

# **From Knowledge to Wisdom: On Being Informed and Knowledgeable, Becoming Wise and Ethical**

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**Abstract:** In this paper from the Xiangshang Forum 2006 we propose the Wisdom project, an international network initiative on developing the next generation of management and entrepreneurial systems based on knowledge and wisdom rather than data and information. This is a major challenge especially for China which must aspire to become wise and ethical rather than just efficient or effective. Major topics of the project include Knowledge management, Wisdom systems, Added value measures, Entrepreneurial university and Management as a profession. These topics are the key ones for developing sustainable competitive advantage of any globally aspiring economy or enterprise.

**Keywords:** knowledge society, management systems, knowledge management, wisdom, wisdom systems, added value, entrepreneurial university, human systems management, outsourcing, global sourcing, integration strategy, DIKWE

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## **Introduction**

The ancient Chinese traditions indicate that a transition from data and information to knowledge and wisdom are likely to happen before long also in China and that the Chinese contribution could go way beyond its current preoccupation with data and information. The world is longing for knowledge and wisdom and we, as management scientists, should be at the cutting edge of the global development of their theory and

practice. China should assume leadership in contributing to the global society along these lines.

That is why it is proposed that an international Wisdom Project be initiated, with full Chinese cooperation and leadership. It is not too early by any means and the schools of business and management, as well as businesses globally, can use put knowledge and wisdom in the center of their pursuits.

In China we should be the leaders, not just the followers: if we do not put wisdom at the center of business, management and entrepreneurship education – who will? If not now – at the doorsteps of the global era – when? If not wisdom and ethics – what else should be our calling, mission and charge?

Business education is going global and it will never turn back to local, regional or provincial. Globalization is a one-way street and it is the challenge of its global reach and mission that offers a competitive edge.

“Wisdom systems” is a new working term representing the new concept, the next stage of evolution beyond KM (Knowledge Management), the term coined already in 1987. [See Zeleny, M., “Management Support Systems: Towards Integrated Knowledge Management,” *Human Systems Management*, 7(1987)1, pp. 59-70.]

Management systems have witnessed a cumulative progression from *data* processing, through *information* technology, to the current *knowledge* management. The next step is *wisdom*.

Corporations can be *informed*, they can be *knowledgeable*, but in the global era they must increasingly become *wise*. *Wisdom of enterprise*, its definition, taxonomy, achievement and use are the purposes of the “wisdom project.”

Although the term *wisdom* is ancient and laden with substantial and significant philosophical meanings, our aim is not philosophical, but *pragmatic, practical* and *useful*. Wisdom should become – like knowledge and information – a manageable resource for the *corporate spine of 4Es: Efficiency, Effectiveness, Explicability* and *Ethics*.

Clearly, Efficiency is about doing things right, Effectiveness about doing the right things, Explicability about being able to understand and explain one’s action, and Ethics about assuming responsibility for one’s action. In the end, it is all about deciding, doing, and acting. *It does not matter what we say, the only thing that matters is what we do.*

## **Evolution of Management Systems**

Let us shortly characterize the evolution of management and entrepreneurial systems. Right after World War II, the earlier paradigm of product-oriented mass production (linear assembly lines, organizational hierarchies of command, product quality control, and mass consumption) had reached its peak. Data processing supported the efficiency efforts.

Soon afterwards, the Deming-Juran process quality teachings spearheaded a new quality orientation (later referred to as TQM) and propelled Japan directly to the post-war *process focus* (process quality control, just-in-time, continuous improvement). The U.S. responded by a painful and prolonged product-to-process transformation, ultimately leveling the playing field again by the mid eighties. Management information systems have emerged.

At the end of the eighties, *business process reengineering* (BPR) focused on the radical redesign of the production process through the reintegration of task, labor and knowledge (Zeleny, 2005). As a result, lean, flexible and streamlined production processes were created, capable of fast-response and internet-based integration. Internal knowledge has become a resource and knowledge management (KM) accompanied its expansion.

In all three above described stages, the competitive advantage was derived almost exclusively from the *internal resources* of the firm. At the end of the nineties, the most radical fourth shift has occurred: the competitive advantage became increasingly tapped from the *external resources* of the firm – through the *extended networks of suppliers and customers*. The phase of *supply chains* was transformed into *demand chains*. Knowledge has become coordination of networks and took on worldwide importance.

In Figure 1 we display the basic scheme of production and service delivery process. This scheme has remained unchanged and unchallenged for centuries of the engineering and economic descriptions of business management. What has been changing is the *focus of management* on different parts and components of the basic scheme. However, the most important is the Fifth Stage.

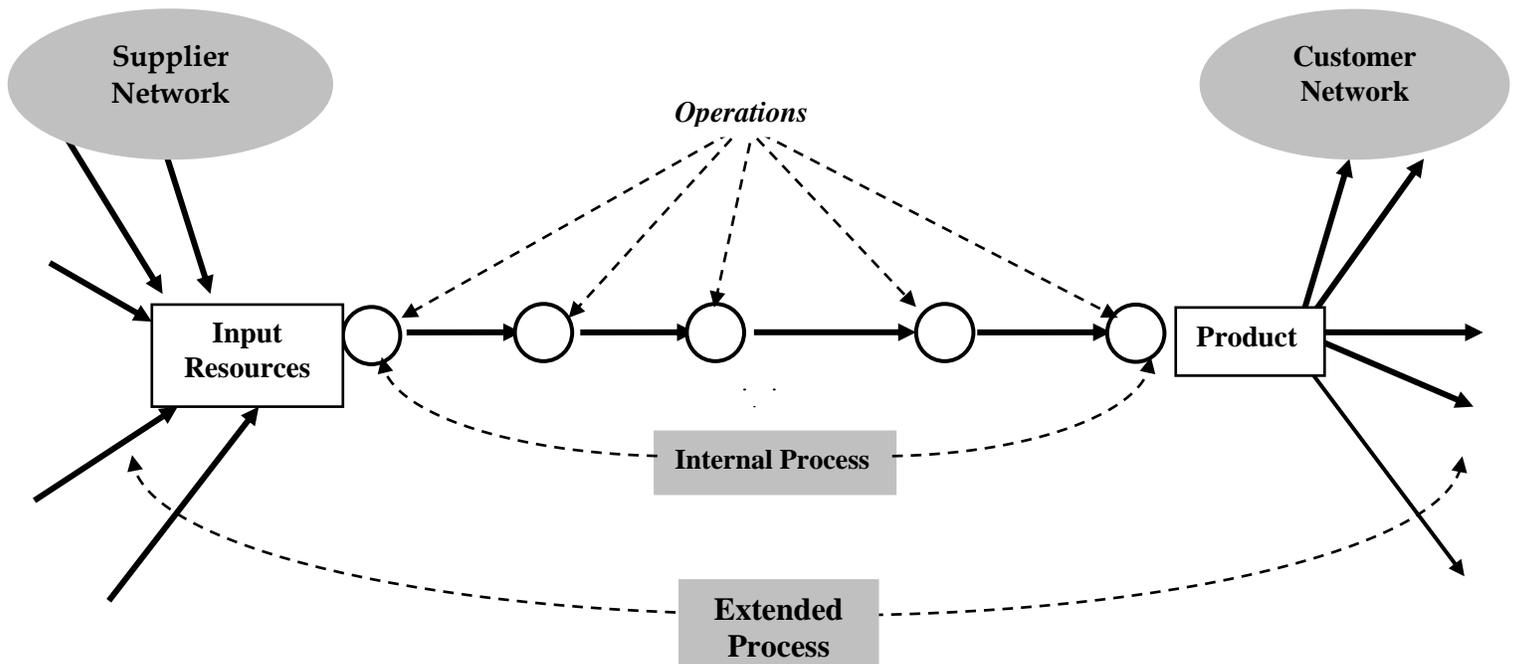


Figure 1. Basic scheme: product, process, networks.

Although the scheme [inputs → process → outputs] remains unchallenged, there are indications in the emerging fifth stage that even this scheme will undergo a major restructuring in the near future. It shall become disaggregated and distributed, subjected to *nonlinear modularity*, bringing forth entirely new ways of making things and delivering services. In fact, the distinction between goods and services is rapidly

disappearing as demand chains, customer dominance and mass customization assert their influence globally.

While the first two stages were firmly rooted in relying on data and information, the subsequent two paradigmatic shifts expanded the internal process into the *extended process* - including supplier networks and alliances as well as customer self-service, mass customization and disintermediation - as the main, increasingly external, sources of competitive advantage. Such a shift changed the very notion of competitive advantage, the sources of knowledge and the concept of the firm itself. The concept of Knowledge management (KM) has been transformed from information (explicit “knowledge”) to knowledge itself (tacit knowledge). There is no “explicit” knowledge, only information and data. Clearly, all that can be digitized assumes symbolic form and becomes information. All knowledge is “tacit”, but that does not make it less real, intangible or unmeasurable – just different from information and data.

The subsequent Fifth stage of global sourcing brings forth and fosters a new set of relationships with customers and suppliers. The firm starts disaggregating its production processes, transferring, leasing or selling selected pieces off to a higher-added value operator/coordinator. Strategic wisdom and corporate ethics are gaining in importance over operational and tactical concerns.

*Any firm can be only as good as is the network of which it is a part. Consequently, the firm will disaggregate and become a network. No firm is an island.*

### Summary of the Five Stages

1. *Final-Product Orientation.* The final product is a primary focus, the production process is considered secondary. Its operations and their sequences are technologically fixed or “given.” Product quality is “inspected in,” mostly at the end of the process. Statistical quality control, inventory control, cost minimization, mass production, assembly lines, work specialization, hierarchies of command, mass consumption, statistical mass markets and forecasting are among the defining characteristics of this stage. *Collecting data is the mode of management.*
2. *Process-Operations Orientation.* It is the high-quality process that assures the high-quality product, but not *vice versa*. The main focus is on the improvement of process *operations*. Quality of the process was understood as the quality of its operations. Powerful new concepts of Total Quality Management, Continuous Improvement (Kaizen) and Just-In-Time systems have characterized this stage. Although the operations are being improved, the process architecture and structural sequencing are kept intact and remain technologically “given.” *Generating and managing information has become predominant.*
3. *Integrated-Process Orientation.* In Fig. 1, the focus of attention shifts from operations (circles) to *linkages* (arrows) – thus changing the process architecture itself. The *reengineering* of the process, re-integrating individual components into effective, more autonomous and even self-manageable wholes,

has characterized this stage. The production process has become a business process and therefore subject to qualitative redesign and reengineering (BPR). Discontinuous improvement and process innovation replaced the piecemeal continuous improvement. Traditional vertical hierarchies of command have flattened out into more horizontal, process-oriented networks. Mass customization, disintermediation, knowledge management and autonomous teams have started emerging. *Internal knowledge becomes the main source of competitive advantage.*

4. *Extended-Process Orientation.* In this current stage, networks of suppliers and communities of customers have extended the internal process into a functional and competitive whole. Both internal and external sources of knowledge and competitiveness form new core competencies. Supply-chain management has transformed into demand-chain management. Intranets and extranets have provided a communication medium for business-to-business and business-to-customer exchanges. Quality has become bundled together with cost, speed and reliability. *External knowledge is tapped as the main source of competitive advantage.*
5. *Distributed-Process Orientation.* This emerging stage represents the most radical business refocusing so far. Through the global sourcing, sections and components of the internal process are being outsourced to external providers and contractors in search of the highest added value contribution. Long-term alliances are formed and companies are transforming themselves into networks. Network cooperation is replacing corporate competition: “*coopetition*” emerges. Globally distributed process brings forth new forms of organization, coordination and modular integration. *Strategic wisdom is required to guide the globally distributed action.*

The majority of third-world companies (and educational and training institutions) are still in the first, i.e. post-war stage of the final product orientation and even the early process orientation has been eluding them. That’s how rapid the management evolution has been: the best world-class companies are already deep in the Fifth stage.

The Fifth stage of global sourcing is propagating the search for the *maximum added value* worldwide.

The five stages of management-systems evolution are mirrored in the essential taxonomy of knowledge.

### **Taxonomy of knowledge**

What is knowledge?

*Knowledge is the purposeful coordination of action.* Achieving its purpose is its sole proof or demonstration. Its quality can be judged from the quality of the attainment (its product) or even from the quality of the coordination (its process).

What is meant when we say that somebody knows or possesses knowledge? We imply that we expect them to be capable of coordinated action towards some goals and

objectives. Coordinated action is the test of possessing knowledge. *All doing is knowing, and all knowing is doing.*

Every act of knowing brings forth a world. We “bring forth” a hypothesis about the relationships and test it through action; if we succeed in reaching our goal - we know.

*Bringing forth a world of coordinated action is human knowledge.*

Bringing forth a world manifests itself in all our action and all our being. Knowing is effective [i.e., coordinated and “successful”] action.

	<b>Technology</b>	<b>Analogy (Baking Bread)</b>	<b>Effect</b>	<b>Purpose (Metaphor)</b>
<b>Data</b>	EDP	Elements: H2O, yeast, bacteria, starch molecules	Muddling through	Know-Nothing
<b>Information</b>	MIS	Ingredients: flour, water, sugar, spices + recipe	Efficiency	Know-What
<b>Knowledge</b>	DSS, ES, AI	Coordination of the baking process → result, product	Effectiveness	Know-How
<b>Wisdom</b>	WS, MSS	Why bread? Why this way?	Explicability	Know-Why

Figure 2. Taxonomy of knowledge.

Our concern, clearly, is the last row of Figure 2: *the wisdom row*.

While information allows us to do things right (efficiency), knowledge already aspires to also do the right things (effectiveness). Doing the right thing, especially in business, requires not only knowing how, but also knowing why. *Explicability* of purpose is an essential ingredient of its effectiveness in attainment. *Wisdom is about explicability and ethics* of our doing.

Many informed people know what to do, quite a few knowledgeable experts know how to do it, but only a few *wise persons* know why it should (or should not) be done.

The taxonomy of Fig. 2 reflects a continuing process. After wisdom comes *enlightenment*, but it is too early to belabor that phase when so much of mankind is still in the data phase. However, once we move beyond data and information, our action becomes less rooted in the technical and quantitative and guided more by the philosophical (strategic) and qualitative.

We shall use some quotes from philosophers to illuminate the foundations:

G. Ryle (1949): ... the capacity to act, to live, more or less successfully in the world, is more fundamental than (propositional) knowledge. ‘Knowing how’ is more fundamental than ‘knowing that’. All our knowledge is but a development of our capacity to act. *Dissociated from life, from action, knowledge stored in libraries is just paper and*

*ink, devoid of meaning.*

N. Maxwell (1984): The primary task of academic inquiry is to help humanity solve its problems of living in increasingly rational, cooperative, enlightened ways, thus helping humanity become more civilized. The basic aim of academic inquiry becomes to promote the growth of wisdom - *wisdom* being defined as the capacity to realize what is of value in life (and thus including knowledge and technological know-how). Those parts of academic inquiry devoted to improving knowledge, understanding and technological know-how contribute to the growth of wisdom.

And again Maxwell (2000) on enlightenment: The basic idea of *enlightenment* is to learn from scientific progress how to make social progress towards an enlightened world. Putting this idea into practice involves getting appropriately generalized progress-achieving methods of science into social *life itself*. But in sharp contrast to all this, the traditional Enlightenment has sought to apply generalized scientific method, not to social life, but merely to social science. Instead of helping humanity learn how to become more civilized by rational means, the traditional Enlightenment has sought merely to help social scientists improve knowledge of social phenomena.

The ever widening Knowing-Doing Gap (see Pfeffer-Sutton, 2000), or, as we would term it: the Action-Description Dichotomy, is the price we pay for the manipulation of symbolic descriptions substituting for action itself. That is why right things do not get done anymore while wrong things are increasingly allowed to happen.

### **Wisdom: On the Art of Asking Why**

Wisdom is *knowing why* things should or should not be done – locally, regionally and globally – and is, and will, remain, in short supply. Wisdom is not practiced purposefully and it is not taught at schools.

Asking *Why* is fundamentally different from asking *How*.

Whenever we explore a coordinated process in the sense of *What* or *How* (What is to be done, how sequenced, how performed, etc.) we already accept and fixate that process. The process is becoming *a given*, subject to learning or mastering, but not subject to exploration or change.

It is only when we start asking *Why* (Why to do it at all, why this operation and not another, why this sequence, etc.) we question the very structure of knowledge (coordination of action) and introduce the possibility of change. The *Whys* and the *Why Nots* are the most important questions in business and management and they should not be taken as givens.

In the global economy, frequent or continuous strategic change will become the norm of competitiveness. Doing the same, given thing better and better (continuous improvement) will be inadequate for strategic success. One has to *do things differently* (not just better) and *do different things*, not just the same ones. Such an important mode of strategic thinking can be learned and mastered not by asking *How*, but only by asking *Why*.

### **Strategy and strategic action**

All presented concepts of “the spine” of 4Es and the taxonomy of knowledge have one important thing in common: they are all about *action*, all about *doing*.

Only information is always and only about descriptions. *Information is a symbolic description of action*, past, present or future. Yet, business is not about managing descriptions, but about managing action. So, the need to move from data and information to knowledge and wisdom is tantamount to moving from words to deeds.

Wisdom project would usher in a new era of global corporate strategy. Strategy also is not about statements, but about action. Traditionally, organization executives prepare a set of statements, descriptions of future action: mission, vision, set of goals, plan or pattern for action and similar artifacts or tokens. All such statements are information. It all remains to be translated into action, into corporate knowledge.

Our students and future executives are conditioned to ask *How*, how to do it, but rarely search for the wisdom of *Why*. Why should this or that statement be translated into action? More importantly: why not? What should we not change and why? Only then can an effective strategy emerge from what is to be conserved, what is being done already.

Our students are increasingly trained to talk and make presentations, to substitute smart word for action, to manipulate symbols. *Then* we expect them to become competent strategists, to thrive on action and deliver the results. Not even a miracle can make that happen.

Strategy is about what we do, not about what we say we do or desire to do. Strategy is about action, not about the description of action. Strategy is about doing, not about talking.

*Your strategy is what you are doing. And what you are doing is your strategy.*  
Teach *that* to your students.

## **Wisdom and Ethics**

Wisdom and ethics are clearly closely related, often being indistinguishable and inseparable. An unethical person cannot be considered wise. Both concepts are related to strategy and strategic action.

Also ethics, in this context, is about action, about doing.

The most remarkable lapses in ethical behavior have occurred at companies with admirable ethical rules and covenants, stunning ethical vision statements and other elaborate props that simulate and substitute for ethical know-how. Enron’s walls were covered with descriptions and statements on ethics. The problem with corporate ethics is not with “knowing” what is right, but with doing right and being good.

Truly ethical behavior does not come from deliberate judgment, decision making, reasoning and learning the rules, but from human coping with immediate circumstances, from *being and acting good*, not just describing what “good” means, out of context and devoid of action.

It is clear that teaching ethics, i.e., providing rules and descriptions, does not necessarily lead to ethical behavior and deeds, to being good and wise.

Ethics, more than anything else, is about what one does, not just about what one says.

There is a difference from reading or learning an ethical rule, and putting it into action consciously and purposefully, or acting ethically through mastering one’s

microcontext, i.e., *acting ethically* through one's own internal self-interest. In order to be truly ethical, one cannot be consciously and intentionally "ethical."

A system which does not make ethical behavior a part of individual self-interest cannot claim or hope to become ethical system.

### Adding value

Knowledge is very *real* and very *tangible*. What can be more tangible than an automobile we have produced, bread that I have baked or milk that she has brought from the stable? Knowledge *produces* very tangible things and very tangible things are the measuring rods of human knowledge.

The value of information is intangible, unless it is translated into knowledge and thus into measurable action.

Because knowledge, wisdom and ethics are so intimately related to action and are the products of action, they are eminently *measurable*.

Knowledge is measured by the value our coordination of effort, action and process adds to materials, technology, energy, services, information, time and other inputs used or consumed in the process.

*Knowledge is measured by added value.*

In any business (and human) transaction, value has to be *added to both* participants or sides: the provider *and* the customer. Adding value is what makes the transaction satisfactory and sustainable.

There are two kinds of value to be created: *value for the business* and *value for the customer*. Both parties must benefit: the business – in order to make it; the customer – in order to buy it. In the global age it is precisely this business-customer *value competition* that is emerging as the hardest and the busiest battleground.

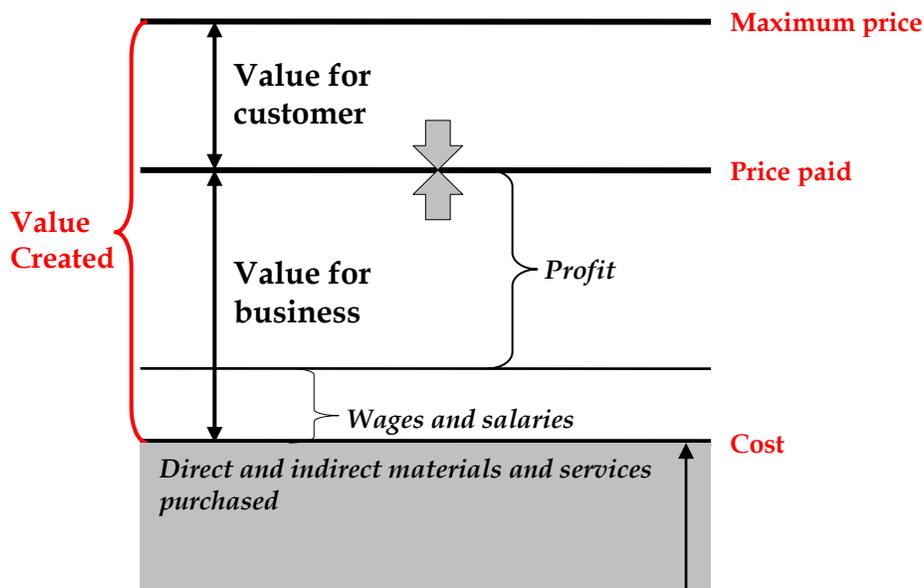


Figure 3. Adding Value for the Customer.

In Figure 3 we attempt to explain the process of creating new value. This is crucial for the identification and assessment of innovation.

First, the customer pays for the service or product: the *price paid*. The producer subtracts the *cost incurred*, including all direct and indirect materials and services purchased. The difference is the *added value* for the business. This added value can also be interpreted as the *value of knowledge* engaged in producing the service or product. In order to pay wages and salaries, the production process and its coordination must generate this added value. Added value is the only source of corporate wages and salaries and profits.

If the added value does not *cover* the wages and salaries, then these must be correspondingly lowered. If no value has been added, then the value of knowledge is zero and no payment can be attributed to it. The business must add enough value in order to *cover* at least its workers and managers, their salaries and wages. If even more value has been created, then *profits* can be realized, up to the price received.

The customer, of course, must be willing and ready to pay more for the service/product than he actually paid. The *maximum price* the customer would be willing to pay must exceed the price the producer has asked for. The difference is the *added value for customer*.

If there is no value for customer – the maximum price is lower than the price to be paid – then the customer would not buy the service or product. In a competitive market, the customer pays money only for the value received, i.e. the value for the customer.

## **The Entrepreneurial University**

We are entering an era of re-assessment of business programs, shifting from description of action (functional, “scientific” model) towards action itself, i.e. an *entrepreneurial model*.

It is being realized globally that business is a *profession* and business schools are *professional schools*, like schools of medicine and law. Professions are always more about knowledge and wisdom, less about information, always more about doing and less about describing.

It is challenging to contemplate why business schools model themselves more on physics, chemistry and economics and less on medicine and law.

Business *should become* a profession.

Professions work with: 1. *Accepted body of knowledge* (not information), 2. *Certification and guarantee* of acceptable practice, 3. *Commitment to the public good*, and 4. *Code of ethics*.

Professions integrate knowledge and practice in a wise and ethical way, serving the public, focusing on clients’ needs.

Education in business must involve history, moral reasoning, logic and most importantly: *practical knowledge, wisdom and ethics*.

Bennis and O’Toole (2005) write: “*The problem is not that business schools have embraced scientific rigor but that they have forsaken other forms of knowledge.*”

*Every business school should run its own business*, as proposed by Polaroid’s E. Land. This need for practice, innovation and entrepreneurship takes us to the notion of the *entrepreneurial university* (Etzkowitz, 2004).

The entrepreneurial university not only produces knowledge (rather than information) but engages in a new mission of *capitalization of knowledge*. It produces not only graduates and alumni, but also firms and companies: it becomes an economic actor in the regional and possibly – through a network – also in global economic and social development. This new mission puts the university into direct cooperation with the government and corporate sectors, forming the *triad of cooperation*.

From the original “conservatory” of information and knowledge, through the producer and transmitter of information and knowledge, to the *university as an entrepreneur* – that is the vision of assuming global leadership in business education.

The university-industry-government is the proper *triad* for successful regional development. *New firms and their capitalization* is the proper output of a professional, entrepreneurial school. One-way, linear outflow without feedback is replaced by a self-sustaining cycle of knowledge and wisdom.

The entrepreneurial university still produces graduates and publications, of course, but “packages” them in firms and companies to take the created knowledge out with the newly minted entrepreneurs.

## Conclusion

The strategy to be pursued by global leaders, even by China, can be related to the *Integration of Five Forces*: [data → information → knowledge → wisdom → enlightenment] or DIKWE value chain. The separate, isolated pursuit of components has dominated business and economics for most of their history. Although China is still deeply embedded in the data stage, DIKWE itself represents an ever ascending, integrated whole, balancing symbolic descriptions, action and value explication towards synergies which we have barely started to tap or even realize. The synergic effect of DIKWE integration is worthy of pursuit and more in harmony with China’s long philosophical traditions than recent technical specialization and atomization of work.

*Data mining* does not stand alone but must be directed towards better *information processing*. Information and knowledge are interconnected through mutual externalization and internalization in a self-reinforcing cycle of *knowledge management*, production and maintenance. *Wisdom systems*, as explication of values, provide justification and ethical anchoring for human action. Finally, enlightenment directs our efforts towards life, social action and civilized society, rather than towards technology, science and economics. In the end, it is how we live, not just how we work, produce and consume, which is the ultimate value of *enlightened life*.

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