converted point to point interactions into a complex set of relations that, based on networks

DOI: 10.4018/978-1-61520-611-7.ch048



where knowledge is the most sought commodity (Wickramasinghe and von Lubitz, 2008), and we now live embedded in a rapidly evolving, globe-spanning mesh of a “network of networks” (von Lubitz, 2009; see fig. 1). Simultaneously with the development of new technology-based transaction platforms, another major technology-facilitated transformation began to occur: subtly, but with an ever increasing force, business interactions begun to move away from the traditional concept of ownership and its transfer as the basis of transaction between firms, firms and their customers, and even among customers themselves. Instead, *access* to goods and services among organizations became the increasingly prominent form, and Friedman’s era of Globalization 3.0 (Friedman, 2005) became synonymous with Rifkin’s “Age of Access” (Rifkin, 2003). Individuals rather than state and corporate bureaucracies acquired unprecedented power, and started to actively shape the world. In contrast to the first and second stage of Globalization, the process of change altered its direction, the flow now moving upward, from the bottom up, instead of hierarchically sanctified top-down descent of orders, commands, and directives. The boost for the change was provided by the intensification of horizontal exchanges conducted across boundaries of time, space, and specialization among individuals and groups of increasingly diverse character. Technology not only altered the way we do business but caused a fundamental transformation in the way we think about business. While Globalization 2.0 (Friedman, 2005) had the characteristics of Kuhnian “paradigm shift” (Kuhn, 1970), the forces that induced Globalization 3.0 induced *business mutagenesis* – a permanent alteration in the hitherto immutable “genetic” structure of the organism.

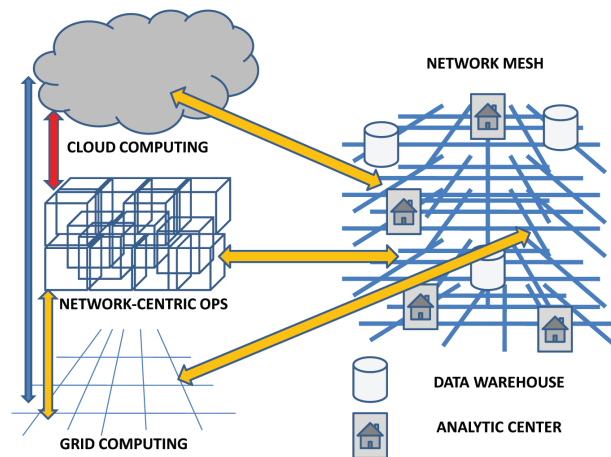
## **THE CONSEQUENCES OF CHANGE**

While transformation in global relations that Friedman (2005) termed as Globalization 1.0 and

2.0 took place over approximately 200 years, the second stage—Globalization 3.0—occurred within less than ten, at a pace unprecedented in the history of humanity. The new political and economic realities of the “global world” (Haas, 2005; Sachs, 2005) provided fertile ground for the development of new customer- and knowledge-driven concepts of doing business (Wickramasinghe and von Lubitz, 2008) conducted by the growing number of learning organizations (Senge, 1990) able to both understand better and respond with a much greater agility to the shifting demands of markets. The concomitant intensification of consumer-generated pressures altered the nature of competition: “the hunter became the hunted” (Prahalad and Ramaswamy, 2004; Greenwald and Kahn, 2005). Size and power-based quest for market dominance that characterized earlier stages of globalization transformed into customer-driven need for innovation, adaptability, and highly innovative approaches to product development, marketing, and sales. Ultimately, business strategies based on collaboration, knowledge sharing, and increasing level of organizational transparency became increasingly the norm rather than exception (Christensen et al., 2004; Kim and Mauborgne, 2005; Evans and Wurster, 2000). Increasingly, and in a curious similarity to political confrontation and conflict (Smith, 2007), modern business operations became increasingly conducted “amongst the people.”

Technology shrunk the world in both physical and temporal sense (Friedman, 2005.) It simplified processes, reduced bureaucratically-imposed loads on business, and increased efficiency. Yet, because it also increased the range of operational permutations, escalated the number of direct and indirect actors, intensified their mutual relationships, and introduced technology-specific complexities, technology also led to the emergence of a tightly coupled, highly intricate global system of mutual dependencies and vulnerabilities. With the chances of failure depending exponentially on system’s complexity, and with the resulting

Figure 1. The network mesh consists of several network layers (e.g., financial, reporting, logistics, etc.) each associated with its data/information/knowledge storage facilities, analytic centers, and entry portals). Within each layer activities are conducted using a wide variety of computing and analytic platforms (grid and cloud computing, network-centric operations). All layers are interconnected, and data/information/knowledge flows are omnidirectional, i.e., the output of one entity (or network layer) may provide input to another one. User-oriented outputs consist predominantly of actionable information and actionable knowledge



failures often having catastrophic proportions (Ebenhart, 2003; Mandelbrot, 2004; Taleb, 2007), globalization created the environment in which potential for such catastrophic events became increasingly greater.

The complexity characteristic of closely coupled systems is also the source of elevated “random noise”, i.e., normal and quite harmless performance variation. However, that very same random noise may mask critically destabilizing events that hide below the level of detection based on casual observation (Mandelbrot, 2004; von Lubitz and Wickramasinghe, 2006; Taleb, 2007). Information technology is now used very extensively as the means to detect such events through gathering of business intelligence, operational performance monitoring and control, and alert generation. Increasingly more ubiquitous “smart portals” (Wickramasinghe and von Lubitz, 2007) provide access to web-based analytic tools, and grid- and cloud computing, and network-centric

approaches (von Lubitz, 2009; Chang, 2008) enhance the speed and the range of the data/information/knowledge retrieval, manipulation, and analysis. In turn, their outputs facilitate generation of pertinent knowledge and evidence-based practices (von Lubitz and Wickramasinghe, 2006a).

Under ideal circumstances, all participating actors, whether within the same entity or across collaborating entities would have equal status and equal access to all inputs and outputs involved in these processes. In reality, however, while inputs may be shared among collaborators, most of the outputs are generated within narrowly defined, discipline-oriented sectors of action. Furthermore, the products of analyses are distributed hierarchically in a bottom-up flow. Individual streams of knowledge are subsequently converted at the executive level of the organizational pyramids into *actionable knowledge*, then distributed in form of standard operational practices, doctrines, rules, and regulations in the top-bottom direction. More

importantly, the generated actionable knowledge has also a very limited lateral spread: it is domain related and affects predominantly only those at whom it is directly aimed, i.e., intra-domain specialists and experts. Consequently, many actors for whom such knowledge would be *pertinent and germane* (von Lubitz and Wickramasinghe, 2006b) remain entirely unaware of its existence. Despite all advantages offered by information technology and increasingly ubiquitous information/knowledge management techniques, their current employment in business operations does not engender creation of the cardinal transforming catalyst – the *actionable understanding*. Yet, it is the latter which transforms the wealth of pre-existing actionable knowledge into a clear strategy and links it to cohesive operations conducted in the precise alignment with the strategy-defined objectives.

### **THE CONCEPT OF ‘TEAMS OF LEADERS’ (TOL)**

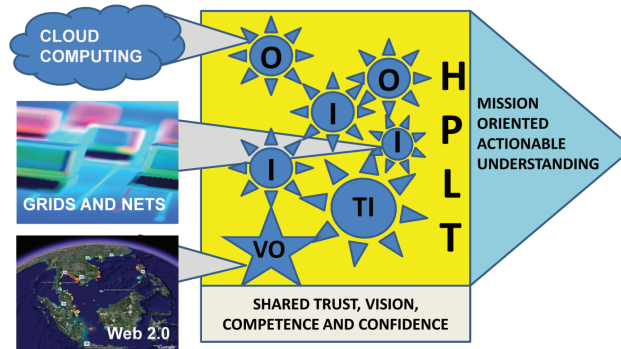
The concept of “*actionable understanding*” has been introduced several years ago by the US Army general Frederic Brown (Brown, 2002; see also Bradford and Brown, 2008) to denote the final “product” of all actions and activities performed within the broad realm of the “Teams of Leaders” (ToL) environment. ToL is the direct outcome of the requirements faced by the US Army following the end of the Cold War, where decisions made by the “man on the spot” have the potential to influence national interests, the fate of alliances, and the difference between rebuilding broken societies and perpetuation of armed conflict. The new demand necessitated a new breed of soldier-leaders: flexible, adaptable, versatile, and comfortable in operating within the complex setting of Joint Interagency, Inter-government, Multinational (JIIM) operations in which military and civilian concepts intertwined into a tightly woven mesh (Brown, 2002; Brown,

2008a,b; Bradford and Brown, 2008). In several aspects, the issues affecting the US Army were and are nearly identical to those seen in the conduct of global-scale business activities: increasing organizational complexity and spectrum of operations, the need for mission-centered cooperation of others, be it corporate partners, regulatory agencies, or customers themselves, and the need to adapt in order to address increasingly larger host of rapidly diversifying issues. The process of this far ranging transformation is complicated by the fact that it must be enacted while continuing simultaneous engagement in routine activities (Brown, 2008a).

### **WHAT IS TOL?**

Conceptually, ToL centers on the active, platform independent fusion of advanced IM, KM and High Performing Leader Teams (HPLT; see Bradford and Brown, 2008; also von Lubitz, 2009; Fig. 2). What distinguishes ToL from a specialized social network is the essential prerequisite for the development and functions of HPLT: the shared foundation of *skills, knowledge, and attitudes* based on the previously acquired appropriate and universally high-quality professional preparation of individual team members. The preparation demands intensive training to *task, condition, and standard*, and the ability to demonstrate complete, practical mastery of performance. To be efficient, the rigorous professional training must satisfy strictly defined metrics-based performance standards. Consequently, general uniformity of education/training outcomes is attained, assuring not only the high professional capability of the participants, but also shared confidence in mutual professionalism and ability to act appropriately under a very wide range of conditions both as individuals and teams of individuals. Mutual trust and sharing are the cornerstones of successful performance, and their development and strengthening a contiguous process.

Figure 2. A high performing leader team (HPLTs) may consist of individuals (I), teams of individuals (TI), organizations (O), and virtual organizations (VO). The latter may be created ad hoc by the team members as the means of addressing specialized aspects of the mission, or enter HPLT as already formed entities. The foundations of an HPLT are shared Skills, Knowledge, and Attitudes (SKA) whose team-based application promotes development of shared trust, vision, competence, and confidence. All intensely collaborative, purpose-oriented, and meaningful interactions among Team members are based on/facilitated by the extensive, platform independent use of all available IT/IM/KM resources. Interactions result in a rapid development of shared vision, empowering sense of mutual trust, and confidence, and the conversion of actionable knowledge possessed by individual team members into mission-oriented actionable understanding shared by all members of the team. In the process of that conversion, new knowledge is generated which is fed back (bottom-up generation) into the world of computing clouds, grids, nets, and Web, where it is converted into tacit and/or explicit knowledge, then distributed (top-bottom) either as such or as actionable information back into the HPLT “universe” (von Lubitz, 2009). The entire process is made possible through the intense use of all available IT/IM/KM tools and resources. The wide variety of high-level expertise characterizing HPLTs serves as the principal facilitator in access to, acquisition, and transformation of multi-domain information and knowledge into a unified, mission-relevant body of knowledge supported by mission-oriented actionable understanding. The latter constitutes the culminating output of the team (von Lubitz, 2009)



Training alone is not sufficient: it must have roots in active learning which, in the context of leader team development, requires collaborative learning shown to significantly improve critical thinking and task performance (Bradford and Brown, 2008, von Lubitz, 2009). To assure task performance to a predetermined standard, the learning process is experiential rather than didactic, and involves routine exposure to sudden, unpredictable scenario changes (“confounders”). The latter develops the required mental flexibility and adaptability of individuals within the team as well as the entire team (Brown 2002; Bradford

and Brown, 2008). This type of training has been used with the great success in medicine, nursing, and in advanced business education, and assures the mastery of skills, knowledge, and also emergence of the related mental and physical attributes employed with equal ease under routine circumstances and in the environments of maximum stress, uncertainty, and tempo.

Performance assessment under rigorous and highly demanding conditions constitutes the essential part of High Performing Leader Team development: the process becomes a chain of objective self-evaluation which promotes further

training leading to pitch efficiency of the teams. Due to the standardized approach used in HPLT development, teams can be inserted as “modular elements” whenever and wherever required, and the standardized training/testing regimen assures that organizations, whether real or virtual, which co-opt HPLTs as part of their operational profile will have full confidence and trust in their capabilities. The latter is of possibly the greatest significance in the development of efficiency and cohesion that, in turn, serve as the critical lubricant in multi-organizational efforts (Smith, 2007). Conversely, it has been demonstrated on several occasions that absence of such trust and acceptance are among the primary reasons for several failures (see von Lubitz, 2009 for further references).

### **THE IMPACT OF TOL ON GENERATION OF NEW KNOWLEDGE AND EVIDENCE-BASED, BEST PRACTICES**

Continuing limitations in the use of sophisticated, technology-based methods in the process of generating actionable knowledge (see above, and von Lubitz, 2009) may lead to inadvertent “stove-piping.” Implementation of ToL avoids this issue through the “horizontal spread” (Fig. 3) attained by means of platform-independent, peer-to-peer exchanges, social and professional networks, text- and visual blogs, avatars, etc., whose increasing functionality, reach, and practicality of use are supported and expanded by the rapidly growing impact of Web 2.0. Combined with the enterprise-wide access to the internal and external primary information and knowledge sources, the resulting pervasive, system-wide use of IT promotes generation of *ad hoc* collaborative entities (teams) needed to address common problems or develop “just-in-time” solutions. In the process of such interactions, and by fusing expertise of team members and teams with all

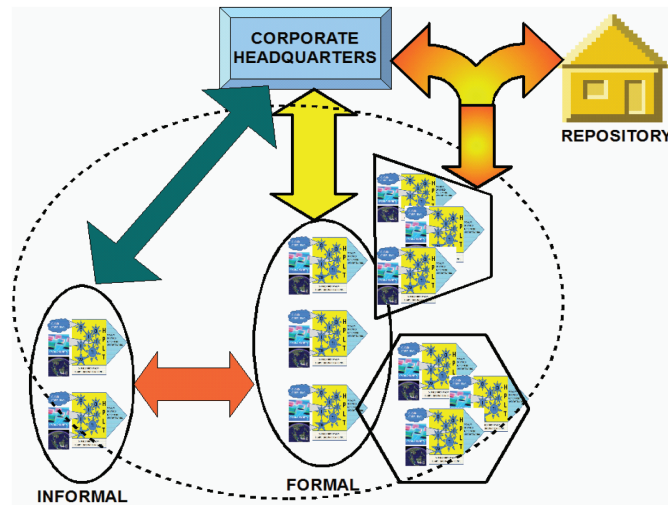
available e-based resources and analytic tools, both new knowledge and best practices are created.

Extensive use of a wide range of technology platforms and technology implementation concepts frees individual team members and teams themselves from the constraints of time, space, organizational/inter-organizational cultures, and – most importantly – the destructive influence of organizational status and rank (Bradford and Brown, 2008). For this reason ToL and its inherent processes of action and interaction have been employed with a great success by the US Army in a wide range of pilot projects involving both military and civilian affairs ((Brown, 2008a,b; Bradford and Brown, 2008). Moreover, with the already well proven methods and techniques ToL is now vigorously implemented on the national and international/multinational scale by the organization of great complexity, involved in a wide range of support and nation building missions which demand the closest possible cooperation with other, equally complex organizations of national, international, multi-national, or even global level (Brown 2008a; Bradford and Brown. 2008).

### **TOL AND “ACTION SWARMS”**

The extensive use of IT, IM, and KM as the means of sharing information and knowledge serves as a powerful promoter of rapid development of shared vision, competence, confidence, and trust (Bradford and Brown, 2008) that constitute the critical attribute of High Performing Leader Teams. The close relationship of team members to each other, and to members of other teams is the chief mechanism which transforms previously top-down bureaucratic and organizational structures into a bottom-up/lateral knowledge and “best practices” generator. Due to the pervasive nature of the exchanges within the lattice of the rapidly forming relationships, the process of transformation helps to demolish the existing organizational barriers. Instead, close socialization ensues, and

Figure 3. Information and knowledge generation and distribution in ToL environment consisting of formal and informal teams. While informal teams provide supporting roles (background functionality), formal teams generate actionable knowledge, best practice definitions, and define the framework of actionable understanding. Individual HPLTs and Teams of Leaders share information and knowledge both horizontally among themselves (indicated by the overlap of individual teams) and vertically, along hierarchical chains of command. Horizontal spread results in the generation of new knowledge and formulation of “best practices.” Vertical flows provide inputs to the executive layer of the organization where strategies are formulated and modified on the basis of bottom-up inputs. All flows are bi-directional (arrows). ToL-based interactions prevent both vertical and intra-specialty/domain information/knowledge distribution. Because of this characteristic, ToL environment provides the ideal setting for both broad-spectrum and specific intelligence gathering, analysis, and dissemination across organizational/institutional boundaries. At present, no other approach is equally powerful in these tasks (after von Lubitz, 2009)



fosters further growth of mutual confidence and trust among members of leader teams.

The transforming process has chain-reaction characteristics: professional and social relationships based on universal trust and confidence expand rapidly and freely, and lead to the emergence of Teams of Leaders (Bradford and Brown, 2008; see also Lipnack et al., in press). Individuals and groups who have been physically and/or organizationally isolated convert into “swarms” and converge whenever needed based on the exact match to the requirements of the task and mission at hand (Fig. 4). Such swarms are essential when addressing problems affecting performance at the “Domain of Domains” complexity level, and the activities of Teams of Leaders have been

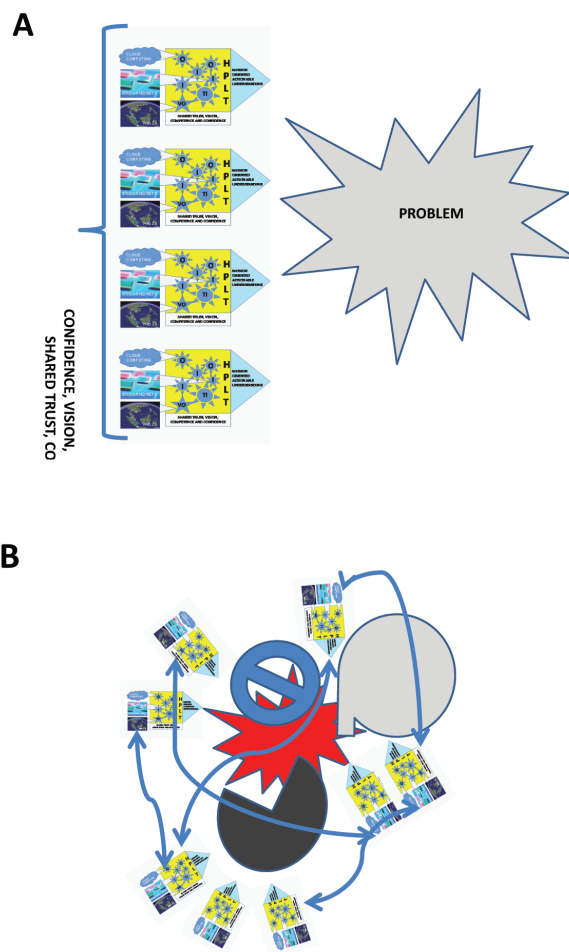
shown to restore coherence to disorganized multi-organizational efforts (Brown 2008a; Bradford and Brown, 2008), and help in aligning them with the underlying strategies. Indeed, ToL reached the level of maturity and broad utility that its implementation and applications manual has been developed and disseminated by the US Army (Lipnack et al., 2009).

### TOL AND THE SYNTHESIS OF ACTIONABLE INTELLIGENCE AND ACTIONABLE KNOWLEDGE

Throughout the course of transition from HPLT to ToL a less tangible but critical advantage emerges:

**Teams of Leaders Concept (ToL) and E-Business Operations**

Figure 4. Among the principal attributes of ToL interactions is task/mission-centered swarming. Simple, intra-domain tasks can be addressed by relatively small swarms representing relatively narrow range of often highly specialized expertise and knowledge (A). Very complex missions performed in domain of domain” environments (B) may require several HPLT “swarms” addressing individual sub-components or component-aggregates of the overall mission. Nonetheless, individual swarms cooperate very closely, coordinate their actions, and share information, knowledge, and results (bidirectional arrows). This type of interactions, possible only in ToL environments maximizes efficiency, maximizes strength and utility of effort, and increases operational OODA Loop revolution speed. Overall, strategic goals are attained through collaborative rather than confrontational means, and the entire process is both faster and less resource demanding



people who previously had no knowledge of each other, who might have been separated by distance, institutional or specialty barriers begin to rapidly form a network of close social relationships.

Consequently, the development of collaborative spirit that often characterizes interactions be-

tween local actors can now emerge among groups of actors residing on different continents. The collaboration-building attribute of ToL is further strengthened by the fact that teams can change their status from informal to formal depending on circumstances. Also, because of the intensity

of the existing interactions, team members cooperate as readily and effectively in distributed environments as when the contact is based either on the mix of physical and distributed, or direct interactions.

ToL based activities enhance both the external reach and tempo of action. It is important to stress that the enhancement is made possible due to significantly improved intelligence gathering which, in ToL environments transcend classical concepts of business intelligence. The largely multidisciplinary nature of HPLT permits gathering of intelligence data in a wide variety of forms and from a wide variety of sources (Brown, 2009a,b; Bradford and Brown, 2008), while close collaboration among HPLT members converts individual, domain-centered data streams into *intelligence-based operational picture*. The latter has two major functions: it helps in selecting the elements constituting *actionable intelligence* that leads to immediate organizational response, and as the predictor of the forthcoming needs to modify the accepted strategy to better suit and respond to the forthcoming changes within the operational environment. During the latter process actionable knowledge is rapidly generated. Altogether, the outcomes of network-centric activities that might have been shared between two isolated but professionally related groups (von Lubitz, 2009) are transformed through ToL-based interaction into a broad based “*actionable understanding*” which unifies several groups (Bradford and Brown, 2008).

Actionable understanding constitutes the most essential prerogative for operational efficiency in the environments of uncertainty and rapid, unpredictable change (Bradford and Brown, 2008) seen in complex, multi-entity business operations conducted in the environment of uncertain political and economical influences. Circumstantial evidence clearly indicates that the lack of such understanding may be among the chief sources of errors (Mittelstaedt, 2005).

## TOL AND SYNTHESIS AND DISSEMINATION OF MULTIDISCIPLINARY KNOWLEDGE

The process of globalization transformed relatively straightforward business operations into the new realm of “domain of domains.” It is intensely complex, involves disciplines that, until recently, seemed to be entirely alien to commercial activities (e.g., military operations, nation building, global healthcare, etc.). Modern business conducted on the worldwide scale represents probably the only arena outside military operations where success of missions (particularly when conducted on a national, international, or global scale) *demands* extraordinarily close cooperation of vast numbers of individuals, agencies, and nations.

Implementation of ToL practices in business will unquestionably have major impact (Table 1) due to the nature in which information and knowledge are gathered, handled, and disseminated. At peer-to-peer level, ToL promotes lateral spread and sharing of information and knowledge to the audiences greatly extending beyond one’s own professional specialty. Likewise, ToL supports *downward* migration of knowledge from more experienced/senior professionals within teams to the more junior ones. The direct advantage of such spread is the enhancement of *distributed socialization across unrelated but mutually relevant intra and inter-domain professional specialties*. In similarity to *within-profession* trends, on-line communities of practice will form. However, ToL promotes and consolidates from the outset the *interdisciplinary and trans-domain communities* of practice rather than narrow, domain-restricted ones. Cumulatively, ToL offers the most fertile ground for innovation, lateral and vertical dissemination of knowledge, and the dissemination and development of evidence-based practices. All of these are of utmost importance for business in Globalization 3.0 environment: changed relationships that this stage introduced demands major change of practices and substitution of the



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*Table 1. Impact of tol-based activities (after von Lubitz, 2009)*

TYPE	IMPACT
<b>OPERATIONS</b>	Generates actionable understanding Supports strategy development Promotes mission definition Promotes actor cooperation and collaboration across disciplines and domains Speeds OODA Loop cycles Increases OODA Loop operational space and reach Promotes extraction and analysis of mission-relevant intelligence Promotes generation of alternative approaches (“workarounds”) Serves as force multiplier Maximizes mission support through the employment of shared skills, knowledge and attitudes
<b>RESOURCES</b>	Promotes strategy-relevant resource assembly Promotes mission-centered, parallel use of intellectual and material resources Maximizes optimal resource exploitation Utilizes legacy and future IT/IM/KM platforms Maximizes resource deployment speed Promotes mission-relevant resource concentration Maximizes utilization of platform-independent CT/IT/IM/KM resources
<b>ORGANIZATION</b>	Promotes creation of collaborative actor grids Promotes ad hoc creation of collaborative virtual organizations and communities of practice Maximizes mission-centered utilization of actionable information and actionable knowledge Supports hierarchical and peer-to-peer interaction Maximizes information and knowledge sharing among all actors of the mission grid Generates bottom-up actionable knowledge generation and top-bottom actionable information flows Promotes interdisciplinary and interdomain information and knowledge distribution and use
<b>SOCIAL</b>	Maximizes generation of trust and understanding among all actors Enhances mentoring Maximizes personal contacts Enhances personal knowledge and competence beyond boundaries of own discipline/specialization (promotes “generalist” education) Maximizes development of shared skills, knowledge, and attitudes

rigid top-down methods by the ultra-agile and dynamic bottom-up generated advances.

**“FORCE MULTIPLIER” ROLE OF TOL**

At present, there is a clearly perceptible absence of a clearly defined “global strategy” and foresight among the Western nations mirrored in the failure to incorporate into the future plans anything beyond the most obvious. The inability of the West

to detect, analyze, and counteract the growing dissatisfaction with its policies is among the principal causes underlying the explosive emergence of anti-Western sentiment, religious extremism, and – ultimately – international terrorism as the sole means available to the populations of the “gap” to attain emotional if not economical “parity” with the developed countries.

In turn, the political destabilization that typically accompanies these extreme forms of protest weakens the economies in the underdeveloped

regions, promotes escalation of poverty, and leads to an even greater decline of their already meager (or practically nonexistent) economies. Consequently, despite substantial funds provided by the multinational Western sources, most attempts to establish comprehensive solutions to the problems of the developing and underdeveloped world continue to fail.

ToL may change all that. It brings to the forefront the fact that technology, no matter how powerful it might be, serves nothing but the solution of “tactical” tasks whether simple or unimaginably complex. Processes (such as IM and KM) or their combination (network-centric operations) lead to the formulation and operational implementation of actionable knowledge, in typically very task specific (i.e., narrow) context. By bringing together people able to maximally exploit their mutual talents and expertise, able to efficiently implement technology and technology-based processes, and by rooting their activities in the *maximum, platform-independent use of all tools and methods and processes offered by ITC*, ToL permits to develop the *strategy* which serves as the guide and rationale of all subsequent operations (Fig. 5).

Such strategy cannot be devised by even the most intense application of either technology or processes alone. ToL provides the needed catalyst and *force multiplier*. It is in that context that ToL, contrary to “within the profession” approaches, supports the development of both evidence-based methods and of best practices among a much wider range of professionals, disciplines and agencies at a scale that has not been possible previously. The new “rules of engagement” that the jointly created best practices represent are among the major beneficial “side effects” of ToL implementation (Bradford and Brown, 2008).

Most importantly, however, ToL brings people to the forefront: it facilitates generation of locally appropriate solutions by the “people on the ground.” It transforms grand but unrealistic international schemes into a coordinated

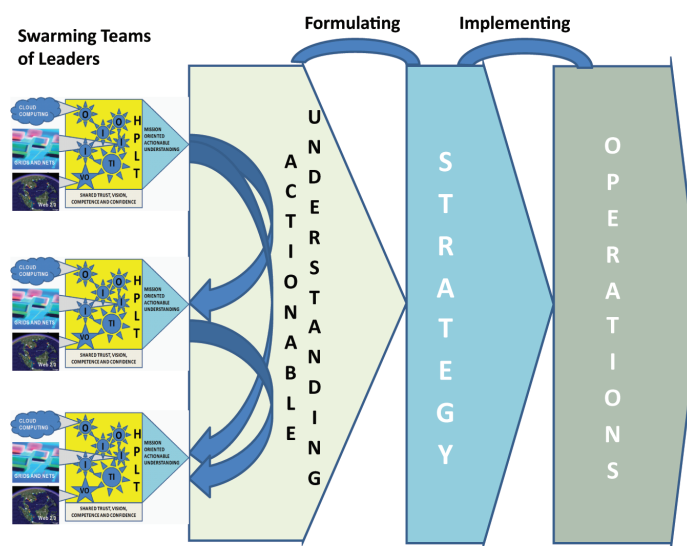
“bottom-up” effort whose ground effect becomes measurable, lasting, and aligned with the overall strategy devised on the basis of vertical inputs generated within the realm of ToL operations. All that relates directly to the manner in which e-tools, methods, and processes are used in the operational environment of ToL-based business operations: ToL transforms advanced technology from a Ferrari accessible only to a few into a hammer available to all.

### **TOL AS THE PLATFORM FOR THE DEVELOPMENT OF FLEXIBLE STRATEGIES**

In the ToL environment, results are generated *at the practitioner level* rather than at the level of executive policies (von Lubitz and Beakley, 2009). What emerges is the *bottom-up* spread of knowledge developed through *consensus of practitioners supported by joint practical experience* and acceptable by the business communities, consumers, and regulatory bodies far more willingly than directives descending from the executive level of corporate headquarters or the governmental and international bureaucracies. Once thoroughly analyzed and tested within “communities of actors” (i.e., producers of goods and services, their distributors, and the consumers), the generated best practices can be converted via hierarchical process into a flexible and practical strategies with clear and attainable objectives. Endowed with these attributes, such strategies are readily acceptable and understandable to all involved actors at the horizontal and hierarchical levels of administration and operations. Moreover, the continuous up-down-lateral interactions keep will keep the strategy attuned to changes in the operational environment; knowledge ceases to be confined to the vertical and often entirely separated channels of profession and bureaucracy but spreads laterally and the strategy becomes actionable rather than bureaucratic (von Lubitz, 2009).

## Teams of Leaders Concept (ToL) and E-Business Operations

Figure 5. Operations of teams of leaders. Individual, multi-, inter-, and trans-disciplinary HPLTs join into mission-oriented “swarms.” Their intense interactions both within and among individual HPLTs generate mutually shared actionable understanding. Through vertical bottom-up spread, actionable understanding assists in formulating a coherent strategy. The latter is then implemented as precise, focused (“effect-oriented”), and simultaneous operations. Actionable understanding is critical for the development of strategy-based, coherent operations conducted in “domain of domains” environments such as global range business activities. While for some of these operations actionable knowledge may be sufficient, increasing environmental complexity and the number of the participating actors shifts the balance toward ToL-based solutions and enhances the demand for actionable understanding prior to operational execution of the intended missions (after von Lubitz, 2009)



By promoting mutual trust, ToL furthers rapid development and coalescence of shared attitudes among all actors. It is a process of critical significance in international and multinational operations in any arena, be it civilian or military (Bradford and Brown, 2008, Brown, 2008a, Smith, 2007). It has been said that, in the context of globalization, mutual trust has eroded since the policies of the developed nations are rooted within their monocultural, ethno-centric concepts, and the remedies proposed by the rich may therefore be both beyond the reach and without any relevance to the present and future problems of the poor (e.g., Sachs, 2005). ToL not only allows for fully empowered inclusion and interaction of all affected groups—in order to be effective, the concept of ToL *demands*

such inclusion since only then can problems be addressed effectively and efficiently. By its very nature, ToL makes global business into the business of the people of the globe.

### WHY TOL?

It would be exceedingly naïve to expect that consequent implementation ToL practices will offer a dilemma-solving panacea for the global business. Nonetheless, in the realm of complex, modern business operations it may provide the launch-pad for the needed remedies. ToL is endowed with a number of distinct and unique advantages. First of all, the essential physical constituents already

exist: computational methods based on grid- and cloud computing begin to impact the realm of near-real time data analysis, high-speed Internet access rapidly transforms from a Western luxury to high-speed Internet the popularly available global tool, wireless communications networks increase their reach and presence, while Web 2.0 offers increasingly wider range of tools and platforms. Intuitively applied, the ToL concept serves as the foundation of modern practice in national and global medicine and biomedical sciences (von Lubitz, 2009a,b). It is also a pre-eminently suitable tool in the development of disaster preparedness centered on mitigation of catastrophic incidents in which close collaboration among national and international agencies is required (von Lubitz et al., 2008). Most importantly, however, ToL is implemented with a remarkable success in solving extremely difficult challenges of international cooperation and collaboration by the US European Command (EUCOM) as part of its extensive interaction with the civilian authorities of several European and non-European countries (Bradford and Brown, 2008). Thus, the “lessons learned” can be readily adopted into a broad range of purely civilian environments and activities and in order to facilitate rapid dissemination of the concept into the widest practical implementation, EUCOM published recently a “rapid implementation manual” of ToL which allows users operating in practically any field to rapidly implement ToL-based operations at essentially no cost, and based on the already existing IT and personnel resources (EUCOM, 2008).

In conclusion, one aspect of ToL must be forcefully underlined: ToL unifies continuously disconnected fields of business, social responsibility, environmental protection, and global security and stability, and, for the first time, a concept has been created that fosters rapid development of actionable understanding rather than actionable knowledge. As argued in the preceding sections, it is actionable understanding rather than actionable knowledge which serves as the prerequisite and

the *essential* prelude to creating a solid foundation for the development of the very badly needed collaboration and cooperation among all involved actors on the global business stage. Without such understanding, all efforts to relieve the mounting pressures of conflicting demands, inequities, and deficiencies will ultimately fail. The signs of the approaching collapse are clearly visible already, and the currently favored erratic application of ever larger amounts of money or increasingly complex, technology-based solutions to avert the inevitable is, has been condemned by many leading businessmen and economists of the world as utterly inadequate. ToL does not represent a “paradigm shift” but a conceptual mutagenesis necessary if the increasingly more difficult and polarizing problems of the contemporary world are to be addressed successfully.

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## KEY TERMS AND DEFINITIONS

**Actionable Knowledge:** knowledge which is necessary for and required to initiate immediate response to changes in the operational environment. Hence, Actionable Knowledge includes in its fullest form both pertinent and germane forms of knowledge, the latter two providing only the supportive background. Actionable Knowledge is typically domain-restricted even if its application may affect several related domains.

**Actionable Understanding:** the state of uniform understanding of and agreement about the purpose, goal, strategy, and operational intent developed among all actors about to participate in a complex, often multidisciplinary operation performed on a very large scale within a domain-of-domains (national, international, or multinational/global) environment. Actionable Understanding is the most critical and fundamental prerequisite necessary in the development of strategy, formulation of “commander’s intent” necessary for the translation of strategy into a set of actions to be executed (theater activities) in order to reach strategy-determined objective. Actionable Understanding assures maximum flexibility in the execution of strategy-determined actions, and frees individual subcomponents of the organization from command-control influences into share-collaborate-coordinate pattern of activities.

**Domain-of-Domains (Environment):** environment characterized by extreme complexity of

interactions among individual often seemingly unrelated subcomponents, the latter existing as individual domains in their own right. In contrast to closely coupled systems, events in one domain may or may not affect events taking place within another constituent domain. Therefore, detection of critical events capable of producing wide-ranging perturbations and crises is significantly more difficult, requires a much broader range of expertise and knowledge, and most often remains undetected by domain-centered human experts or automated monitoring systems (e.g., ERPs)

**High Power Leader Team:** (HPLT) a group of individuals, organizations, virtual organizations, or teams of individuals centered on devising solutions to a complex task or complex task aggregate. Members of the team can be either distributed (even globally) or partially co-located. All members possess demonstrable advanced professional skills, knowledge, and abilities (SKAs) and have been thoroughly trained in their practical use. All interactions within the team are built on mutual trust, competence, and shared vision, and most are conducted using the entire range of the available IT platforms and means of data/information/knowledge exchange. Rapidly developing trust promotes intensification of sharing necessary to develop broad-based solutions to the task at hand. HPLTs can be formal (created within the organization to address a specific task), informal (devoted to addressing general issues affecting the field or domain), permanent or ad hoc.

**Network-Centric Operations:** operations based on the maximum use of multi-layered data/information/knowledge networks (mesh of networks) that facilitate command and control of all activities. Originally devised as the means to decentralize the two latter functions, it evolved into a hierarchical up-down command approach that allows the executive levels full and instantaneous access to ground level information. Consequently, in current implementation, network-centric activities serve as a “peek over the shoulder” approach.

**Teams of Leaders (ToL):** HPLT groups united on addressing a common task within a domain-of domains environment. ToL interactions are based on the foundation of shared actionable understanding, trust, and vision. HPLTs within ToL environment can either act in full concert or aggregate as “just-in-time” swarms devoted to the solution of specific, suddenly emerging and mission-critical tasks, then disperse to participate in other strategy-dictated activities. ToL-based exchanges are both horizontal and vertical, and are also based on the maximum platform-independent utilization of all capabilities and advantages offered by IT/IM/KM. Horizontal exchanges promote development of best practices and evidence-based methods. They also provide real-time upgrades to the state of actionable knowledge and significantly elevate the range and pertinence of intelligence gathering processes. Vertical interactions channel best practices, evidence-based methods, and newly generated actionable knowledge and high quality intelligence information needed to retain organizational agility, and strategic adaptability to sudden and unpredicted changes within the operational environment. ToL interactions are free from influences of organizational hierarchies,

influence of rank or status of participants, and assure maximum freedom of content exchange and analysis.

**Theater of Operations:** The entire complex of people, processes, technologies, and methods involved in specific set(-s) of activities within a specific geographic/political realm and including both own resources, resources of allied organizations and entities, and those of the opposition. In order to have full utility, all actions executed within the theatre of operations need to have roots in a coherent strategy, be executed in a manner that promotes reaching strategy-determined objective(-s), and the execution of such actions must be characterized by coherence and cohesion. Actions performed within the theater of operations have strategic impact but are often executed as tactical events, i.e., activities affecting only a small segment of the major activity (e.g., construction of a new air/sea container terminals at strategic locations represents coherently conducted tactical action in the strategic effort to simplify transoceanic supply chain linking several collaborating and closely coupled entities).