Creating Sustainable Competitive Advantage through Knowledge-Based Management

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Knowledge Management is...

Not “Managing Knowledge”
But “Knowledge-based Management.”

Not a tool but a theory toward a new paradigm in the Knowledge Economy
“Good theory is the most practical”
(Kurt Lewin)
Why Knowledge?

“Knowledge is the only meaningful resource today.”
Peter Drucker (1993)

Knowledge is one of the most important assets for an organization to create values and hence, sustainable competitive advantage.
Characteristics of Knowledge

1. Increasing Return
2. Unlimited Usage
3. Production and Consumption Unseparated
4. Difficulties in Market Transaction
5. New Value by Re-categorization
6. Quickly Outdated
7. Created by Human in Relationship
What is Knowledge?

In Western Epistemology:
“Justified True Belief”

The belief must be true, and the truthfulness must be justified.

But what is truth?

“There are no whole truths; all truths are half-truths.”
(Whitehead, 1954)
What is Knowledge?

Other aspects of Knowledge:

Multi-perspective
Context-specific, relational and dynamic
- created in social interactions
Aesthetic Values
- Endless pursuit of truth, goodness, and beauty

Hence, we define Knowledge as:

“A dynamic human process of justifying personal belief towards the truth.”
Two Types of Knowledge

**Tacit Knowledge**

- Subjective and experiential knowledge that cannot be expressed in words, sentences, numbers, or formulas (Context-specific)
- Technical Skills
  - craft
  - know-how
- Cognitive Skills
  - beliefs
  - images
  - perspectives
  - mental models

**Explicit Knowledge**

- Objective and rational knowledge that can be expressed in words, sentences, numbers, or formulas (Context-free)
- Theoretical approach
- Problem solving
- Manuals
- Database

**Dynamic Interaction**

Analog-Digital Synthesis

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“The strength of Japanese manufacturing industries are at the technologies (based on) tacit knowledge. With the progress in Information Technology (IT), tacit knowledge is converted into explicit knowledge. Still, we need tacit knowledge. To build a car, we have to build people.”

-Hiroshi Okuda, the chairman of Toyota
SECI Process

Sharing and creating tacit knowledge through direct experience

1. Perceiving the reality as it is
2. Empathizing with others and the environment
3. Transferring of tacit knowledge

Learning and acquiring new tacit knowledge in practice

9. embodying explicit knowledge through action and reflection
10. Using simulation and experiments

Tacit

Socialization

Environment

Individual

Explicit

Externalization

E

O

I

Group

Internalization

I

G

O

E

Combination

G

Org.

Explicit

I = Individual, G = Group, O = Organization, E = Environment

Articulating tacit knowledge through dialogue and reflection

4. articulating tacit knowledge using symbolic language
5. translating tacit knowledge into a concept or prototype

Systemizing and applying explicit knowledge and information

6. gathering and integrating explicit knowledge
7. Breaking down the concept and finding relationship among concepts
8. editing and systemizing explicit knowledge

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Basic Components of Knowledge-based Organization

- Vision (What?)
- Environment (Ecosystem)
- Tacit Knowledge (Subjectivity)
- Dialogue (Why?)
- Ba (Dynamic Context)
- Explicit Knowledge (Objectivity)
- Knowledge Assets
- Driving Objectives
- Practice (How?)
Knowledge Vision

- Essential Questioning: “What do we exist for?”
  “Where should we live?” (Existence and Domain)
  “Why do we create knowledge?”
- Gives the firm an absolute, not a relative, value system.
  “You do it because you want to do it, not because everyone else is doing it.”
- Transcends the existing boundary
- A long-time view that goes beyond the arena of competition.
  It is not a short-time view on efficiency in knowledge utilization.
- Inspire the intellectual passion
Driving Objective

It is a concept, goal, or codes of conduct to synchronize vision, dialogue, and practice. By pursuing it relentlessly, contradictions are created and synthesized.

Canon: Kyosei (Coexistence) → Cash Flow
Suzuki: Made in Japan → 1cc=1000 Yen
Eisai: hhc → Increase the benefit of patients
The history of *hhc* mission

Changes of the pharmaceutical industry environment

- Increasing R&D expenses
- Penetration by other industries
- Competition from foreign giant
- Decreasing medical expense
- Changes of patients needs

To grow, We must Change

What kind of corporation would we like to become?

Focus on Patients and their families
Eisai’s Mission

To be a true human health care company

= hhc

We give our first thoughts to patients and their families and contribute to increasing their benefits.
What should we do to make high-quality products at low costs?

For what purpose are we making medicinal products?
Training Sessions at Eisai

Socialization
Preceptorship Program

Externalization
Knowledge Creation Conference

Internalization
SECI-Based Reflective Practice

Combination
hhc Initiative
Empathizing with Patients
On-site experience (at a Nursing Home)
### Activities 2005 by Division

<table>
<thead>
<tr>
<th>Division</th>
<th># of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescription Drug</td>
<td>113</td>
</tr>
<tr>
<td>Consumer Health Product</td>
<td>16</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>102</td>
</tr>
<tr>
<td>Production</td>
<td>24</td>
</tr>
<tr>
<td>Global Headquarters</td>
<td>28</td>
</tr>
<tr>
<td>Network Companies – Japan</td>
<td>106</td>
</tr>
<tr>
<td>Network Companies – US/Europe</td>
<td>27</td>
</tr>
<tr>
<td>Network Companies – Asia</td>
<td>11</td>
</tr>
</tbody>
</table>

**Total:** 427
hhc Initiative Ceremony  2004
hhc Activities: Rapid Integration Tablet

Rapid disintegration tablet
(Disintegrates in approximately 10 seconds)

Ordinary tablet
“Caring to Help Others” is a highly evaluated training manual of caregivers for senior citizens.

Total # of Page: 500

Contents:
- Various Issues about elderly care
- Useful advice for caregivers

Target Readers:
- Trainers of elderly care volunteers

With 9 non-profit organizations & Distributed 13,000 copies
Nurses prompted a change: "I think it would be convenient to have a stick-on seal."

Handwritten by the nurses so it is not mistaken for physiological saline

The subsequent result
What Makes a Good Medicine?

Another Researcher Feels This Way
History of hhc

Enterprise founding spirit

<table>
<thead>
<tr>
<th>87</th>
<th>89</th>
<th>92</th>
<th>97</th>
<th>02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispatch of the hhc ideal message – 1st stage –</td>
<td>Age of individual hhc – 2nd stage –</td>
<td>Realization of global hhc – 3rd stage –</td>
<td>The leading company in the world in terms of making contributions to patient healthcare - The Millennium Plan</td>
<td></td>
</tr>
</tbody>
</table>

Knowledge Creation Dep. Introducing KC Theory

EI declaration

EI managers

Daily hhc practices

Spread of the hhc ideal

Creation of knowledge

hhc Driven Innovation

Global hhc company
"Further upgrading, in an ideal form"
Comparing the four modes company-wide (first through fourth times)

- Socialization
- Externalization
- Combination
- Internalization

First investigation (1997)
After second investigation correction (1999)
After third investigation correction (2001)
After fourth investigation correction (2003)

Knowledge Conversion Point

Samples
1st N=4313
2nd N=4157
3rd N=3747
4th N=3671
Dialogue  
- Dialectic in Thought -

1. Dialectic  
   Truth is dynamic and is developed through the dynamic process of thesis, antithesis and synthesis.

2. Existential Context  
   A theme is created by sharing deep thoughts and beliefs.

3. Meaning, Rather than Form  
   It is not about whether it exists or not, it is a question of the process of how it comes into being.  
   “Human is mortal. Socrates is a human. Socrates is mortal”

   So what? No new meaning can be created. For example, if one asks, ”What does it mean to be mortal?” we might reach a new conclusion, “Socrates as a thought is immortal”

4. Open Thought  
   Conflict with others serves as a catalyst to reach a higher level of understanding beyond compromise.
“Ask Why Five Times”

Reality: Waste of “making too much”

Why? 1:
- Order to produce unnecessary parts.

Why? 2:
- Timing for the changes at the production line and production order didn’t agree.

Why? 3:
- Although there was a trouble at the next process, the prior process continued producing.

Why? 4:
- The information that the parts are not necessary at the next process was not communicated to the prior process.

Why? 5:
- It was not the “next process ordering necessary parts” system, but the “pushing in” system based on a production plan. We need to build a system to incorporate the changes at the production line.
Practice as Kata (Creative Routine)

Kata has a high quality feedback function that sharpen senses and help to notify and modify the differences between predicted outcomes and reality.

- Creative Routine: Continuous spiral of tacit and explicit knowledge until it becomes the second nature. Kata (form) means “way of doing things.”
- Kata is the core of ideal action.
- Good Kata functions as archetype that fosters creative routine but provides higher freedom.
- Shu 守 (learn), Ha 破 (break), and Ri 離 (create) steps are critical in continuous self-renewal processes.
# GE vs Toyota vs Honda

<table>
<thead>
<tr>
<th>GE</th>
<th>Toyota</th>
<th>Honda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice of relative values</td>
<td>Mutual interaction between relative and absolute values</td>
<td>Practice of absolute values</td>
</tr>
</tbody>
</table>

**GE**

What does your global competitive environment look like?
In the last three years, what have your competitors done?
In the same period, what have you done to them?
How might they attack you in the future?
What are your plans to leapfrog over them?

**Toyota**

Set even higher goals and implement continuous improvements without settling with temporary success.
Observe the place of manufacturing with a clean slate and without bias, repeat ‘why?’ five times to the subject.
Understand one’s own capability through comparison internally and externally.

**Honda**

3-Gism: Be at the actual place of work (genba), know the actual product (genbutsu) and situation (genjyou), be realistic (genjitsuteki).
Respect sound theory, develop fresh ideas and make the most effective use of them.
A00 -What do you do this for? (Ontological)
A0 - What is your concept? (Conceptual)
A - What is your specification? (Operational)
Dialogue (Why?)

Vision (What?)

Practice (How?)

Driving Objectives

Tacit Knowledge (Subjectivity)

Explicit Knowledge (Objectivity)

Knowledge Assets

Environment (Ecosystem)

Ba (Dynamic Context)

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It is not just a physical place.

Ba is a dynamic place where one shares a context with others to create meanings (=change the context). Without context to specify time, place, and relationship with others, knowledge becomes just information.

Participants understand the contexts of others and oneself, and through interaction, change the contexts.
Ba as shared context in Motion

Individual contexts are shared at Ba, and the shared context and individual contexts expand themselves through such interaction.
Good Ba Synthesizes Contradictions

Diversity: Multiple context Boundary to protect the emerging context
Here and Now: Sharing time and Space
Subjectivity: Viewpoint as an insider

Integration: Sharing context Boundary has to be open to accept new context
Universality: Transcending time and space
Objectivity: Viewpoint as an outsider
Ba: Asakai (Morning Meeting)
Small World Network: Rewiring the multilayered Ba

Through rewiring, far apart ba can be connected to each other to find new combinations and create new knowledge.
Knowledge Ecosystem: Organic Configuration of Ba

- Customer
- Supplier
- University
- Government
- Local Communities
- Competitor
- Firm

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Build, Maintain, and Connect Ba

Provide space for Ba
Select members
Foster the spontaneous creation of Ba by creating conditions for one to share contexts
“Find” Ba, utilize it, and connect various ba to form a larger ba
Energizing Ba: Autonomy

Increase the chances of finding valuable information
Motivates organization members

A self-sufficient team
Task forces
Energizing Ba: Creative Chaos

Helps to focus their attention and encourages them to transcend existing boundaries

Leaders can introduce intentional chaos by proposing challenging goals or ambiguous visions.
Energizing Ba: Love, Care, Trust, and Commitment

Love, Care, Trust, Safety and Commitment

Safety and commitment are necessary to share and create knowledge.

Leaders need to be highly aspired and committed to their goal. They also need to be selfless, altruistic, and positive thinkers.
Knowledge Assets

Vision (What?)

Dialogue (Why?)

Driving Objectives

Practice (How?)

Environment (Ecosystem)

Tacit Knowledge (Subjectivity)

Explicit Knowledge (Objectivity)

Ba (Dynamic Context)

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### Four Categories of Knowledge Assets

Not just intellectual capital such as patents, but various types of knowledge including tacit knowledge:

<table>
<thead>
<tr>
<th>Social Knowledge Assets</th>
<th>Conceptual Knowledge Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared tacit knowledge</td>
<td>Explicit knowledge articulated through images, symbols, and language</td>
</tr>
<tr>
<td>• Skills and know-how of individuals</td>
<td></td>
</tr>
<tr>
<td>• Care, love, trust, and safety</td>
<td></td>
</tr>
<tr>
<td>• Energy, passion, and tension</td>
<td></td>
</tr>
<tr>
<td><strong>Routine Knowledge Assets</strong></td>
<td><strong>Systemic Knowledge Assets</strong></td>
</tr>
<tr>
<td>Tacit knowledge routinized and embedded in actions and practices</td>
<td>Systematized and packaged explicit knowledge</td>
</tr>
<tr>
<td>• Know-how in daily operations</td>
<td></td>
</tr>
<tr>
<td>• Organizational routines/kata</td>
<td></td>
</tr>
<tr>
<td>• Organizational culture/tradition</td>
<td></td>
</tr>
<tr>
<td>• Product concepts</td>
<td></td>
</tr>
<tr>
<td>• Design</td>
<td></td>
</tr>
<tr>
<td>• Brand equity</td>
<td></td>
</tr>
<tr>
<td>• Documents, specifications, manuals</td>
<td></td>
</tr>
<tr>
<td>• Database</td>
<td></td>
</tr>
<tr>
<td>• Patents and licenses</td>
<td></td>
</tr>
</tbody>
</table>

Source: Nonaka, Konno, and Toyama, 1998
Redefine the firm in terms of its knowledge, not by its physical assets.

“Take an inventory” of its knowledge assets - What do we have, and what do we lack?

Build, maintain, and utilize its knowledge assets based on the knowledge vision.
Leading Knowledge Creating Process

• Provide Knowledge Vision & Driving Objective
  - “Where are we going?”

• Develop and Redefine Knowledge Assets
  - What we have and what to create

• Build, Maintain, and Connect Ba

• Energize Ba
  - Give ba intention, autonomy, creative chaos, redundancy, requisite variety, love, care, trust, and commitment.

• Lead SECI Process
  - Direct Knowledge creation through event creation and justify the knowledge created

• Create and Maintain Kata
Role of a Leader

Management should be very clear on the *what*, spend the bare minimum time on the *how*, and spend a lot of time on the *why*.

Leaders should support the workers so that they can find a meaning in their work.

David Maister, 1993
The Knowledge Leadership is…

The process to exercise the synthesizing capability of the organization by integrating the vision, dialogues, practice, ba, and environment.

At the base of such leadership is phronesis.
Three Types of Knowledge

Episteme (Scientific Knowledge)
Universal, context-free and objective knowledge (explicit knowledge)

Techne (Skills and Crafts Knowledge)
Practical and context-specific technical know-how (tacit knowledge)

Phronesis (Practical Wisdom)
Experiential knowledge to make context-specific decisions based on one’s own value/ethics (high quality tacit knowledge)
Phronesis (Prudence, Practical Wisdom)

A virtuous habit of making decisions and taking actions that serve the common good.

A capability to find a “right answer” in particular context.

Deliberate reasoning and improvisation that comes from the SECI process, which synthesizes particulars and generals.

Can acquire only through high quality direct experiences.
Six Abilities that Constitute Phronesis

1. Ability to make a judgment on goodness.
2. Ability to share contexts with others to create ba/shared sense.
3. Ability to grasp the essence of particular situations/things.
4. Ability to reconstruct the particulars into universals using language/concepts/narratives.
5. Ability to use any necessary means well to realize concepts for common goodness.
6. Ability to foster phronesis in others to build resilient organization.
Every sort of expert knowledge and every inquiry, and similarly every action and undertaking, seems to seek some good. Because of that, people are right to affirm that the good is ‘that which all things seek’.

Aristotle, Nicomachean Ethics

Internal Good: Realized in the course of trying to achieve those standard of excellence.

MacIntyre

Example: Self-sufficient values such as happiness.
Asahiyama Zoo

Located in Asahikawa city
Lack of rare animals
Temperatures around Celsius –25 degrees in winter
Located at a slope
Small scale and budget

Since 1980, dropping number of visitors
In 1996, 260,000 visitors; in risk of closing down
In 2004, 1,450,000 visitors came; this exceeds the visitors to the Uneno Zoo, making the Asahiyama Zoo a number one zoo in Japan

北海道新聞 http://www5.hokkaido-np.co.jp/pet/asahiyama/02.php3
Vision : Asahiyama Zoo

“What is zoo for?” (Raison d’etre)
From this point, think from the basis;
“What do we need to do?”, “What do we want our animals to show?”, “What animals should do?”
And structured the ideas.
Came up with four missions of the Zoo.
It is a place for;
Recreation, Education, Keeping nature, Research and study

出所: 小菅
Asahiyama Zoo : Concept

Show animals as they are.
  Reduced the distance to the animals
  Life and death : show the lives as they are (Do not hide the old animals or injured animals).

One point guide
  Reduced the distance between animals and visitors
  Increased the interaction between zoo keepers and visitors

Mogu Mogu time
  Showed the animals in action
  Feed the animals at the same time with interacting with the visitors

Hand-written pop-sign
  Showed news, column, attentions and announcements
  Use five senses to learn about the animals

Zoo at night
  In August, delayed the closing time so that visitors can watch the animals at night
Sharing Experience with Animals

Penguin Walk
Show animals as they are
Zoo, Where Animals Wants to See You

Animals are watching human
Masao Kosuge: Idealistic pragmatist

Visionary leader of the employee volunteers: he asked around “What is zoo for?”. “What should animals show?”, “What is the ideal of the zoo?”

Four functions of the zoo:
Recreation, education, keeping nature and research

Success did not come from our ideas. We all learned from animals as we watched them closely

Kosuge discussed about ideal zoo (conceptually), and at the same time focused on details of such zoo (concrete and realistic).

Getting Political Support: Justified the vision and action plans to the mayor who wanted to construct a theme park for citizens
Mitaka City

Suburb town of Tokyo
90% is residential area
Reducing tax income due to lowering birthrate and increasing elderly
Lack of sightseeing assets

Active citizens participations
First Community Center in Japan
Second apartment house by housing corporation
Many citizens with high education
Uniqueness of Mitaka

Received Intelligent Community Award 2005

Ranked number one in the Nikkei Newspaper survey on “Rate of evolitional administration”
Mitaka City: Vision

Town management for better place to live
- First in Japan to accept nursery for infants at zero year old
- First in Japan to achieve 100% of sewer
- First in Japan to build community center

Active Citizens
- Citizens proactively approach to the city administration
- Administration bear the cost but do not bother activities of the citizens
Mitaka City : Concept

Intelligent Community

- Participated in INS experiment (1984) → Established IT infrastructures
- Only valuable resource is the citizens → Nurtured knowledge intensive industry = SOHO city
  → Further nurturing the intelligence = Mitaka Network University

From “Citizens Participation” to “Citizens Collaboration”

- Citizens Plan 21 Conference (2001)
- Mitaka Town Management Discussion (2006)
Concept Change

Government guides uninformed citizens.

Citizens creating their own movements, utilizing their knowledge assets. Governments are there to support them. Citizens are the only and most valuable resource for Mitaka!
Achievements: New Style of Collaboration

Mitaka Citizens’ Plan 21 Conference
  375 citizens involved.

SOHO CITY Mitaka
  SOHO incubation by Town Management Mitaka Co.
    Venture college, Business plan contest, SOHO festa, etc.

Citizens Collaboration Center
  A place for citizens activities
    Support collaboration with the administration
A Knowledge-Creating Organization is…

An organization who practices the idealistic pragmatism which synthesizes;

Ontology: How to be
   - “For what do we live?”: the vision to the future and the commitment to it.

Epistemology: How to know
   - “What is the truth?”: the SECI spiral which synthesizes objective and subjective views.

Creation: How one can change itself and the environment

Management is viewed as “a way of life” rather than a “tool” to make money.
A Continuous Process

“… creation is a continuing process, and ‘the process is itself the actuality’, since no sooner do you arrive than you start on a fresh journey” (Whitehead, 1954)

“Day after day, week after week, I’ve been doing the same thing for 25 years – asking the employees what is wrong about our shops and how we can fix it.” (Toshifumi Suzuki, CEO, Seven-Eleven Japan)

It’s a never-ending process!