

On Knowledge Services for Outsourcing Professional Development

Prof. Dehua Ju
ASTI Shanghai

asti-gm@online.sh.cn

Dr. Beijun Shen

Shanghai Jiaotong University

bjshen@sjtu.edu.cn

SEAFOOD 2010



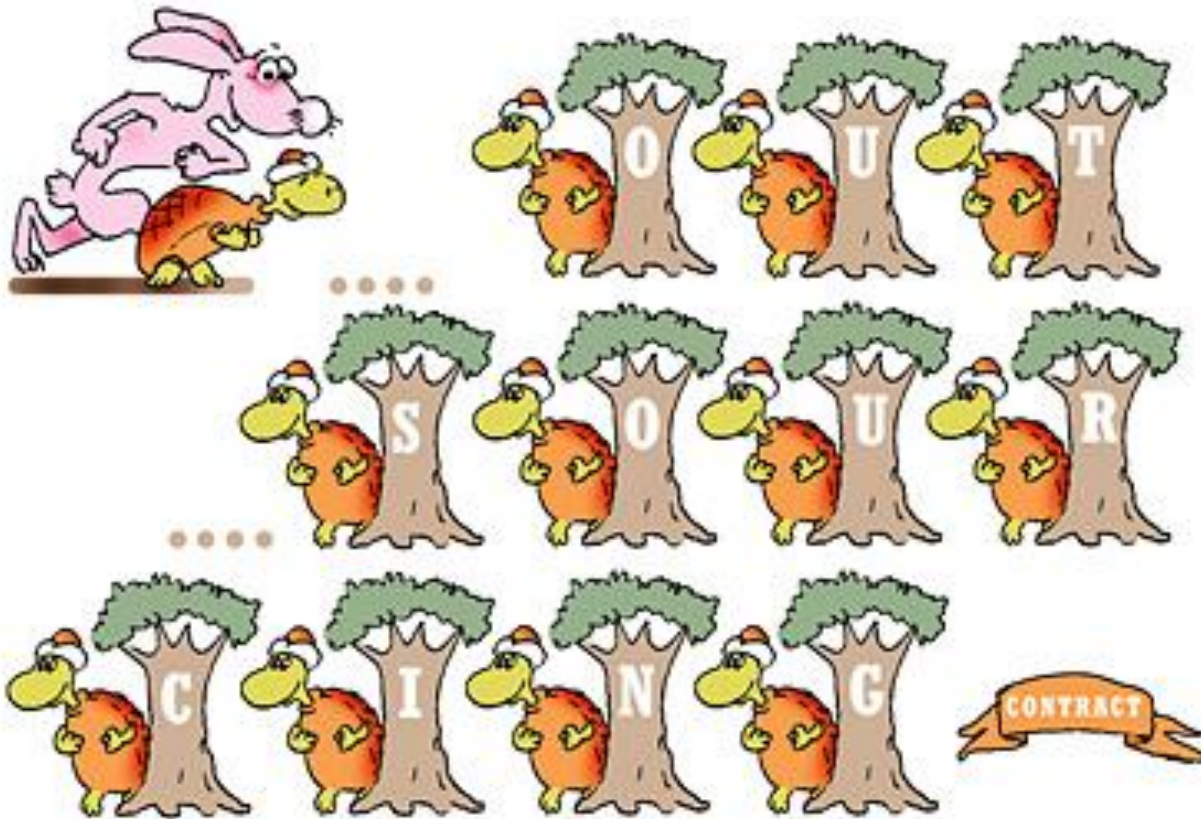
Outline

- **Introduction**
- **Some Key Viewpoints**
- **From Training To Knowledge Service**
- **Public Knowledge Service Platform
(PKSP)**
- **The Outsourcing PKSP**
- **Conclusion**

Introduction



Outsourcing – A Hot Spot



Outsourcing Is
the Mainstream
In Current World
Economy and
also a Hot Topic
In China's
Software
Community

- Based on Atkearney's Global Service Location Index (GSLI) 2005, 2007 and 2009, India, China and Malaysia remained top three attractive destinations for global service outsourcing
- Facing with the global multisourcing trend, China has great opportunities to enter outsourcing market

Rank	Country	Financial attractiveness	People skills and availability	Business environment	Total score
1	India	3.13	2.48	1.30	6.91
2	China	2.59	2.33	1.37	6.29
3	Malaysia	2.76	1.24	1.97	5.98
4	Thailand	3.05	1.30	1.41	5.77
5	Indonesia	3.23	1.47	0.99	5.69
6	Egypt	3.07	1.20	1.37	5.64
7	Philippines	3.19	1.17	1.24	5.60
8	Chile	2.41	1.20	1.89	5.50
9	Jordan	2.99	0.91	1.59	5.49
10	Vietnam	3.21	1.02	1.24	5.47

The 1000-100-10 Project More Ambitious Targets

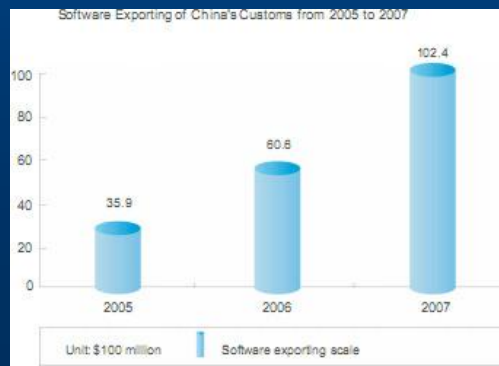


- **Within 3-5 years**
- **Fostering 1000 More CMMI Level 3 Enterprises (300 CMMI Level 5)**
- **Attracting 100 MN companies to migrate their outsourcing business to China**
- **Building up 10 National Training Bases for Outsourcing Professionals**
- **Sponsored By Ministry of Commerce**

High Growth Rate in SW Export

- The state strategic policy has actuated a high growth rate in outsourcing business

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
SW Export USD X 100M	4.0	7.2	15.0	18.0	28.0	35.9	60.6	102	142



Bring On New Problem !

- A clear gap in the human resource supply-demand chain



To Leave Position Open to Await

虛位以待



State Council on Promoting the Development of the Service Outsourcing Industry

国务院办公厅关于 促进服务外包产业发展问题的复函 国办函[2009]9号

全国服务外包政策研讨会

主办单位：商 务 部 外 资 司
承办单位：江 苏 省 外 经 贸 厅
无 锡 市 人 民 政 府
中 国 国 际 投 资 促 进 会
中 国 服 务 外 包 研 究 中 心



Study
New
Outsourcing
Policy

20 Service Outsourcing Base Cites Named

- They are:
- **Beijing, Tianjin, Shanghai, Chongqing, Dalian, Shenzhen, Guangzhou, Wuhan, Haerbin, Chengdu, Nanjing, Xian, Jinan, Hangzhou, Hefei, Nanchang, Changsha, Daqing, Suzhou, Wuxi** approved by the State Council in 2009 + **Xiamen this year**
- All these cites have built their Outsourcing Training centers or Institutes

A New Measure



中华人民共和国教育部

Ministry of Education of the People's Republic of China



WWW.MOFCOM.GOV.CN

✉ 邮箱登录

🏠 设为首页



中华人民共和国商务部

Ministry of Commerce of the People's Republic of China

教育部 商务部关于加强服务外包人才
培养促进高校毕业生就业工作的若干意见

教高[2009]5号

Target: Educating and Training **1.2 million outsourcing Professionals** and increase **1 million jobs** for university (under) graduates within **5 years**

Some Basic Questions



- What is Outsourcing Professional ?
- What Qualification we should require ?
- Can OPD rely on existing education system ?
- If not, what do we need ?
- How about traditional training system ?
- What we really need ?



IAOP OPBOK & COP Program

- Growth in Outsourcing Profession Led IAOP to release **Outsourcing Professional Body of Knowledge (OPBOK)** and **Certified Outsourcing Professionals (COP)** program in 2006
- However, the OPBOK is client-oriented



SSMED

- Towards the service economy, IBM even goes more step further to introduce the SSMED concept - **Service Science, Management, Engineering and Design**
- Do we need and how to follow it ?



Conventional Thinking

- When talking the talent issue, a conventional thinking always expects much from universities, but it's still not clear for us what differences between OP major and existing SE/IT majors ?
- Does mean to put in more additional courses ? Moreover, the university graduate is just an entry workforce, not solving whole HR problems in outsourcing business at all
- Chinese have a proverb:
“Distant water can't quench a nearby fire”



What Lack Of ?!



- To improve the competence, we should also consider how to enhance skills of on-the-job employees, which is a **continuous education** issue, an very weak area in china compared with India
- The main bottleneck constrained our development is mainly the lack in **senior and middle-level** professionals
- Some foreign clients made a pointed remark to us: “We just concern about how many **PMs** you can train, rather than programmers”
- More master or doctor degree is not a strong solution here, so what else ?

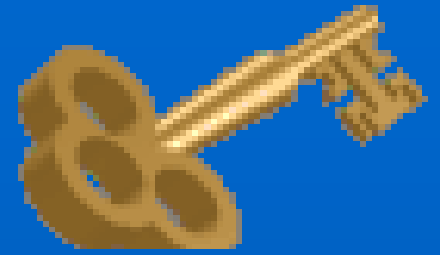
How About Training System ?

- The booming economy has stimulated a learning wave among most Chinese people for improved work and life
- Class teaching is the most prevailing learning model in China
- However, high cost and resource constraints (qualified teachers, available time, facilities etc.) of the traditional training class restrain its development
- There is a high demand to invent an open learning environment for free access with much lower cost



Proactive Solution Required

- For all these challenges and problems, we need a proactive strategic solution, not only rely on reactive methods
- How we can do that ?
- We need some 'Out-of-Box' thinking based on some recently emerging insights and trends



Some Key Viewpoints



Building Learning Society

- Today there is much talk of the learning organization, the knowledge economy and the like
- The '**learning society**' is an aspect of this movement to look beyond formal educational environments, and to locate learning as a quality not just of individuals but also as an element of systems
- Since **lifelong learning (LLL)** is now essential to survival and "thrival," we should re-examine how can provide better learning outside standard educational systems — which can be cost-prohibitive, if it is available at all



21st Century Education Reform In Japan

- *Ministry of Education, Culture, Sports, Science and Technology (MEXT):*
- “In order to create an enriching and dynamic society in the 21st century, it is vital to form a **lifelong learning society** in which people can **freely choose learning opportunities at any time** during their lives and in which proper recognition is accorded to those learning achievements.”
- As one of the fundamental policies of educational reform



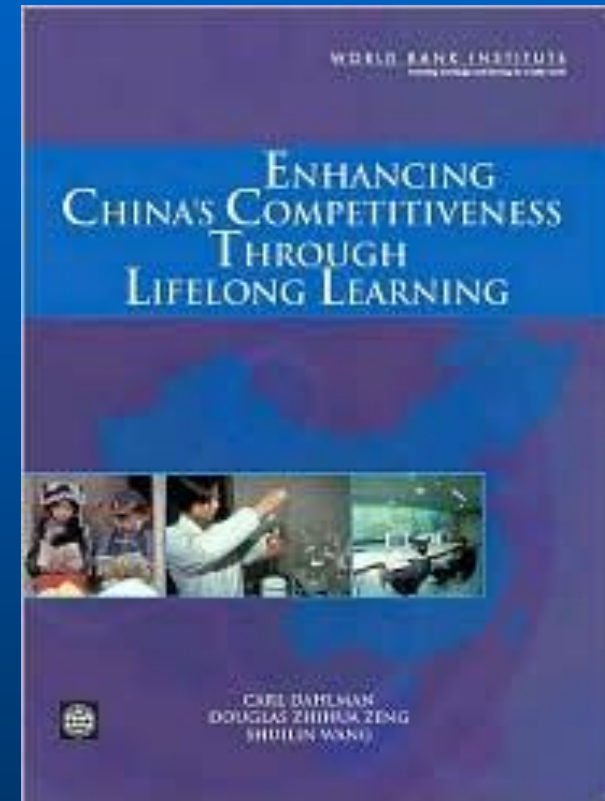
Lifelong Learning in Lisbon Strategy



- to define the goals for lifelong learning in terms of not only educational levels but also new jobs profiles and competences;
- **to develop a new infrastructure for lifelong learning;**
- **to create a diversified supply of learning opportunities able to provide more customised solutions:**
 - to develop the new instruments of e-learning and to explore the potential of the digital TV
 - to turn schools and training centres into open learning centres
 - to encourage companies to adopt learning organisations
 - to shape the appropriate learning modes for each target group
 - to spread new learning solutions for the low skilled workers
- **to foster the various demands for learning and to create a demand-led system:**
 - to improve the framework conditions for lifelong learning
 - to develop a dynamic guidance system over the life course
 - to renew the validation and recognition system
 - to create compensations for the investment in learning
- to spread new financial arrangements in order to share the costs of lifelong learning between the various stakeholders and encourage the initiative of companies and individuals;
- to improve governance for lifelong learning

LLL Is Becoming a Necessity

- China has a large population but still lacks human resources
- Turning the burden of a huge population into an advantage for human resources will benefit economic growth
- This is a strategic choice for China that will help it gain international competitiveness in the age of the knowledge-driven economy
- It has become a pressing task for China to establish a lifelong learning system



Towards Professionals

- As many new technologies are constantly springing up and technical domains move toward more complicated, the division of work become more and more specialized and detailed, requiring competent professionals to govern and operate
- Especially for those critical positions with high economic impacts and safety-related, there are special requirements on professional skills and job responsibilities, causing the need of the professionalism

Why a Professional?

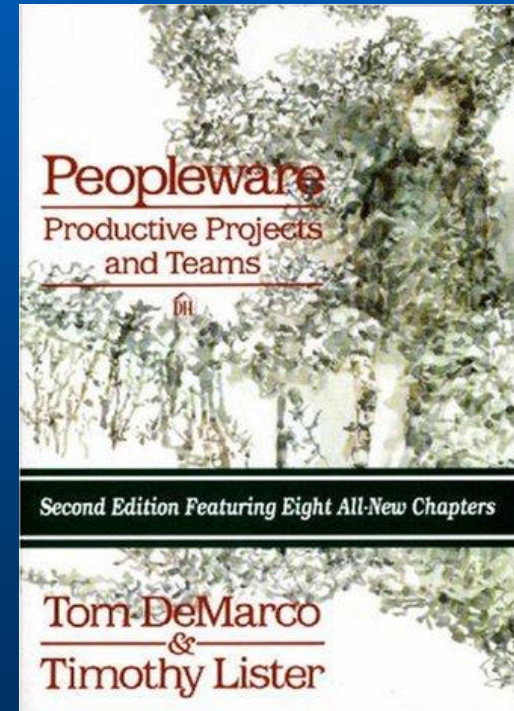
- **IT has become an integral part of our society in our personal and working lives**
- **Systems need to be built that meet the required needs, without errors and on time/budget**
- **Information systems are complex and expensive, and hence require specialist skills**
- **Therefore, the demand on professionalism in the SE/IT domain is a natural trend**

Peopleware & 4P Model



➤ Tom DeMarco first declared the “Peopleware” concept and stressed on professionalism by a ‘**4P**’ model:

- *Proficient* 精通熟练
- *Permanent* 持久恒定
- *Professing* 意向认定
- *Promise-Keeping* 保持承诺





Steve McConnell On: Three Professionalisms



➤ 个人职业化

Individual Professionalism

➤ 组织职业化

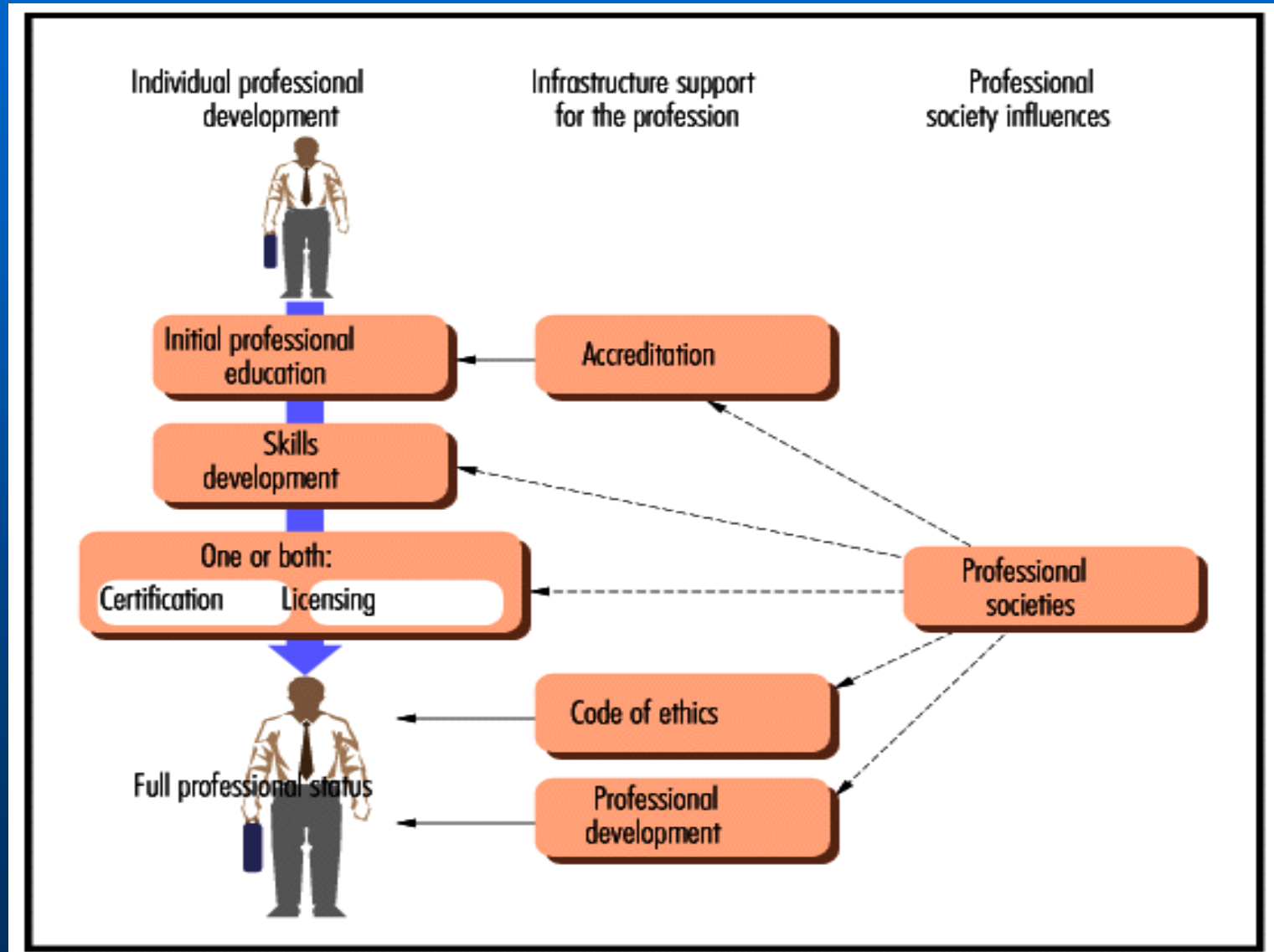
Organizational Professionalism

➤ 产业职业化

Industry Professionalism

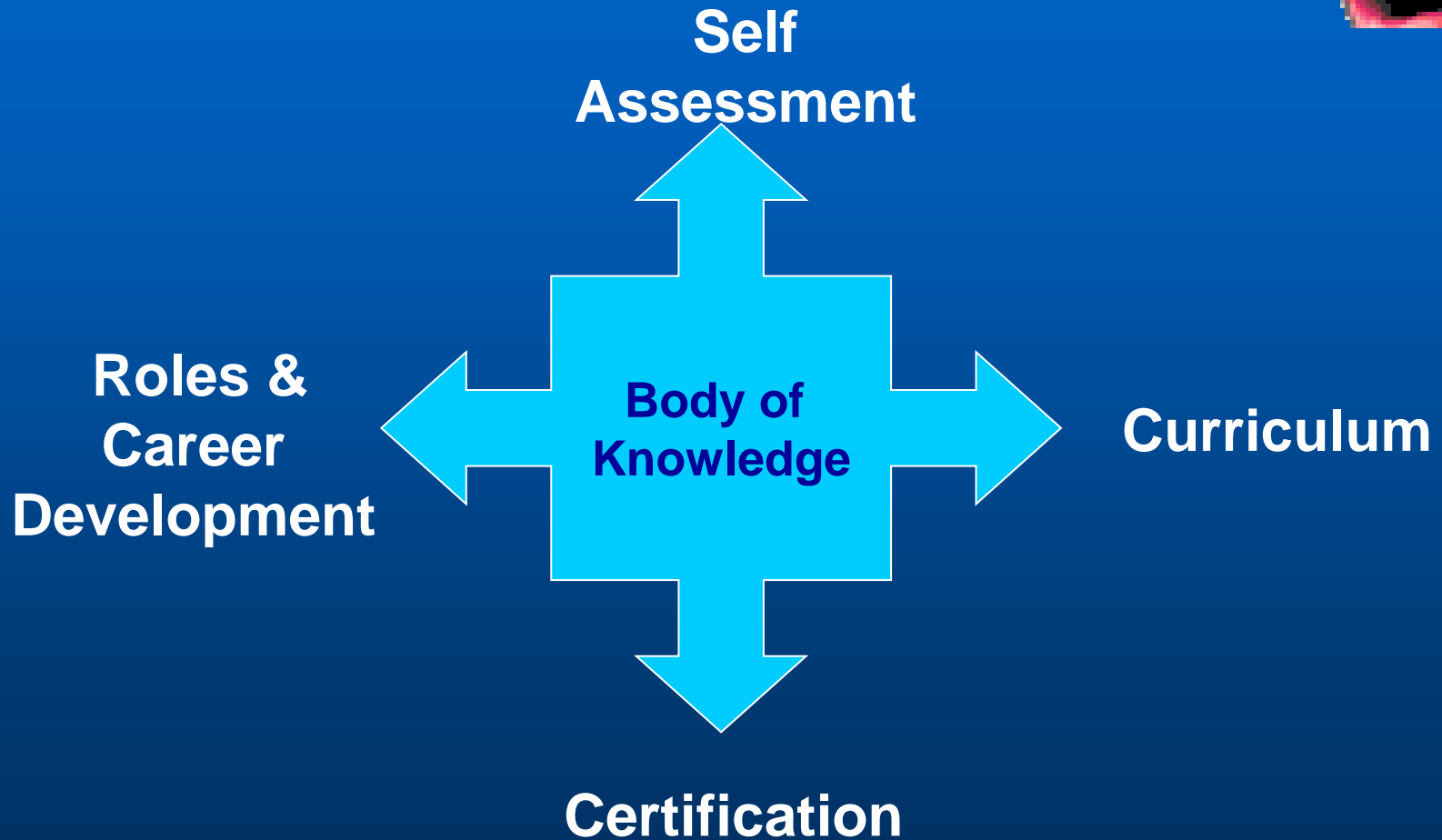
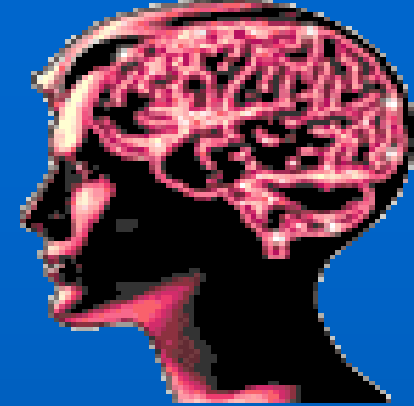


Infrastructure of Mature Profession





Role of BOK





Internationalization and Standardization in HRD

- **In a globalization era, global cooperation and development have become a routine and hence the matching in professional skills standard is utmost importance specially for offshore development**
- **The trend of HR internationalization and standardization is more obvious in recent time**

ISO/IEC 24773

- **ISO/IEC 24773:2008**
- **Software engineering -- Certification of software engineering professionals -- Comparison framework**
- **IEEE is the first to conform with its CSDA and CSDP certifications**



ISO/IEC TR 19759 - SWEBOK

- ❑ Extensive consensus process
- ❑ 5 rounds of review, 10,000 comments from more than 500 reviewers in 42 nations
- ❑ SC 7 experts participated in the IEEE consensus process



Prof. Ju was the first round reviewer

Refresh SWEBOK Guide

- The SWEBOK Guide currently plays a prominent role in the maturation of software engineering as a legitimate discipline and a recognized profession around the world
- The refresh, set for a mid-2010 release, is intended to bring the SWEBOK Guide in closer alignment with IEEE Computer Society certification programs, further define software engineering as a profession, and help bridge the gap between industry and academia
- The refresh is essential to maintaining the document's usefulness. "Keeping the SWEBOK Guide current with industry practices is essential to ensuring that it continues to be relevant to and used by all stakeholders
- The update was approved by the Computer Society Professional Practices Committee in 2008
- Four new knowledge areas will be added to the 2010 SWEBOK Guide to address engineering economy, computing, mathematical, and engineering foundations

Revision of SWEBOK Guide

- IEEE CS will commence revision of SWEBOK Guide in 2009, completing in 2010



- Lead editors:



- ❑ Pierre Bourque, Canada

- ❑ Alain Abran, Canada



- ❑ Juan Garbajosa, Spain

- ❑ Gargi Keeni, India



- ❑ **Beijun Shen, China**



项目管理国际标准 ISO 21500



June 9
2009

 PMFORUM

Teaching vs. Learning

- **Class teaching is traditional school education model**
- **Long formal school education experiences cause it to be the most prevailing learning model**
- **However, it is not the best model for lifelong learning because class teaching is essentially an one-direction pouring model for which all of learning contents are pre-defined by the teacher, not well meeting personalized needs of varied learners**

Learning To Learn (L2L)

- Therefore, we rather recommend to adopt a ‘Self-Learning’ model for lifelong learning in which the learning is transformed from a rather fixed ‘**Push**’ model to a flexible **on-demand** model (i.e. **Pull**)
- Combined with the **e-Mentoring**/Coaching services and optional class room, it will be a more effective ‘Bi-Directional’ learning & teaching approach
- More important, it can foster the capability for **Learning to Learn (L2L)** - a key skill for everybody in the Knowledge/Learning society

Push vs. Pull Learning

Push Learning

Passive student

Others set curriculum

Courses, workshops

Grades

Obedience

Learn on your own

Unchanging knowledge



Pull Learning

Active learner

Learner defines content

Conversation & discovery

Competence

Independence

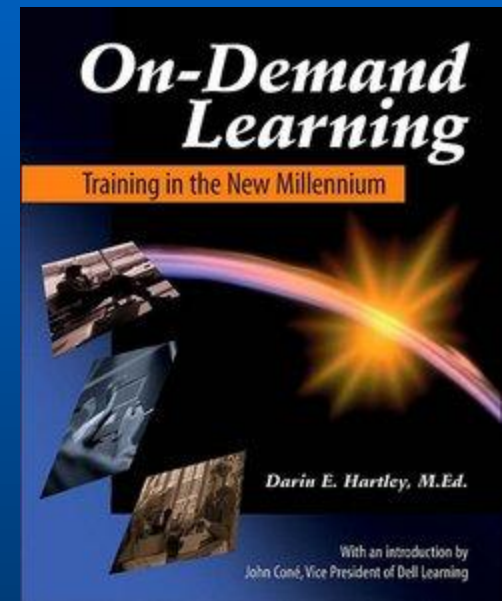
Learn in groups

Knowledge is transitory



Learning On Demand (LOD)

- Needs driven more than technology driven
- Curriculum Design have to catch up the needs of development – **Just in Time**
- 'e' learning = learning is changing
- Moving learning from where it is provided to where it is needed
- Encourage a more active personalized learning environment
- From static and systematic learning guided by BOKs To more dynamic and flexible knowledge services
- It encourage a more active personalized learning environment





Learners and Lifelong Learning

- In the Knowledge Society, every learner is a lifelong learner
- To improve greater access to education and learning opportunities for all, ICT should be used for this purpose, in other words, it should be an e-Learning system



THE STELLENBOSCH DECLARATION
ICT IN EDUCATION: MAKE IT WORK
(IFIP, Stellenbosch, South Africa, July 2005)



Building a Connected Learning Community: Learning without Limits

“The single most important use of information technology is to improve education.”



Bill Gates

Chairman and Chief Software Architect, Microsoft

“In a knowledge-based economy, education skills are the only game in town.”



Dr. Lester C. Thurow

Professor of Management & Economics, MIT

*** Handout – 2020 Student**

Learning 2.0 Paradigm

Technical context (web 2.0)

- ❑ Web as a platform / applications on the web
- ❑ Collaborative & interactive applications
- ❑ User centred model

Pedagogical context (connectivism)

- ❑ Learning is a constant building of a network
- ❑ Capacity to learn more imp. than contents
- ❑ Knowledge rests within the network

Learning 2.0 paradigm

- ❑ Learner-centred design
- ❑ Teachers and learners as peers in a network
- ❑ From traditional learning applications to an open learning environment

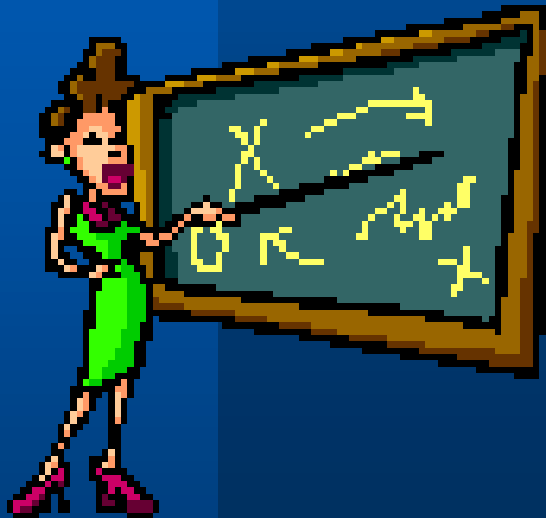




From eLearning 1.0 To 2.0

	eLearning 1.0	eLearning 1.3	eLearning 2.0
Main Components	Courseware, LMS, authoring tool	Reference hybrids, LCMS, discussion groups	Wiki, Social Networking & Bookmarking, Add-ins, Mash-ups
Ownership	Top-down, one-way	Top-down, collaborative	Bottom-up, learner-driven, peer learning
Development time	Long	Rapid	None
Content Size	60 minutes	15 minutes	1 minute
Access time	Prior to work	In between work	During work
Delivery	At one time	In many pieces	When you need it
Content Access	LMS	Email	Search, RSS feed
Driver	ID	Learner	Worker
Content creator	ID	SME	User
Training's Role	Gourmet Chef	Short-order cook	Food critic

From Training To Knowledge Service



- To promote technology transfer, we released a technology resource website called 'IT Source' (www.ITURLs.com) in 2002 which quickly became an attractive IT website in China
- Many young admired it 'A real help'. After first surprise, we recognized such a fact that even we published only what we have collected our work help them saving the time for doing similar thing. we called it as '**Knowledge Service Reuse**', that is, one's labour exempts others from repeated work
- This inspired us to do '**Knowledge Services**' idea
- For technology transfer, we are just enough touch a little bit of terms and points. For knowledge transfer, we need a **much comprehensive collection**, maybe based on the domain body of knowledge, that will be a much **greater value** for learners



What Teacher Is ?



- As a university professor, I made a connection in the mind with the role of teachers in knowledge services who are responsible for well delivering the relay baton to help successors acquiring knowledge more quickly and much better



Knowledge Services



- In knowledge economy, knowledge is the first resource and knowledge is power !
- **Knowledge is not only a resource/asset waiting for mining, but also an active service**
- Knowledge as a Service (KaaS) has been proposed as a knowledge delivery platform to facilitate human obtain right knowledge whenever and wherever needed to perform a task successfully, that means, to provide on-demand knowledge acquisition

Value Chain of KS





Building Public Knowledge Service Platform

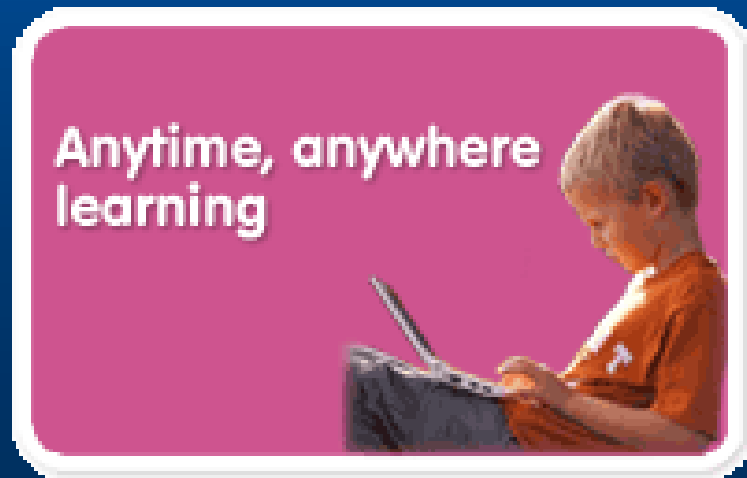
- **Knowledge is the important strategic resource**
- **Knowledge services are the fundamental infrastructure of future knowledge economy and major assurance of knowledge supply chain responsible for discovery, digging, mining, supply and use of knowledge treasure**
- **It needs a conscious, organizational and highly professional services**
- **Construction of knowledge public service platform can help reducing learning curves, promoting learning organizations and organizational learning, raising human capital to improve core competence of a nation or enterprise**

Public Knowledge Service Platform (PKSP)



A Solution Framework Proposed

- The solution framework proposed by us is to established the so-called 'Public Knowledge Service Platform' (PKSP) based on our years investigation, which will be provided as an **ideal learning environment** to support **one-stop** and **5A** knowledge services for development of professionals:
 - **Anytime**
 - **Anywhere**
 - **Anything**
 - **Anyway**
 - **Any pace**

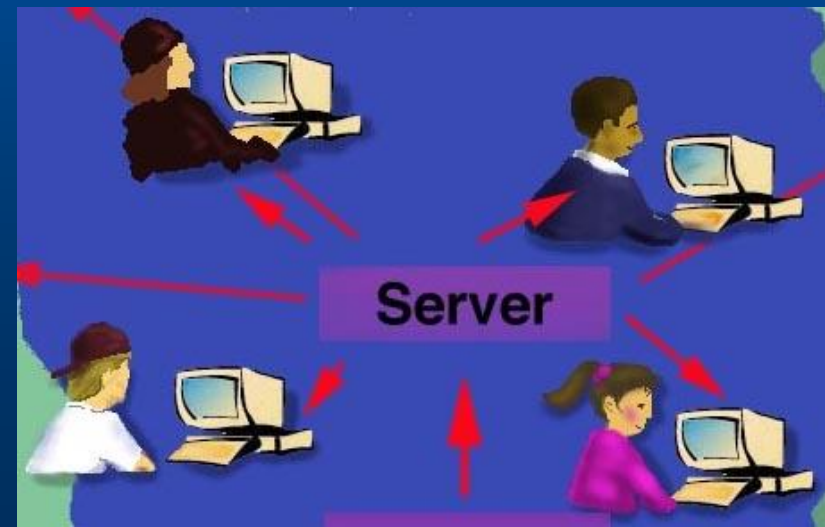


Why PKSP +

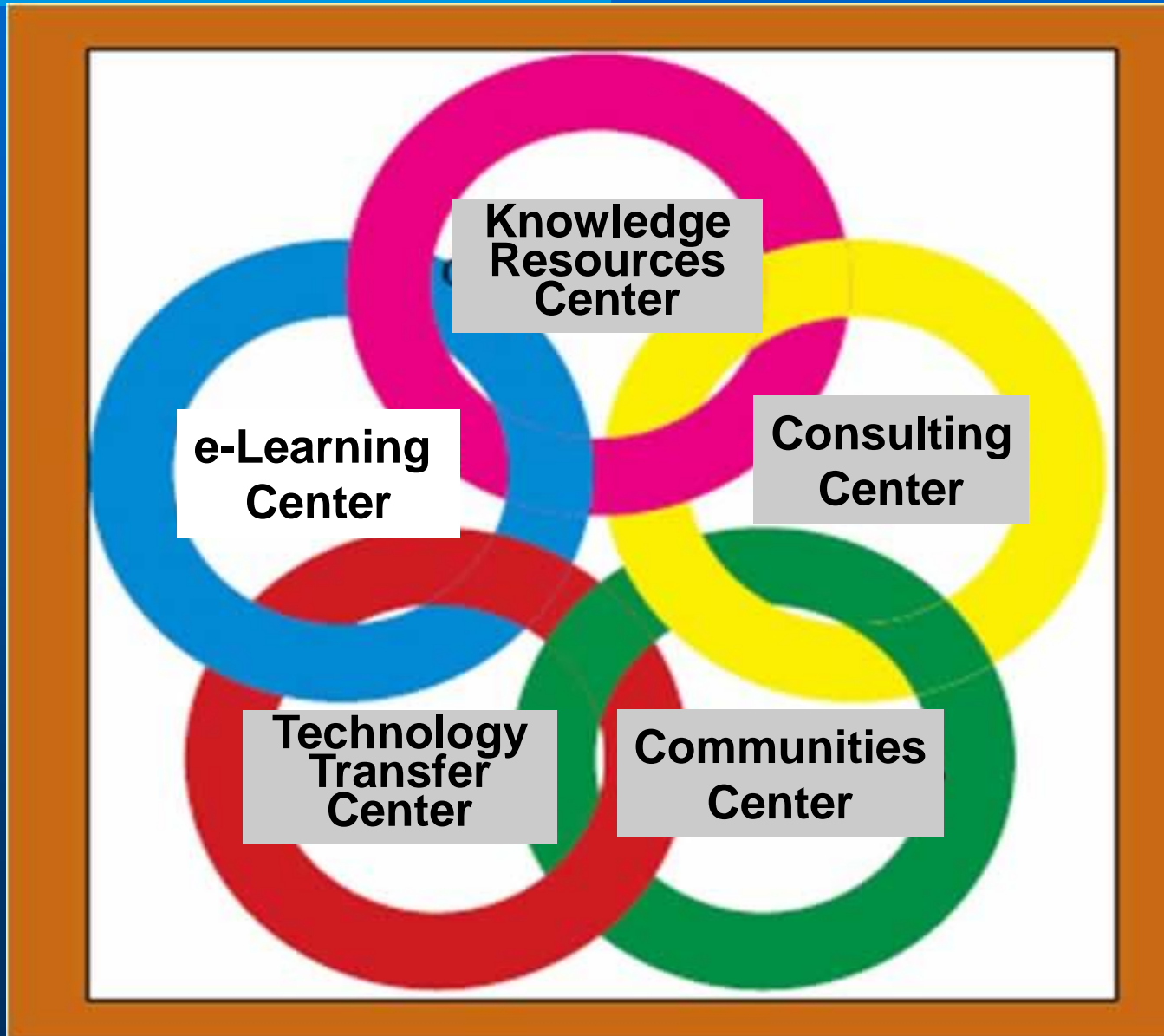
- Because it can give full play of IT Advantages, through Internet, implement dissemination and nationwide sharing of knowledge resources and promote formulation of COPs
- It can realize the e-Knowledge and Intelligent KM, turning originally scattered and isolated information into organic knowledge, then transforming it again into an open and accessible information resource
- By fully utilizing centralized resources and sharing the common service functions of the platform, it can readily implement One-Stop service and integrate cross-domains knowledge for fostering interdisciplinary talents

Identified Functions of PKSP

- **Technology Transfer Center**
- **e-Learning Center**
- **Knowledge Resource Center**
- **Consulting Center**
- **Communities Center**



Five Centers in PKSP

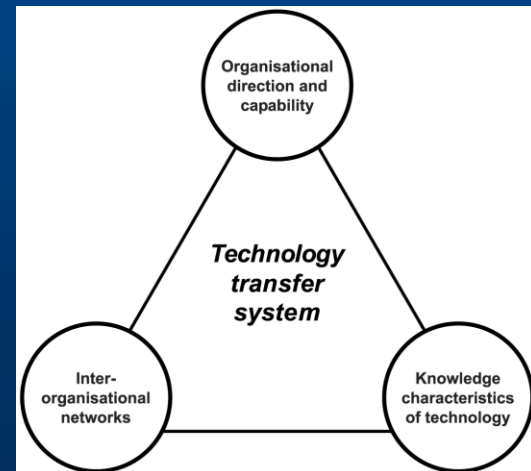


Functions of PKSP



Technology Transfer Center

- As technology transfer center, it is dynamically evolving to inform latest technical progress and reflect the leading-edge technology
- To do so, it is important to establish an independent team for information searching and services and a cooperative and participatory information network





e-Learning Center



- The e-Learning center collects and reuses existing knowledge assets developed to be shared over a more wide scope
- Although they still are in old learning model, it's useful as a quick entry or area roadmap for most new comers



Knowledge Resource Center

- As an authoritative knowledge source, its development must have robust backup expertise to cover enough wide spectrum and degree of depth in its knowledge resources
- To ensure high quality and keep updated contents, a dedicated professional team for knowledge services is a must, including qualified domain experts' participation



BOK-Based Solution

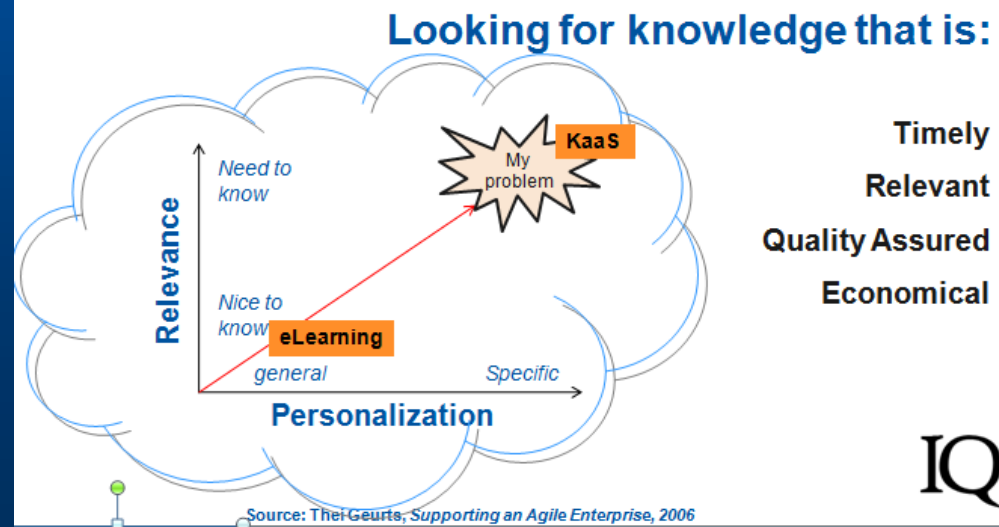
- One solution suggested for that purpose is to fully apply available **Body of Knowledge** of related domains (BOKs) as a scientific guide in collecting knowledge resources because the BOK is an essential achievement defined by the domain experts to specify what knowledge and skills should be mastered by professionals in that domain
- The HRD needs a quality standard and the BOK is a vital part of HRD reference framework towards **professionalism, internationalization** and **standardization**

Demand-Driven Approach

- The key for KaaS is having knowledge at the time of maximum opportunity
- Thus, the priority in the PKSP development is put on what demanded most from society development
- – a learner-centric and where-needed approach

Knowledge as a Service (KaaS)

Relevance combined with true personalization yields the best results.



Focus on Three Main Domains

- Based on our own background, our development in PKSPs has focused on the following main domains:
- the **Software Engineering** domain urgently required by developing software industry;
- the **IT** domain urgently required by implementing state informatization strategy;
- the **New Product Development & Innovation** domain urgently required by building the Innovation-Oriented country



Building A Solid Foundation

- To gain a solid foundation for developing PKSP, we started our R&D project from systematically searching, collecting, studying, compiling and developing related BOKs
- In the three main domains mentioned above, so far, we have gathered **132** associated BOKs in total

Knowledge Resources Repository

- This center is very similar to the web of knowledge, a centralized knowledge resources repository based on these BOKs
- Guided by the interested BOK, learner can easily access what knowledge points/areas he/she wants to know
- The resources repository provides an one-stop services just simply via a browser
- Its user likes entering a specialized reading room with very rich collections and can learn anything what he/she wants
- We refer this function as “ **A Learning Paradise for IT Talents**”

Resources Collection Efforts

- A resource collection efforts have been launched in parallel with the 'first things first' principle
- A dozen of special domains have begun to take sharp already, such as:
- **SE domain:** Software Architecture, Requirements Engineering, Project Management, Quality Management, Software Testing, SWEBOK and SSMED
- **IT domain:** ITSM/ITIL, Information Security
- **Innovation domain:** New Product Development, Innovation Methods, Knowledge Management

What We Have Developed



➤ SE Domain

➤ 知识体系	61 项			
➤ 新技术	21 门	360 学时	7989 页	236 MB
➤ SE 实践	55 门	567 学时	15294 页	316.6MB
➤ 服务外包	39 门	300 学时	8027 页	177 MB
➤ 软技能	10 门	104 学时	2068 页	27.5 MB

➤ IT Domain

➤ 知识体系	52 项			
➤ 基础设施	16 门	228 学时	3982 页	179 MB
➤ 解决方案	35 门	572 学时	8928 页	352 MB
➤ 实施篇	34 门	484 学时	8386 页	296 MB

➤ Innovation Domain

➤ 知识体系	19 项				
➤ 创新人才	22 门	338 学时	8710 页	182 MB	
➤ Total BOK	132	229 M	2977 hrs	63217 pp	1762 MB



Self-Paced & On Demand

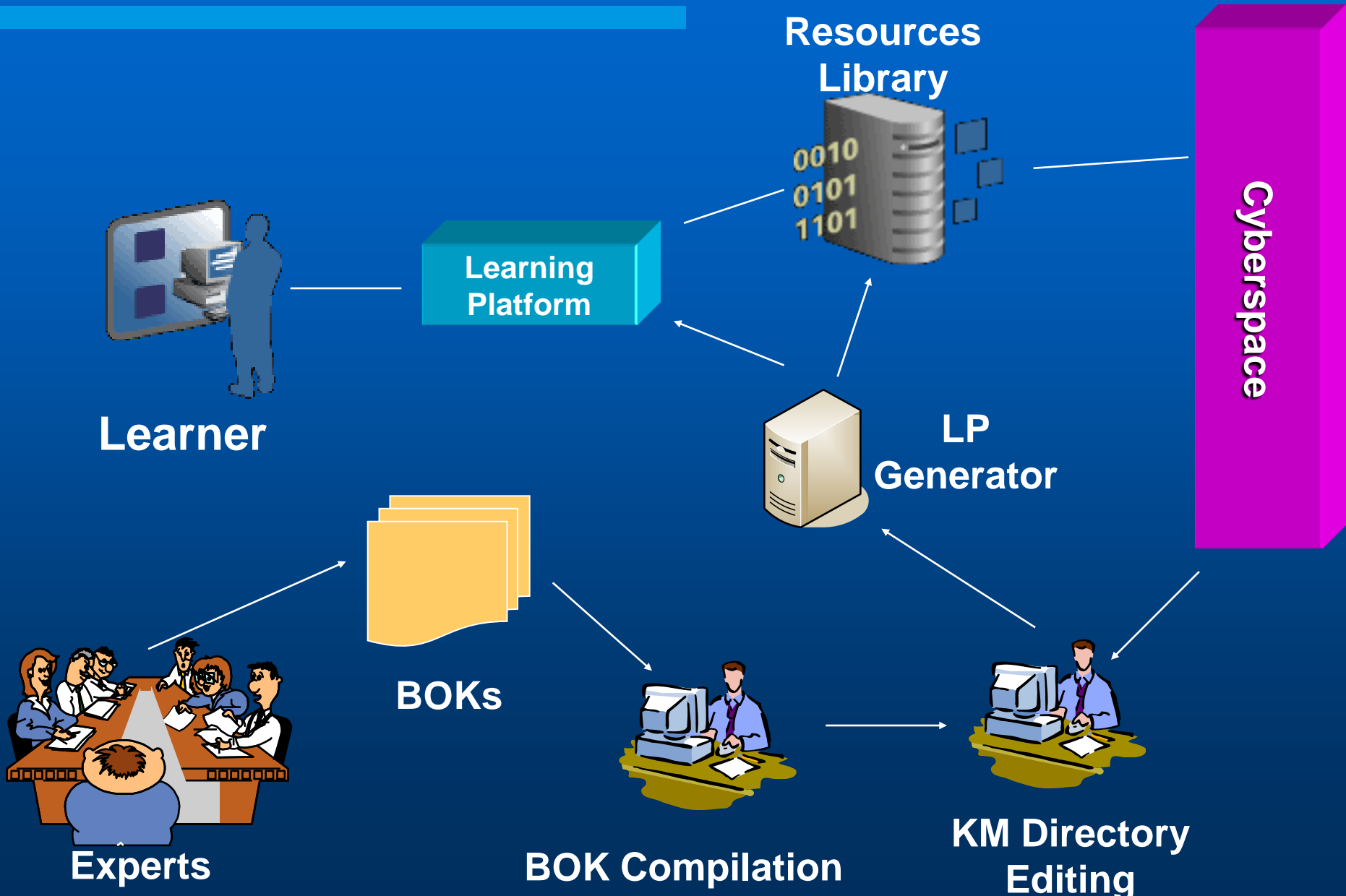
- All these resources will help users to fulfill a 'self-paced' learning with on-demand knowledge acquisition



Consulting Center

- Provide **On-The-Job Learning/Job Embedded Learning/Contextual Learning**, a more interesting and valuable learning platform – a new direction of next-generation learning environment
- Learn while working/learn by doing, learn for better job – Provide **Performance Support**
- Learning for Use, Use after Learning. For veterans, review what has been learned and learn something new. For new comers, a new model for internship. A high-motivation learning helps much deeper grasp
- It seems that a teacher, expert, master or knowledge base always accompanying you, providing online and real-time assistance

OJL Platform



The Central Role of BOKs

- The Figure shows a development process the new learning platform in which you can find the related BOK will also act an important role that ensure the knowledge collected can fully cover all key points in the domain workflow
- And the keywords presented in all knowledge points will help for an ontology-based search



Communities Center

- This OJL platform has all advantages of contextual learning systems
- More important is that it can promote the construction of **Community of Practice (CoP)**
- It is really an open system and community
- All Learning Contents are Accepted Public and Daily Reviews and Examinations From Wide Practitioners
- A Dynamic Knowledge Repository Improved By Better Recommended Learning Materials
- BOKs Are Being Evolved By New Practical Issues and Challenges Identified
- The Beneficial CoP Members Are Expanding Over Time

A Workbench With 3 Links To CoP

- Domain BOK Development – A Link To Leading Experts In CoP
- Knowledge Resource Collection – A Link To Worldwide Experienced CoP Members
- The Learners Forum With Idea and Experience Exchange – A Physical Link To Active CoP Members





Participatory Web



Web 1.0

"the mostly read-only Web"

250,000 sites



user generated content



45 million global users

1996

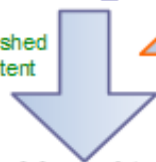
Web 2.0

"the wildly read-write Web"

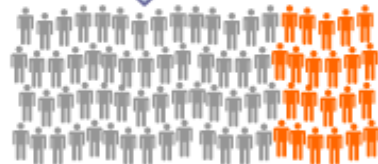
80,000,000 sites



published content

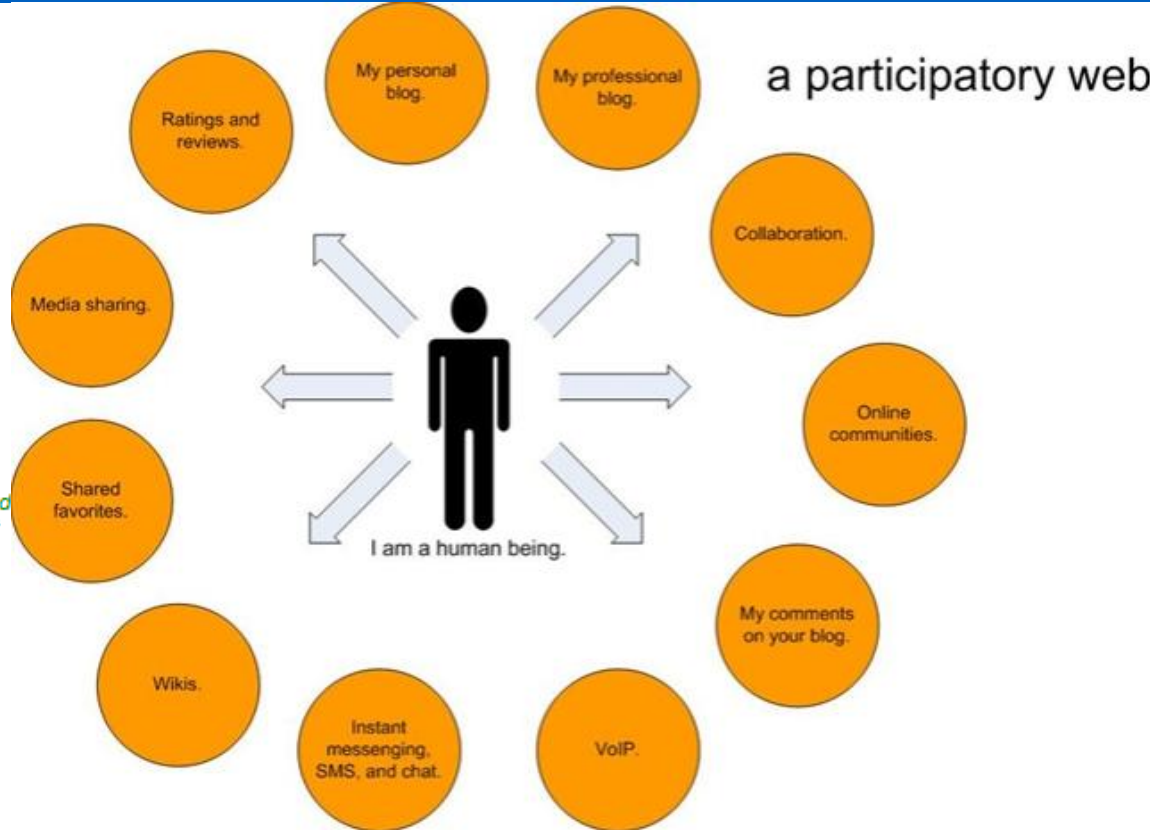


user generated content



1 billion+ global users

2006



Each member is not only a learner, but also a contributor



Outcomes: Shared Learnings that Change Practice

“What I gained most was the chance to collaborate. It was a dream come true for me.”





Features In Networking

- **Knowledge Services Pushes Networking to its extreme points, embodied in three aspects:**
- **Connect different platforms together to form a ubiquitous, accessible in any time and interoperable shared application environment**
- **Link Originally scattered and unorganized information into complete and organic knowledge, then turn it into accessible information and send the knowledge service into everybody's hands**
- **Tie members of COPs together to formulate a collaborative Learning & Working environment – Co-Building a Learning Community for Society's Progress**

Learning on any device



Pocket PC



Handheld
PC Pro



TV



Personal
Computer



ePad

- Same content on many devices
- Wireless connectivity
- The power of your PC, everywhere

New devices, powerful software, and a global explosion in web services combine to enable lifelong learning anytime, any place.

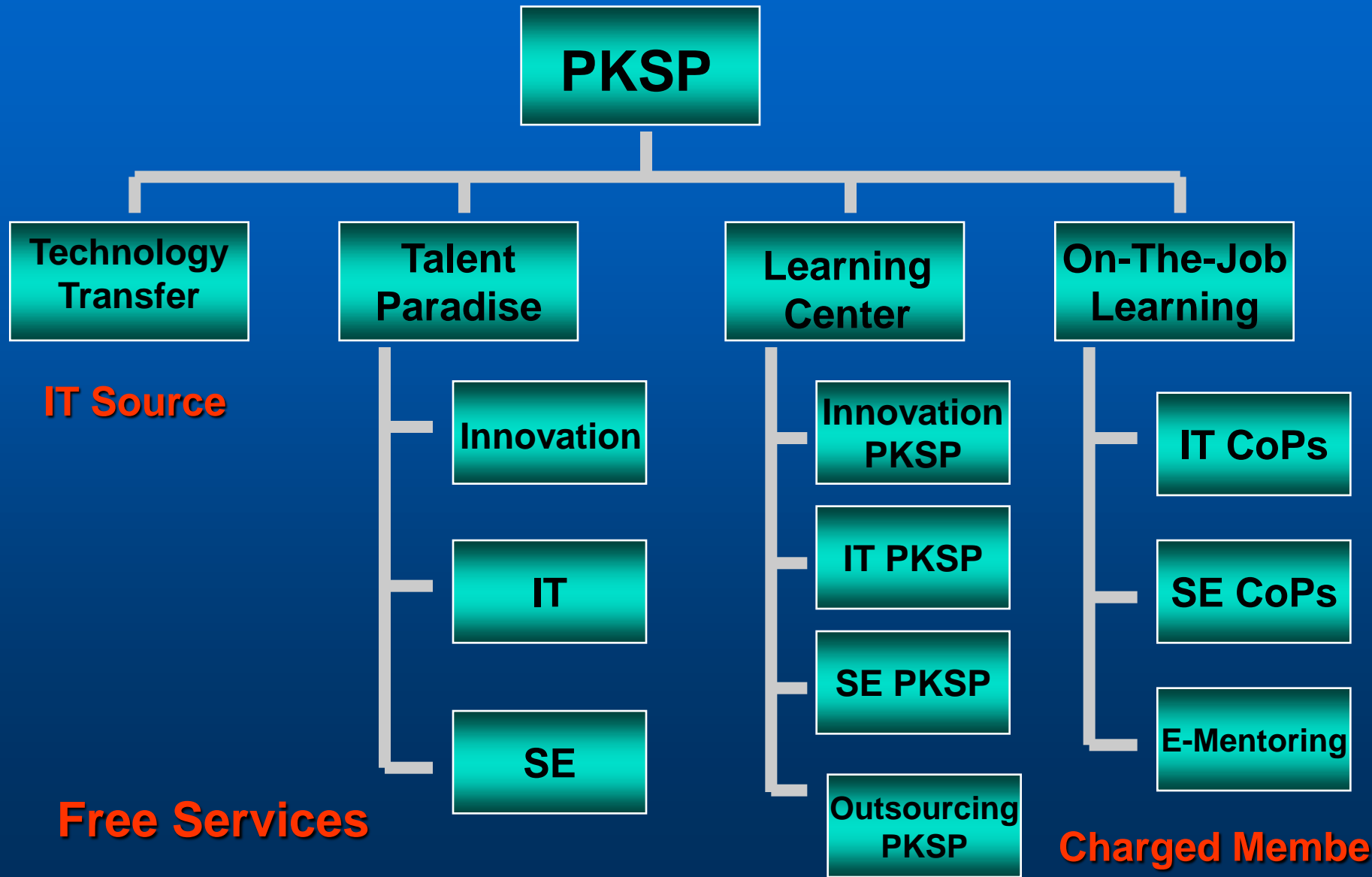


Four Public Knowledge Service Platforms

- Outsourcing PKSP
- Software Engineering PKSP
- IT PKSP
- Innovation PKSP



Public Knowledge Service Platform (PKSP)



The Outsourcing PKSP



A Prompt Response

- As an active response to the demand on outsourcing professional development, we also promptly released our **Outsourcing PKSP** plan based on our R&D achievements under the flag '**From Process Maturity To People Maturity**'
- In the end of 2008, we have announced to release a prototype demo version of Outsourcing PKSP to the Shanghai Commission of Commerce and the Software Offshore Business Union of Shanghai (SOBUS)

Why Develop Our Own OPBOK

- After doing a comprehensive survey on training models for outsourcing professionals, we found quite scattered solutions. Even each one has its merits and specific views, lack of unified framework is obvious problem
- Many of them declared to be suitable for both clients and providers side, however, actually more clients-oriented after a careful examination
- In view of these problem, we tried to integrate these existing models for assimilating the best of them
- Now we have compiled a draft of OPBOK, which is provider-oriented and can be used in training of domestic outsourcing professionals
- The design guideline behind the OPBOK is as follows

Reference OPBOK Models



Insights Behind OPBOK

- Outsourcing Is Technology/Knowledge Intensive Job
- Outsourcing Is Service
- Outsourcing Is Business
- Outsourcing Is Management Practice
- Outsourcing Focuses on People Factor
- Outsourcing Is a global activity with new challenges
- Based on these recognition, we follow the framework of CMU's eSCM model to re-organize the OPBOK into five management, which avoid overlaps appeared in many existing models
- The new OPBOK integrates all merits of existing models and provides a good basis to match with them

OPBOK – Five Management

- **Business Management**
- **People Management**
- **Technology/Knowledge Management**
- **Global Project Management**
- **Service/Operation Management**





A New Starting Point

- **Even it is still a draft to be further refined, we can consider it as a starting point towards a perfect OP knowledge schema**
- **We are determined to make a real contribution to training business of outsourcing professionals**
- **After seeking comments and finalizing the manuscript, we will develop related training materials ASAP based on our OPBOK**

Service Outsourcing is an Emerging Multidiscipline



Science and Engineering

Industrial and Systems Engineering

Computer Science & Info. Systems

Math and Operations Research



Economics and Social Sciences

Business Anthropology

Organizational Change & Learning

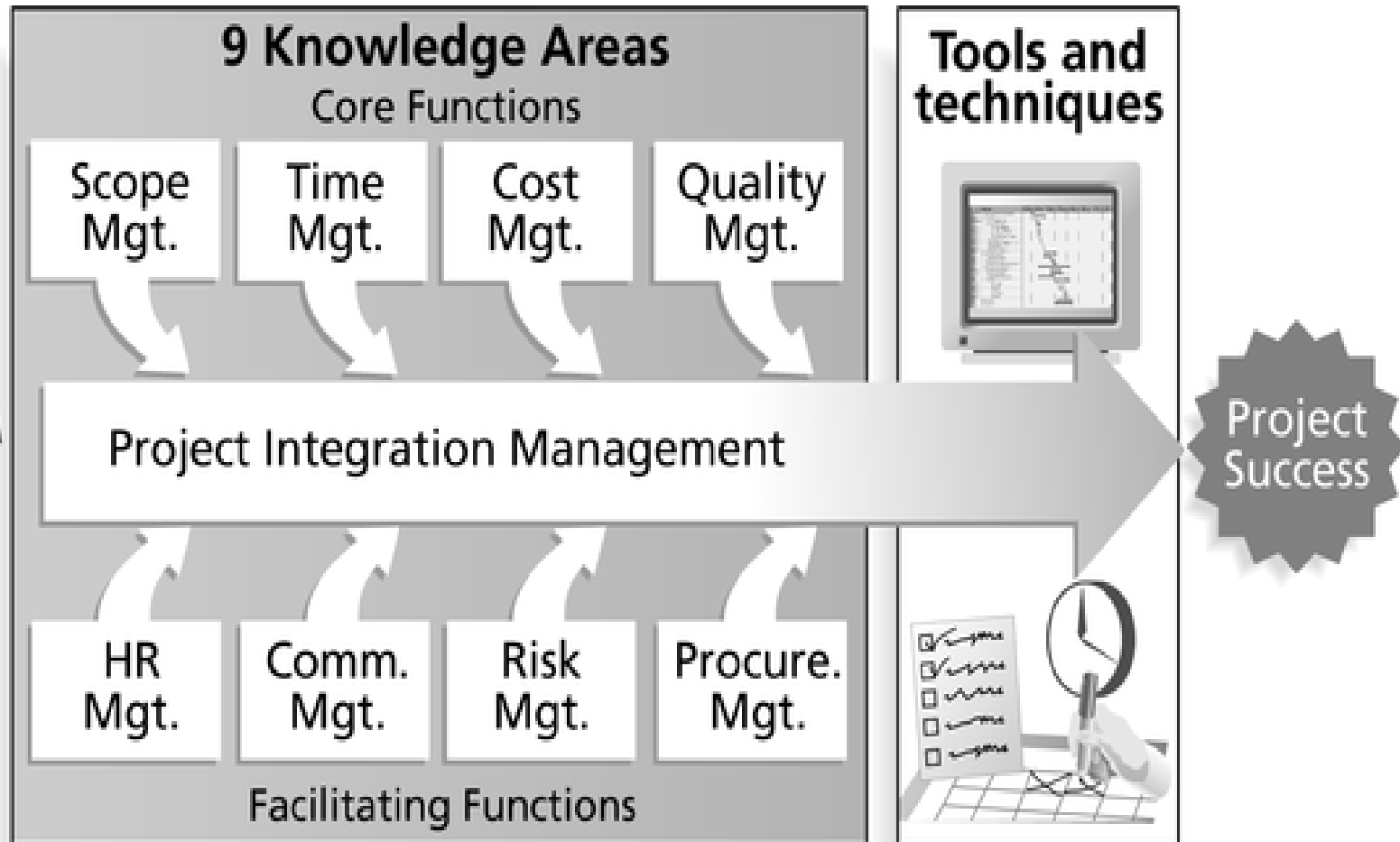
Business and Management

“Need I-shaped, T-shaped, π -shaped people...” – Stuart Feldman (Oct. 6, 2006)

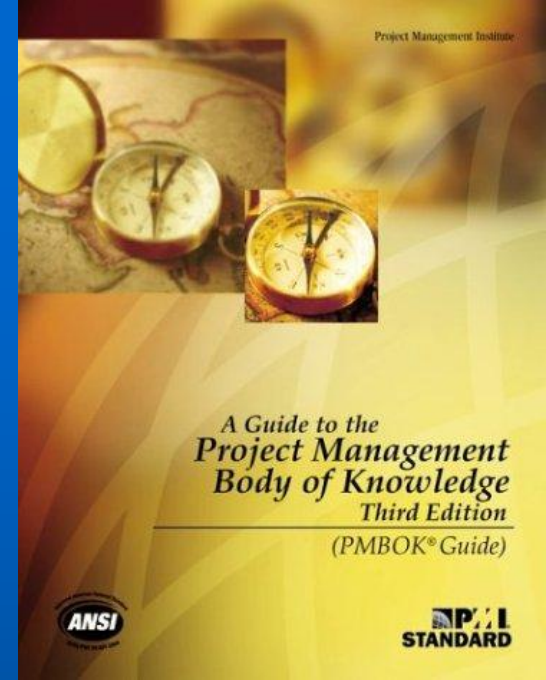
More BOKs for OPs

- Outsourcing is an emerging multidiscipline which needs T-sharp professionals, i.e. having both broad and deep knowledge: speaking the language of many disciplines, and being deep in at least one area
- A good OP knows not only software development, also has management experiences, can do a better service and even deep domain knowledge able to deliver innovative solutions to clients
- To make this happen, the outsourcing knowledge resources repository should gain backup from a wide variety of BOKs. Our 132 BOKs gathering would be a valuable asset for OPD

PMI PMBOK



PMBOK Extension



➤ PMBOK – e =

➤ PMBOK +

➤ Agile Project Management +

➤ Global Project Management +

➤ 21 Soft Skills

Lets talk about **SOFT SKILLS**

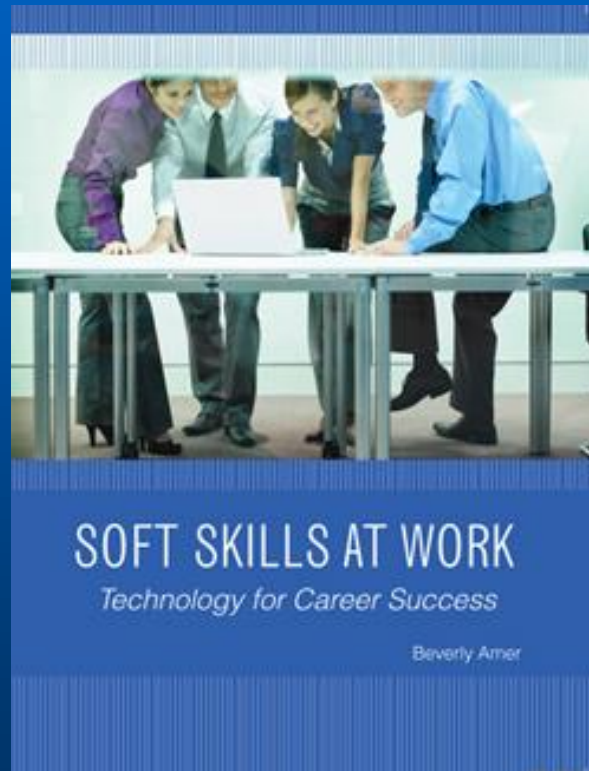
Because Managers need these two things

- Certain Personality and Values
- Awareness of themselves and others

**This is soft and fluid
BUT WE CAN ASSESS
THIS PRETTY WELL**



Soft Skills Needed !



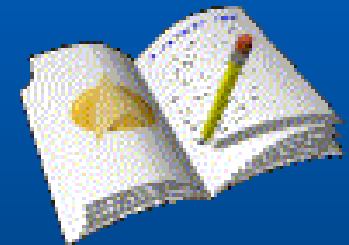
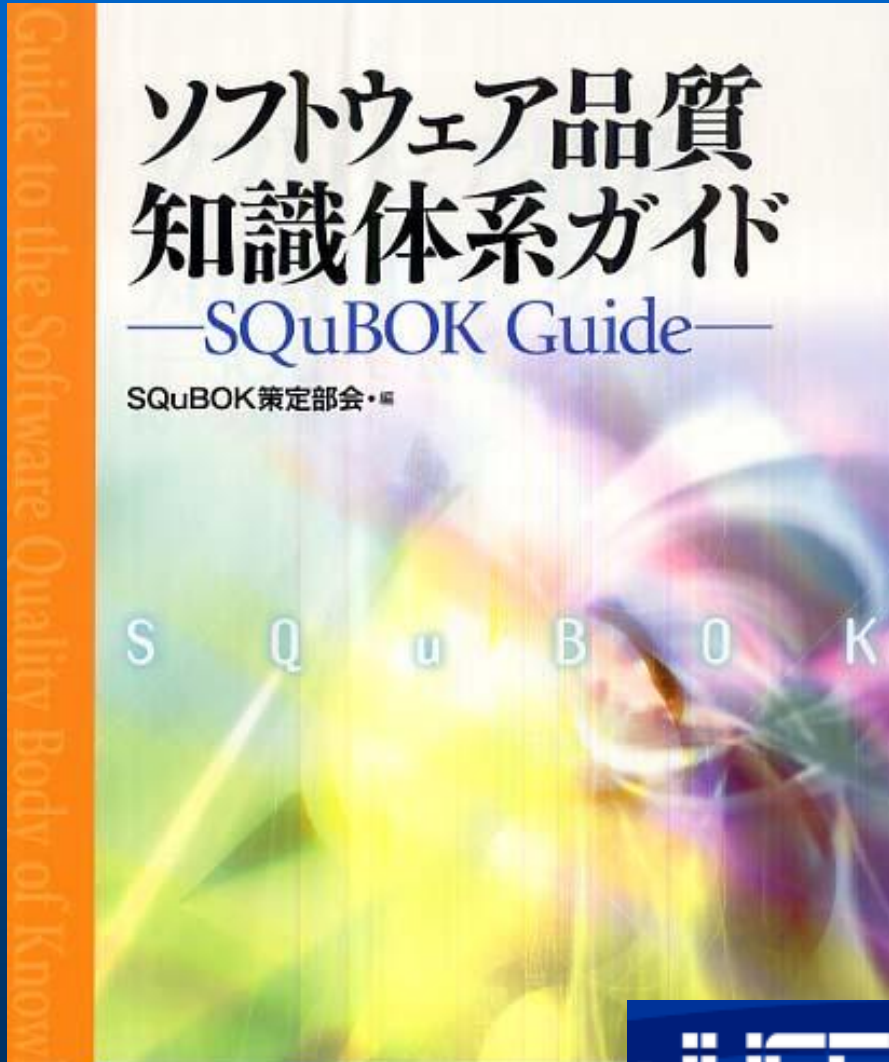
21 Soft Skills



- Leadership, 领导力
- Critical Thinking, 批判性思考
- Work Ethic, 工作伦理, 职业精神
- Self-Motivation, 自我激励
- Honesty, 诚实
- Teamwork, 团队精神
- Risk-Taking, 风险承担
- Adaptability, 适应性, 灵活性
- Interpersonal, 人际关系
- Stress Management, 压力管理
- Creativity, 创造性
- Influencing, 影响力
- Research, 研究能力
- Problem-Solving, 问题解决能力
- Organizational, 组织能力
- Multicultural, 多文化处理
- Learning, 学习能力
- Time-Management, 时间管理
- Oral Communication, 口头沟通
- Written Communication, 文字沟通
- Detail Orientation, 细心周到

Open
Knowledge

Software Quality BOK SQuBOK®



OHM
Ohmsha

UJSE

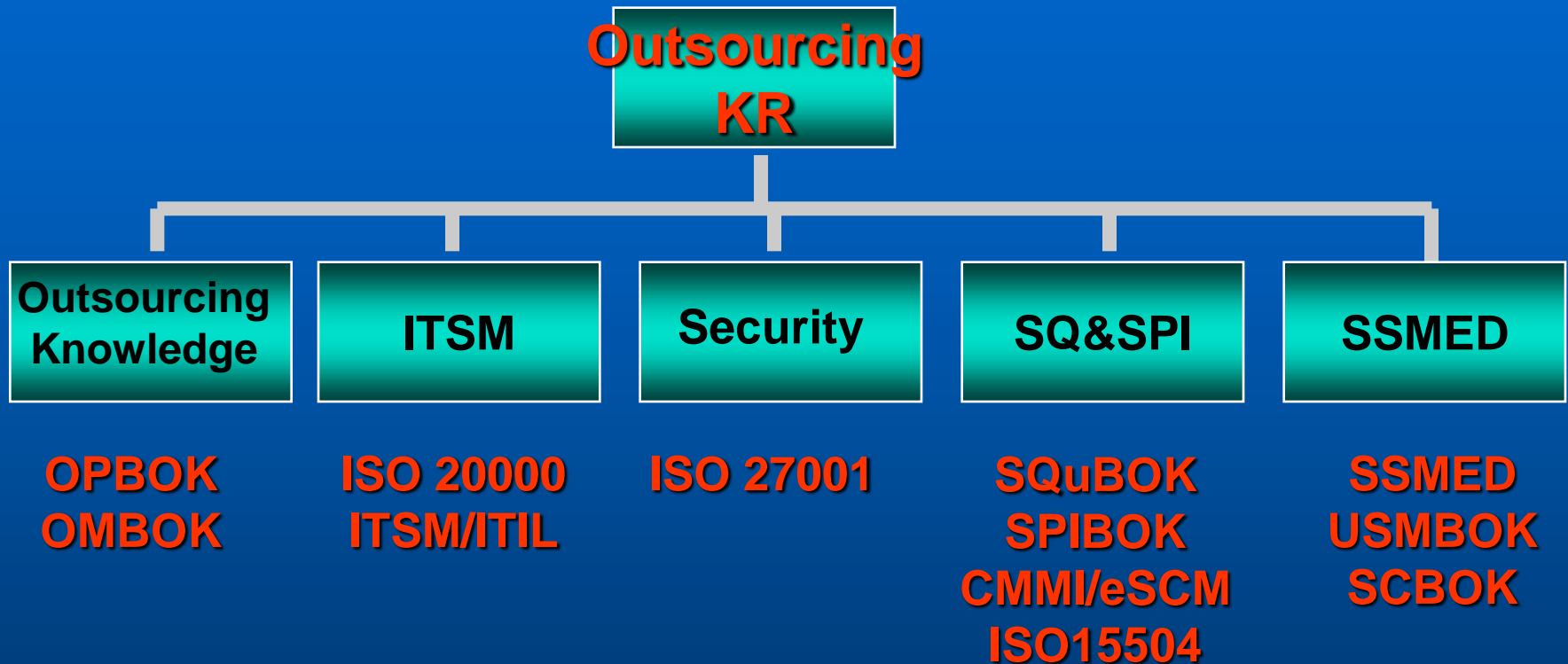
Union of Japanese Scientists and Engineers

- Funded by Shanghai Science Commission, a research project for developing NPDBOK (New Product Development BOK) was accomplished at Shanghai in the spring of 2004
- It integrated and extended the DRM and SCPD BOK
- The NPDBOK covers 5 knowledge areas:
 - **Strategy and Planning**
 - **Organization and Teams**
 - **Process**
 - **Tools and Methods**
 - **Technologies**
- An accompanying training materials and resource have been developed in parallel
- All of these can be used to support the Offshore Product Engineering, a major KPO area





Outsourcing Knowledge Repository



Features:

All columns are based on related BOKs or Standards to ensure a complete cover of main KAs and match with International or industrial standards

* Total knowledge resources over 30K URLs Expected



Main Features of Our Courses

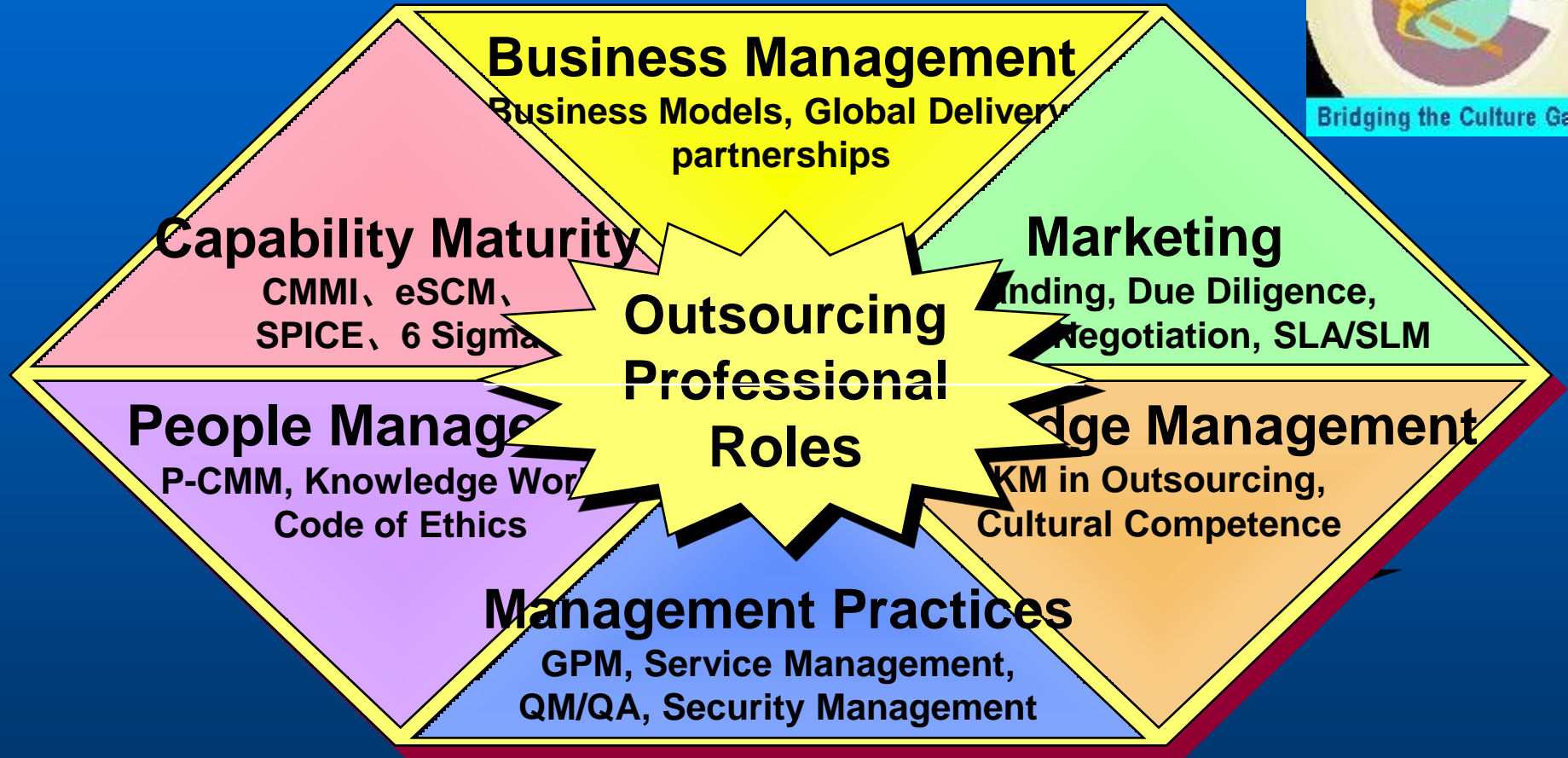


- **Rich Contents and Wide Coverage, Not limited to development, also emphasizing on Management Practices, a key in Outsourcing**
- **Towards Professionalism and Internationalism, Guided Scientifically and Systematically by “Body of Knowledge” (BOK), able to match with international standard in outsourcing practices**
- **The Most Complete and Rich IT Outsourcing Training materials with leading Position In Current China**
- **39 Topics and 300 Hours Training Materials with 8027 .ppt pages have totally be Ready and can be released immediately on to the Public Service Platform for Practical Use**
- **As it can be provided as a Networked Knowledge Service, It will significantly Reduce the Learning Cost and Provide One-Stop 5A Services For On-The-Job Professionals**
- **It will be an Open Workbench for sharing Knowledge Assets which can effectively support the nationwide needs in Developing Outsourcing talents to embody Shanghai’s real contribution to Implementation of the State “1000-100-10” Project**

OP e-Learning Center



Bridging the Culture Gap



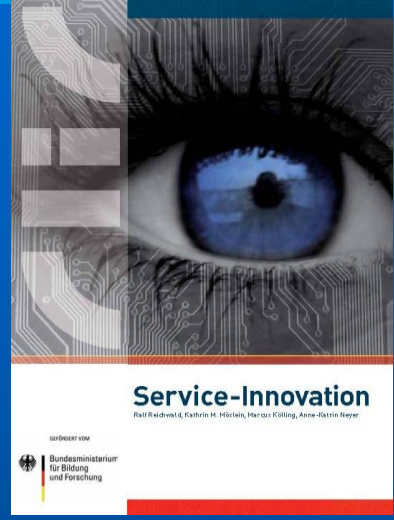
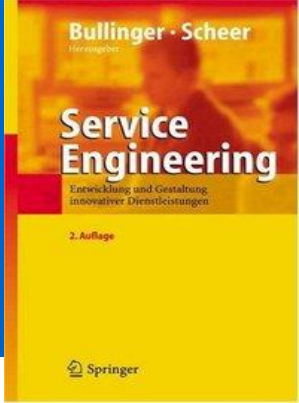
Oriented To Multidisciplinary Outsourcing Professionals

Optional Course Modules

Area	Course Modules
Business Management	New Trends, India Model, Business Model, Partnerships, Global Delivery Model, BTO, KPO, Entrepreneurship
Marketing	Branding, Due Diligence, Pricing & Negotiation, SLA/SLM, e-Marketing
People Management	P-CMM, Knowledge Worker, Code of Ethics, Mentor
Capability Maturity	CMMI, eSCM, SPICE, 6 Sigma, COPC-2000, SEPG, PSP/TSP
Management Practice	GPM, Service Management, OMF, QA, SW Testing, SPC, Security, ITSM/ITIL
Knowledge Management	KM in Outsourcing, Cultural Competence, OPD, UML

Open Knowledge

New Training Materials for Modern Services



Service design is

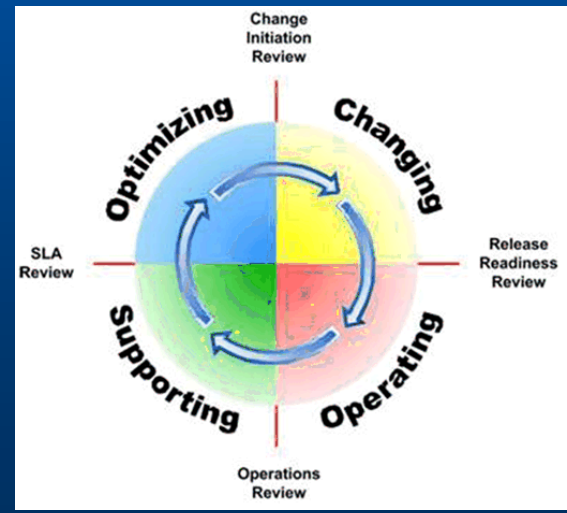
giving people what they want, the way they want it, when they need it



SVC Theory



SVC Quality



SVC Management

International Connection

- To develop high quality outsourcing knowledge services, international connection and cooperation is an important step towards internationalization
- Initialized by the author, the Global IT Outsourcing Summit has been held every year since 2003 sponsored by Shanghai Municipal Government, which acts as a stage for international exchange and cooperation
- Now the Summit has become a key annual event for promoting ITO in China, where Chinese vendors have chance to actively listen the concerns and aspirations of clients, and the overseas clients have chance to discover the potentials of Chinese service providers and their conscientious attitude
- In last year, the Summit has become a National Level Event



Global

IT outsourcing

Summit 2008, Shanghai
上海软件外包国际峰会

Guests Invitation



➤ Dr. Grasso of CMU/ITSqc in 2004 to introduce the eSCM model

UML standard promotion
With UMTP International
Since 2005

IT Skills Standards in Japan

- **ITSS** – Information Technology Skill Standards
- **ETSS** – Embedded Technology Skill Standards
- **UISS** – Users' Information Systems Skill Standards

IPA[®]

独立行政法人 情報処理推進機構

INFORMATION-TECHNOLOGY PROMOTION AGENCY, JAPAN

at

2009 上海软件外包国际峰会



Global **IT outsourcing**

Summit 2009 Shanghai
上海软件外包国际峰会



ISTQB/ISEB Certificate For Test Professionals



CSTQB Established at Shanghai in Feb of 2007

Both authors are the members of CSTQB expert group

Open
Knowledge

With iNTACS

iNTACS™

International Assessor
Certification Scheme



President

Peter Bölter, Germany

peter.boelter@intacs.info

**Vice
President**

Ludger Meyer, Germany

ludger.meyer@intacs.info

**Vice
President**

Prof. Dr. Dehua Ju, China

dehua.ju@intacs.info

Member

Klaus Dehmel, Germany

klaus.dehmel@intacs.info



One Step Forward To Join into Global SE Family

- Successfully Hosting ICSE2006 at Shanghai provided a good chance and stage to let world SE community to know more about China's and Shanghai's potentials and perspectives for GSD
- 1300 guests (700 + Foreigners) attended such a grand gathering
- The main purport of this event is “**Harmonious Integration of China into the International Software Engineering Community**”
- We believe with our concerted effort China will be smoothly joined into the global SE family at last



第28届国际软件工程会议
28th International Conference on
Software Engineering



What Will Be Next



- The 5th World Congress For Software Quality will be held at **Shanghai** on Oct.31 – Nov.4 in **2011**
- A partnership of the Software Division of the American Society for Quality (ASQ), the Software Group of the European Organization for Quality (EOQ), and the Union of Japanese Scientists and Engineers (JUSE)
- This event will be also sponsored by Shanghai government and CSIA, CSSPI
- It will give a good stage to show and demo our new “Software Image” to the world, which will be “**Prosperous And Mature – a Quality World**”



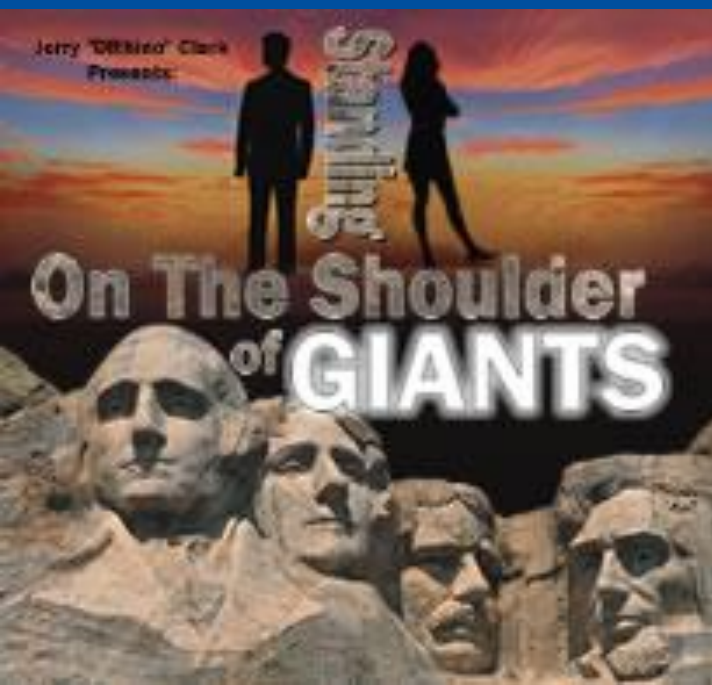


United Under One Banner: Best of Best Quality



A Simple Strategy

- *“Standing on The Shoulders of World Giants”*



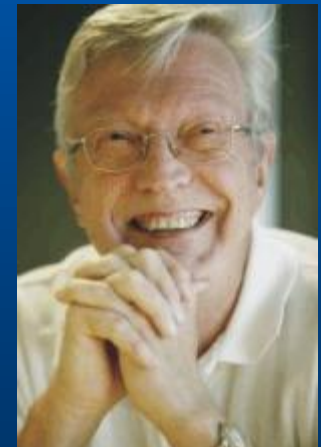
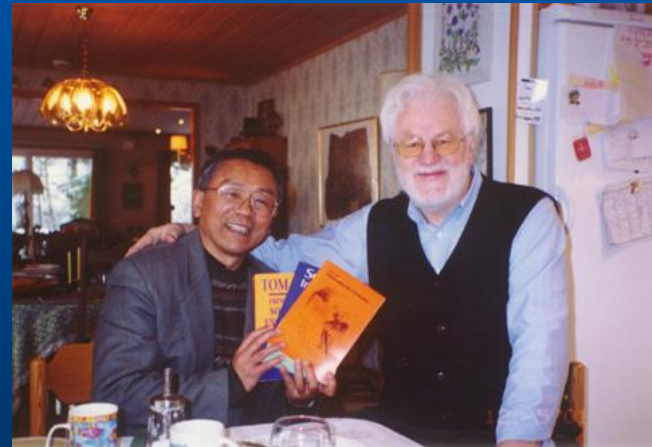
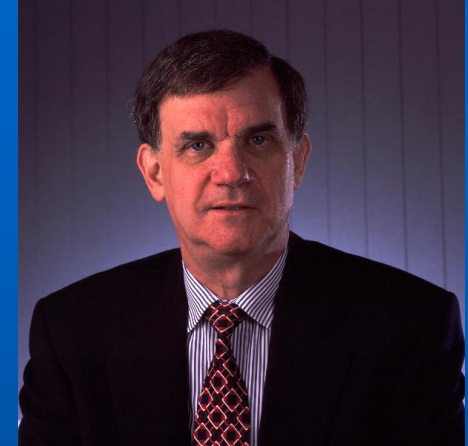
International Cooperation & Support Network

- IEEE Computer Society (CSDP)
- IEEE Software Magazine
- CMU/ISTqc
- SSIA Became A Member of Innovation Champion Network (ICN)
- IESE & ISERN
- UMTF International
- iNTACS
- iSQI, Germany & Q-LAB, France
- Union of Japanese Scientists & Engineering (JUSE)
- IT Promotion Agency (IPA), Japan
- International Institute of Outsourcing Management



Backup Network With Famous Experts

- Steve McConnell
- Tom Gilb
- Prof. Alan Davis
- Prof. Carl K. Chang
- Kouichi Kishida
- Martin Fowler
- Craig Larman
- Prof. Leon Osterweil
- Prof. Lori A. Clarke
- Prof. Mary Lou Soffa
- Prof. Dieter Rombach
- Prof. Bernd Hindel
- Prof. Mary Jean Harrold
- Prof. Alexander L. Wolf
- Prof. Ross Jeffery
- Prof. Carlo Ghezzi
- Prof. Jeff Kramer
- Prof. David S. Rosenblum
- Prof. Jacky Estublier
- James Robertson & Suzanne Robertson
- Dr. Ivar Jacobson
- Prof. T.Y. Chen
- Dr. Gargi Keeni



Conclusion



Main Points

- Knowledge service is key component and essential infrastructure of knowledge economy era
- Knowledge is a crucial resource in promoting modern industries and economy
- In this paper, we analyzed the problems and challenges in current HRD and outsourcing professional development
- And then proposed a novel solution for professional development, suitable for SE, IT, Outsourcing and other possible domains, developing the Public Knowledge Service Platform (PBSP)

A Design Framework for PKSP

- The key part is to design the Public Knowledge Service Platform (PKSP)
- In addition to the system architecture, the stress is put on the content design to ensure quality knowledge services for which a BOKs-based framework was proposed
- Not just contents, the second consideration is to build a support platform for learning and applying knowledge in the context
- Networking or social engineering is another focus to help building knowledge enabled CoPs
- It Provides an ideal learning support environment for HRD/OPD urgently needed

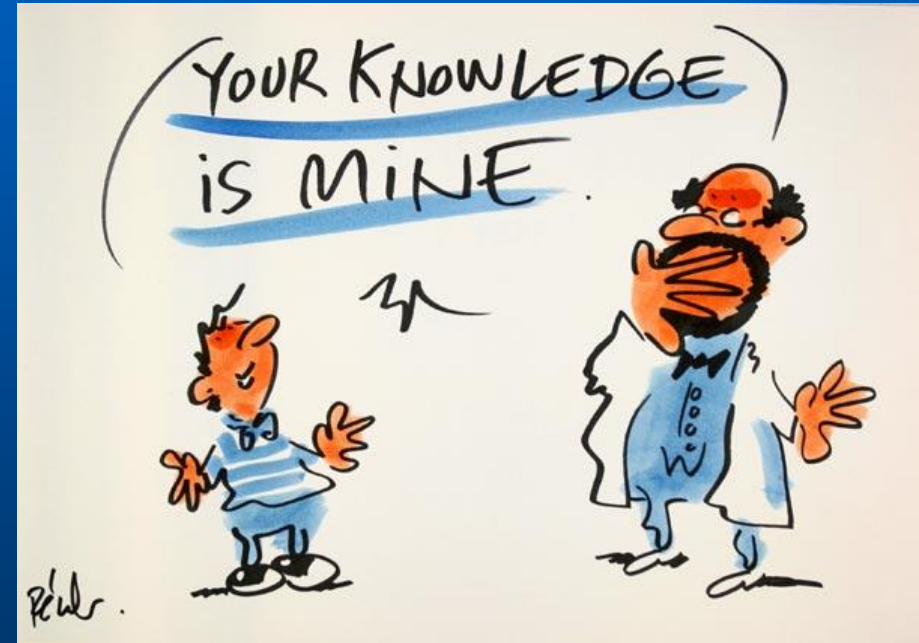
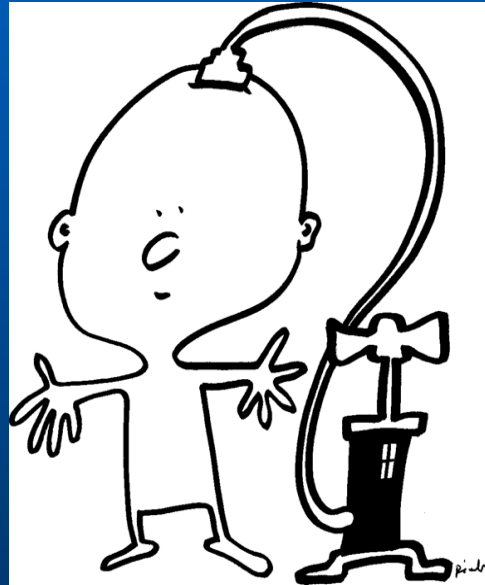
The Success Formula: Content + Context + Connectivity + Community + Convenience



Open Knowledge



The Philosophy of Our Knowledge Services



Send Knowledge
Into Your hands

Knowledge
Charger

Your Knowledge
Is Mine

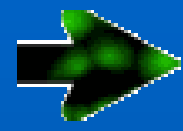


RPV Innovation Framework Applied to Knowledge Society

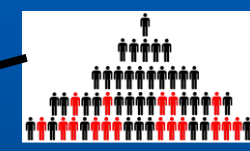
Resource



Process



Value



Digital Divide
Digital Inclusion
Knowledge Divide

Human Capital

Knowledge Workers

CoPs

Learning Organizations

Bridging Knowledge Divide

Knowledge Resources

Knowledge Services

KaaS

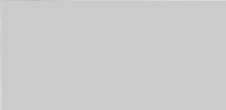


Knowledge Services as a Infrastructure of Knowledge Society

- **According to RPV Innovation Theory, Knowledge services as an IT enabled process transform knowledge resources into real value in knowledge society**
- **Including human capital, knowledge worker productivity, building of CoPs and learning organizations, bridging knowledge divides**
- **As a result, continuous innovation and sustainable economic growth**

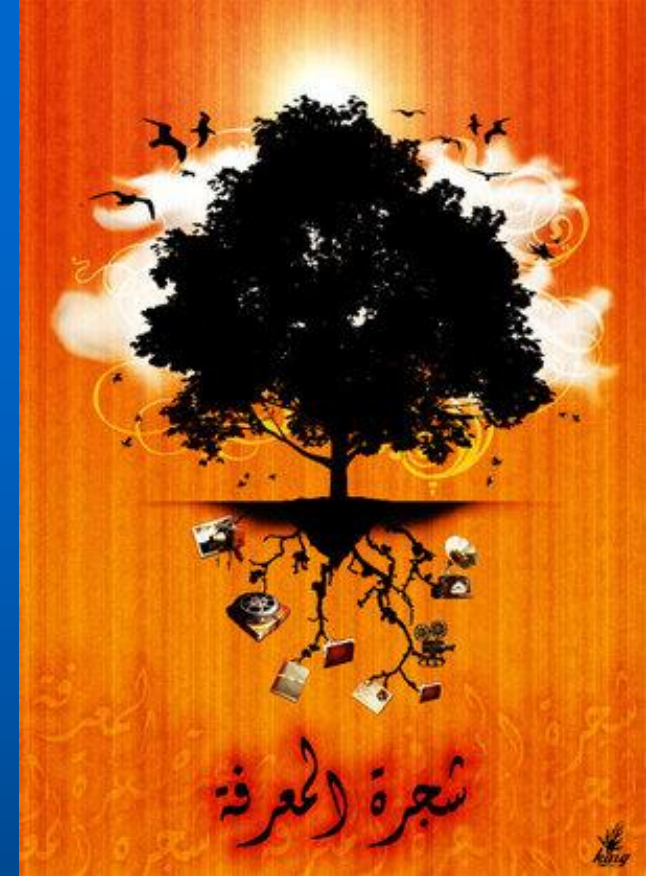


Building Knowledge Infrastructure



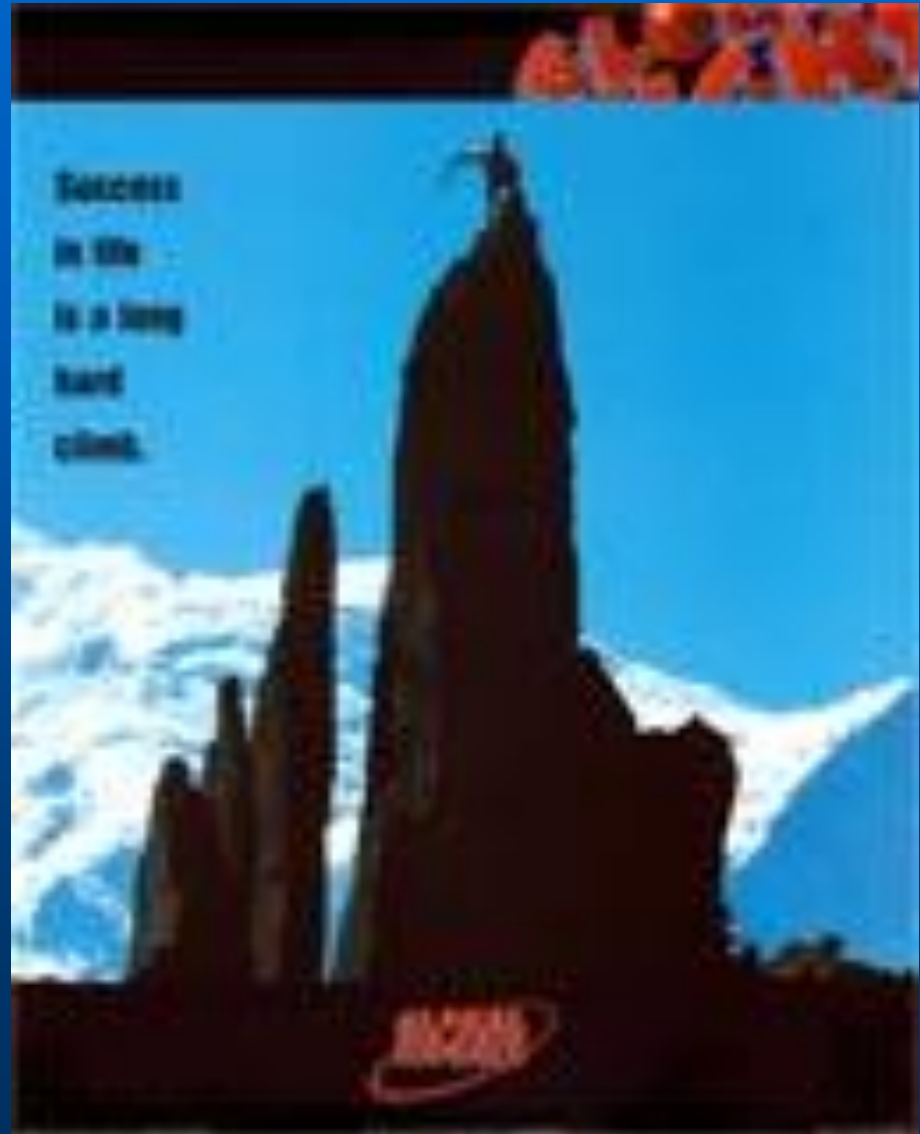
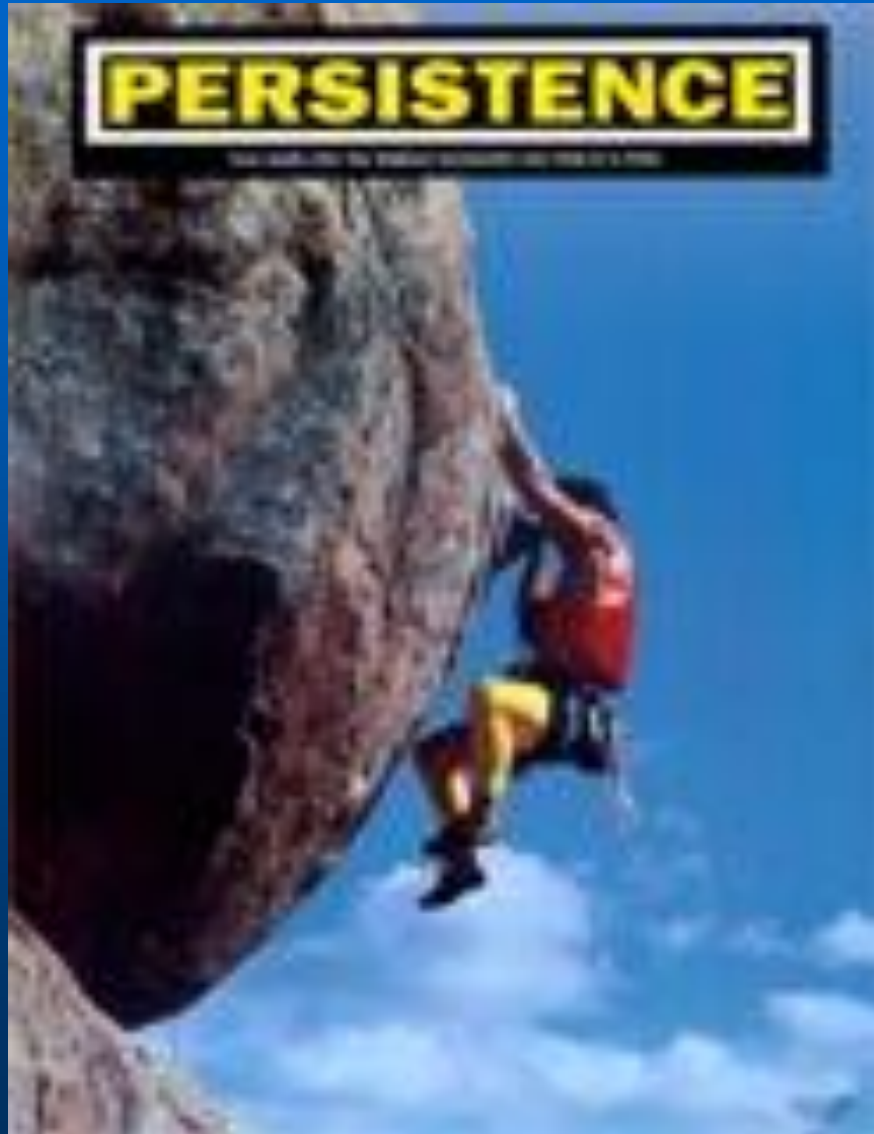
Summary Up

- Outsourcing professionals are a group of T-sharp multidiscipline knowledge workers
- The PKSP solution proposed with comprehensive resources will like a stretch of fertile land with rich knowledge nourishment to speed up their growth and mature





Scale The Heights



Thank You !



Contact Address



ASTI Shanghai
5F, Bldg. 10, 471 GuiPing Road
CaoHeJing Hi-Tech Park
Shanghai 200233

Tel: +86-21-64852743

Fax: +86-21-64853390

E-Mail: asti-gm@online.sh.cn

<http://www.asti-global.com>

<http://www.ASTI.com.cn>

<http://www.ITURLs.com>

<http://www.cnoutsourcing.com>

<http://www.globalToutsourcing.org.cn>

<http://www.SEChina.net>

<http://www.cspin.org.cn/about.asp>

<http://www.csbsg.org/>

