Out of the crisis of the quality profession: The new renaissance in the quality discipline

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Out of the crisis of the quality profession: The new renaissance in the quality discipline

Highlights:

1. Recognizing the crisis in the quality profession and proposing the quality renaissance as the solution
2. Searching for the ontological essence of quality and quality management, and determining the quality archetype as the foundation for the quality conceptualization
3. Presenting quality integration as the most genuine practical solution for the quality management
4. Anticipating to the future challenges of the quality renaissance
5. Discussion

Our challenge is the crisis in the quality profession and its overcoming

What is the crisis all about?

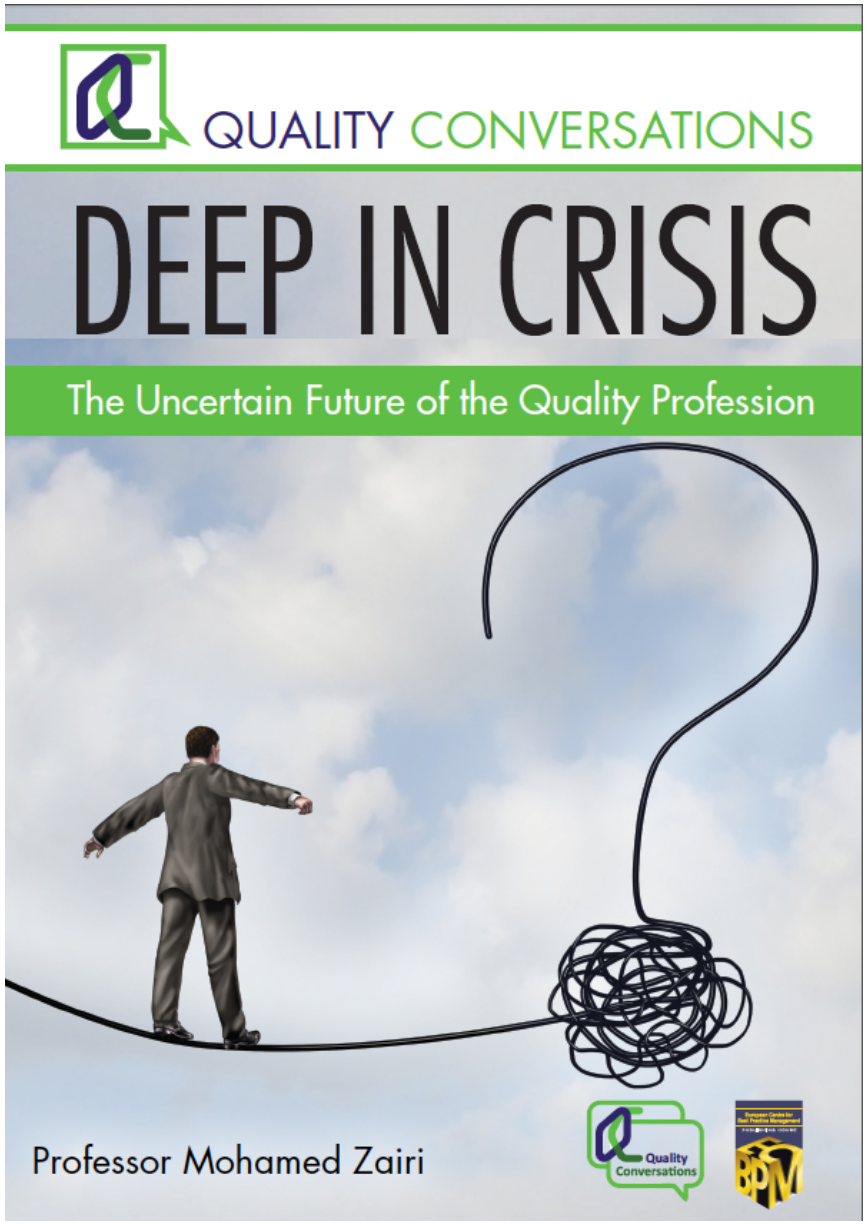
- Conceptual ambiguity
- Methodological fragmentation
- Lost understanding of the ultimate essence and holistic view of the quality phenomena
- Trust in the quality discipline and professionals lost

What should be done?

- In thinking
- In practice

Conversations and actions are needed!

- Searching for the right questions and effective answers



Poor quality and serious quality problems exist everywhere and constantly

Serious quality problems have been reported regarding industrial and public civil service **organizations**, even including generally recognized companies that have been granted with quality awards and certifications.
Consumers' quality complaints are much present in the public eye.
Personal quality problems of individuals and large **society-wide** troubles and failures are common.

The traditional quality management and quality assurance practices and tools seem not to solve problems and ensure quality.

- **Poor quality of management** has been raised as the major cause for the problems, when strong **business leaders** are authoritative and biased with ignorance, negligence or prejudice against the concept of quality, and instead emphasize the ideology of the neo-liberal free-market economy with aggressive cost-cutting for short-term profits.
- **Quality experts** have a narrow outlook and do not see their own insularity.
- **Experts of other disciplines** are not motivated by the quality questions and have difficulties in communicating and collaborating with the quality experts.

However, quality is a **multi-disciplinary** issue.

Irrelevance and stagnation plague the quality practices

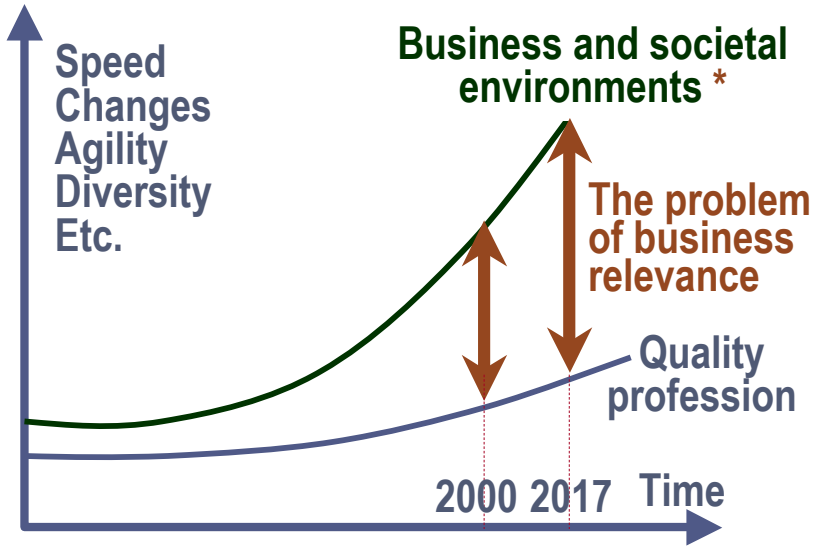
Irrelevance in thinking and practices:

- The quality profession is alienated from its own promises to the real world challenges.
- The knowledge basis and practices of quality are fragmented and vague and do not have consistent scientific foundation.

Stagnation of the quality profession:

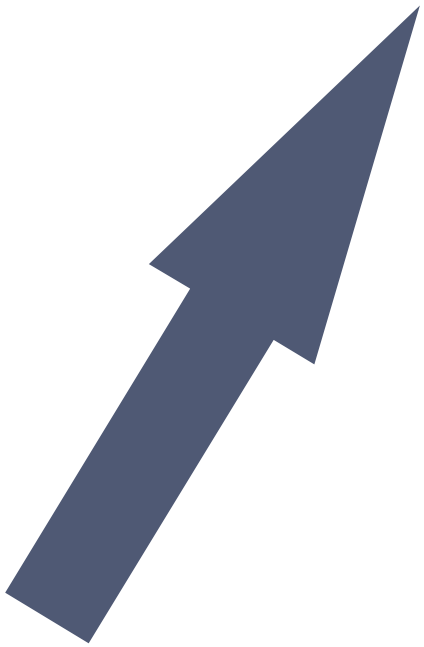
- Failure to meet the real needs of individuals, organizations and societies.
- Inability to benefit the general business management.
- No innovative development

Quality is considered an **old-fashioned thing** (Universities and companies)



* Development from certainty and predictability to increasing uncertainty and ambiguity

New foundations for business infrastructure and challenges for quality profession



- Emergence and self-organizing networks of actors
  - Many heterogeneous global actors in virtual networks
  - All linked with everything else, all linkages not known
- Increased speed of activities and change
  - Significance of transaction phenomena (human and machine)
  - Simultaneous requirements of agility and maturity
  - Immense pressure / stress of business leaders
- Significance of immaterial issues (information, knowledge, services)
  - Informal learning and seredipity
- Increased complexity
  - Complex responsive processes of relating
  - Multidisciplinary nature of all business issues
  - Customers and other stakeholders with singular needs
  - Paradox freedom of the actors (”both-and” instead of ”either-or”)
  - Many new fast developing technologies

(Refs.:D Zohar, R D Stacey)

Technological achievements and urbanization require the reformation of the quality profession

Smart City Definition* (Urban manifestation of the 4th industrial revolution and Industry 4.0):

- Effective integration of physical, digital and human systems in the built environment to deliver a sustainable, prosperous and inclusive future for its citizens

Smart Technology (Intelligent assets), which are interrelated and have synergies:

- ICT technology/digitalization:
  - 5G networks, Cloud computing
  - Internet of things (IoT), Industrial internet
  - Big data, Biohacking
  - Artificial intelligence (AI), Machine learning, Intellectual robotics
  - 3D printing, Additive manufacturing
  - Augmented reality
  - Blockchain
- Other technologies:
  - Nanotechnology
  - Biotechnology
  - Optical technology
  - Energy technology
  - Etc.

Smart technologies impact all of the society's sectors:

- Smart governance, smart education, smart security, smart healthcare, smart building (homes), smart infrastructure, smart transportation, smart mobility, smart energy, smart production, smart living

Quality has increased importance in all these contexts! How to realize quality management in these environments when the old practices are not any more relevant?

* ISO/IEC JTC 1

The basic concept of QUALITY is ambiguous

Quality is a widely and long used **professional concept** in social and business information and communication, but it also is an **everyday and age-old philosophical concept**.
- The word quality is used in many various contexts by engineers, marketing people, business leaders, authorities, lawyers, media, architects, ordinary people, etc.

However - even among quality professionals - **we do not generally seem to be in agreement on the definition of quality as concept**. Hence, this ambiguity results in:

- Informative interference or problems in professional context and superficiality of quality related information and communication.
- Uncontrollable fragmentation of quality thinking, discussion and practices.
- Conceptual confusions between quality results and quality enablers, and between quality and many other related factors.
- Disintegration of the sound theoretical foundation of the quality profession.

This situation can **harmfully affect** in general in contracts, agreements, research, evaluations, education, standardization, general communication, etc. and in particular in quality management and related professional activities.

If the **everyday colloquial language** substantially differs from the **professional language**, it will sooner or later cause unnecessary inconvenience.

Example 1: Unclear terminology leads to pseudo results in research projects.

This widely referred research was:

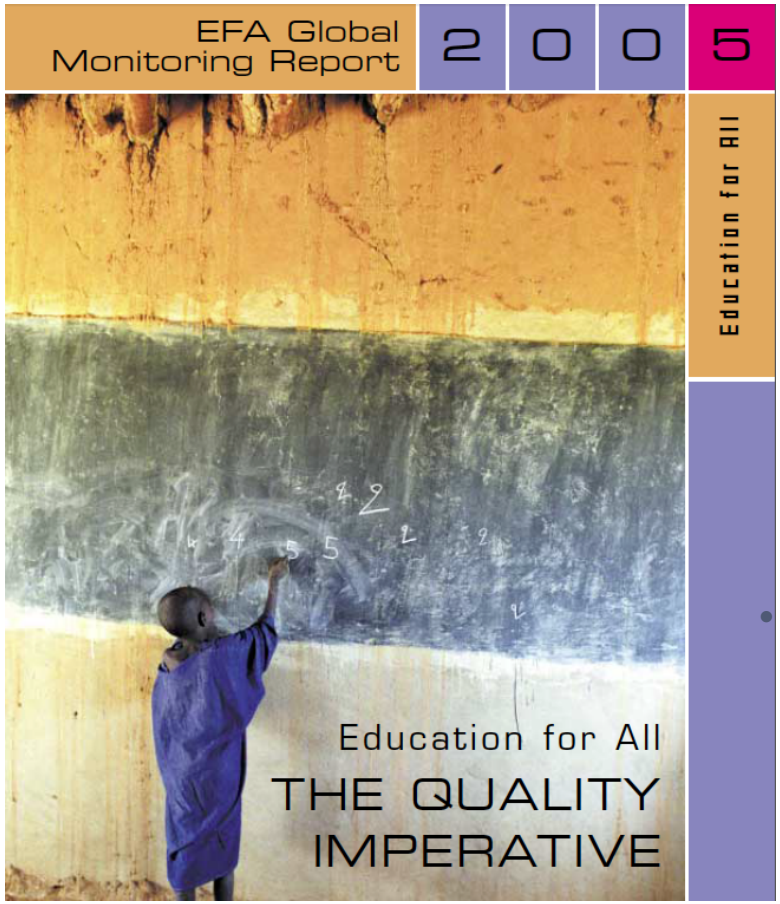
"to create a comprehensive, global, and quantitative view of the state of the quality and continuous improvement industry, practices, and profession by providing data and insights you can use to benchmark your own organization."

However, **what is the value of the results, if the the basic terminology is ambiguous**? And this research is still more questionable, because it has no sound theoretical and methodological foundation.

How is the quality concept understood in the study?

- "Quality and the customer concepts are becoming one - hence the term Qustomer." "Accelerated Qustomer"
- "Quality is considered a continuous improvement activity to proactively identify and manage opportunities."
- "Quality drives profitability through such things as innovation, customer experience, sustainability."

Example 2: “The quality imperative” in education is of a great consensus, but the quality as a concept is unclear



This recognized report of UNESCO considers quality in the education sector from many different and significant viewpoints, but the definition of the concept itself has left unclear.

“Notwithstanding the consensus about the need to provide access to education of ‘good quality’, there is much less agreement about what the term actually means in practice.”

- The report refers to Adams (1993) who identifies about fifty different definitions for educational quality.

The core message, “The quality imperative”, remains vague as well as the measures that are needed.

Summarizing the general understanding of the quality concept

Quality is a word of general everyday language(*). It refers to the characteristics of something, and typically as compared against some other things, or being very good (excellent). In this meaning the concept of quality dates as far back as to Aristotle (350 BC) and Cicero (45 BC).

Due to the professionalization of the quality discipline since the beginning of 1900 century, the concept quality got many different definitions by different recognized experts, e.g.:

1. Definitions based on product characteristics. Quality means measurable and objective properties of a product.
2. Definitions based on production performance. Quality is fulfillment of the specified requirements, a rate of nonconforming units or rate of number of nonconformities, or customer's satisfaction. Examples include Juran's Small Quality and Big Quality.
3. Financial value based definitions. Quality is the use-value (utility) of an object, the ratio of use-value to price.
4. Real economy value based definitions. Quality of an item equals the real experienced and perceived benefit or advantage obtained by its user regardless of what is paid.
5. Philosophical and mythical definitions. Quality is of excellent goodness (e.g. well-being or love) or luxury.

The international standard definition(**) of the quality concept has evolved from 1986 and particularly aimed at professional purposes of all kinds of business, production, servicing, and marketing but not used consistently.

At least the situation is confusing!

(*) Oxford Dictionary, (**) ISO 9000 standards

The usage of the quality concept has expanded

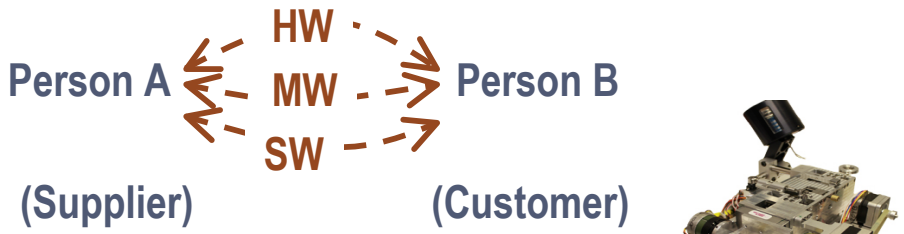
The application area of the quality concept has expanded from the traditional organizational context to the needs of emerging businesses, human individuals and different forms of societies, including:

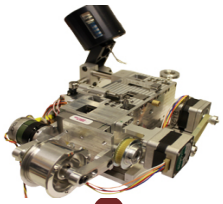
a) Operational entities:
- Business and societal networking, global ecosystems, whole societies
- SMEs and start-ups (99% organizations, in Europe 22 million)
- Great variety of different interlinked and interacting business sectors
- Individuals

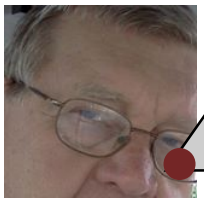
b) The content dimensions of the quality concept
- Security
- Lifelong well-being, quality of life, and health care of everybody
- Quality of society
- Sustainability, social responsibility, inclusive growth, resilience and culture-specific aspects
- Innovativeness

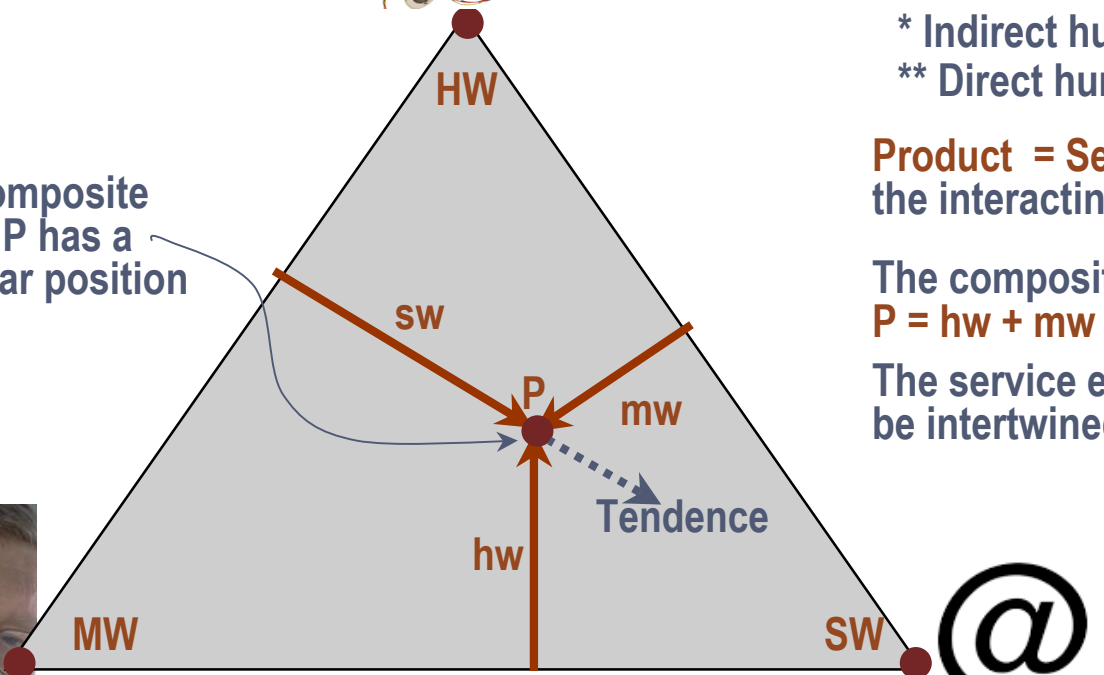
c) Products
- All products today ultimately consist of wide range of services (also goods are means for services)

Products as services through the interacting processes of the involved parties









Interacting processes:

a) HW: Hardware*
b) SW: (Interactive) software*
c) MW: "Man-ware"**

Partial interactions: hw, sw ja mw

* Indirect human influence
** Direct human influence

Product = Service = Result of the interacting processes

The composite service:
P = hw + mw + sw

The service elements may be intertwined.

Expanding the quality practices from organizations to people and society

An individual	An organization	A society
Entity: A rationally, non-rationally and irrationally behaving **human being** with paradoxical existential freedom and tied to the surrounding environment and other individuals	**Entity**: A systemic group of **people** with functions, responsibilities, authorities and relationships to be managed for its objectives with its interested parties	**Entity**: A more or less ordered aggregate of independent **people** and **organizations** interacting with its own members and external parties as a non-systemic network
Quality: Faith, hope and love, but the greatest of these is love (1 Cor 13:13); A good life	**Quality**: Fulfilling all interested parties' needs and expectations; Sustained successful business of the organization	**Quality**: "Quality society"; Well-functioning and well-developing community for all its members; Competitive with other societies
Quality management: Love your neighbor as yourself. (Mat 22:39); Self-leadership	**Quality management**: Management of the organization with regard to quality; management outside the business system	**Quality management**: Quality management within the individual societal actors (Societal quality diffusion)
Responsibility: The person him/herself (or the guardian)	**Responsibility**: Top management of the organization	**Responsibility**: Nobody or everybody

Our solution to the crisis:
Renaissance of the quality profession

Renaissance of the quality profession on two levels:

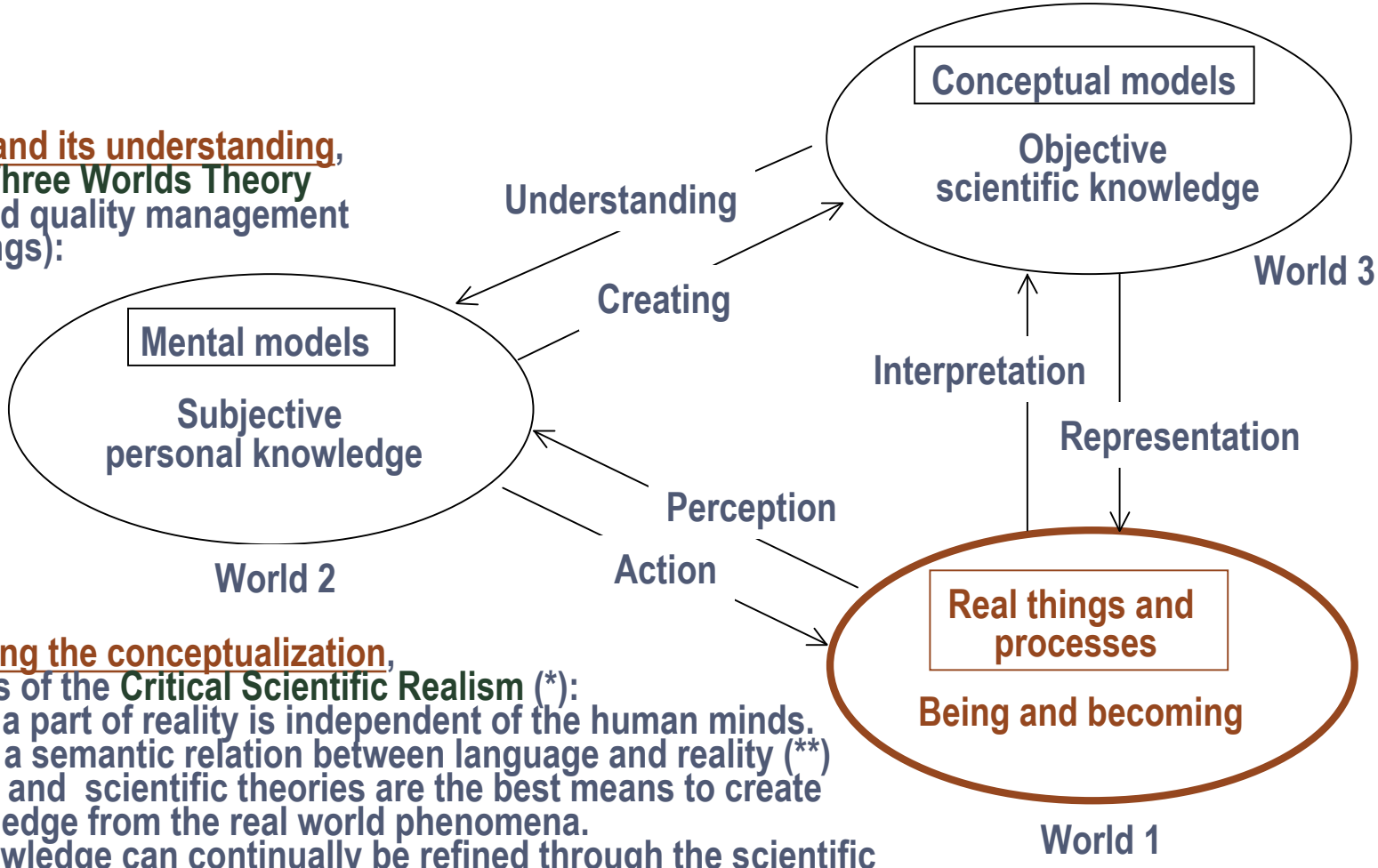
1. Theoretical and scientific of the quality discipline - The renaissance in thinking
   - Ontological foundation of the quality related phenomena
   - Epistemology for the body of the quality knowledge

2. Quality Integration - The renaissance in practice
   - Quality concept with the business specific meaning
   - Creative case-by-case integration of the quality management with the real operation

Renaissance = "be born again, rise again, reappear, a revival"
= return to the fountainhead and the original purpose

Understanding the situation (A) and improving the conceptualization (B) of the reality

A. Reality and its understanding,
Popper's Three Worlds Theory
(Quality and quality management as real things):

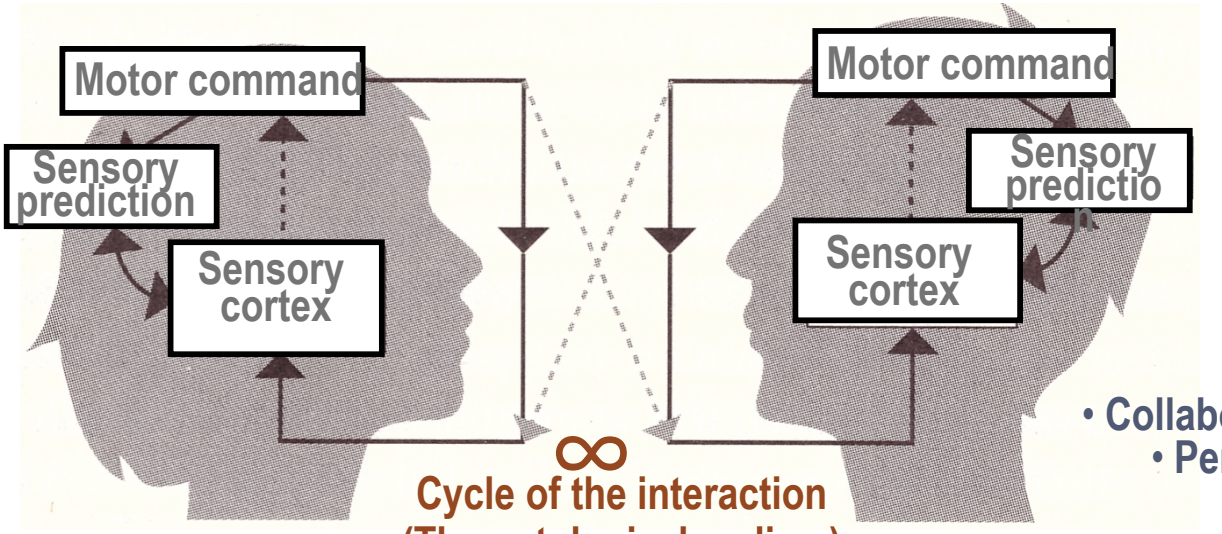


B. Improving the conceptualization,
Key theses of the Critical Scientific Realism (*):
1. At least a part of reality is independent of the human minds.
2. Truth is a semantic relation between language and reality (**)
3. Science and scientific theories are the best means to create true knowledge from the real world phenomena.
4. The knowledge can continually be refined through the scientific research and by collaboration among the research community.

(*) Niiniluoto, (**) Tarski, Semantic theory of truth (Correspondence theory of truth)

The archetype of the quality phenomena: An intentional interaction of two human minds

Quality is just a human-mind-related issue.



Cycle of the interaction
(The ontological realism)

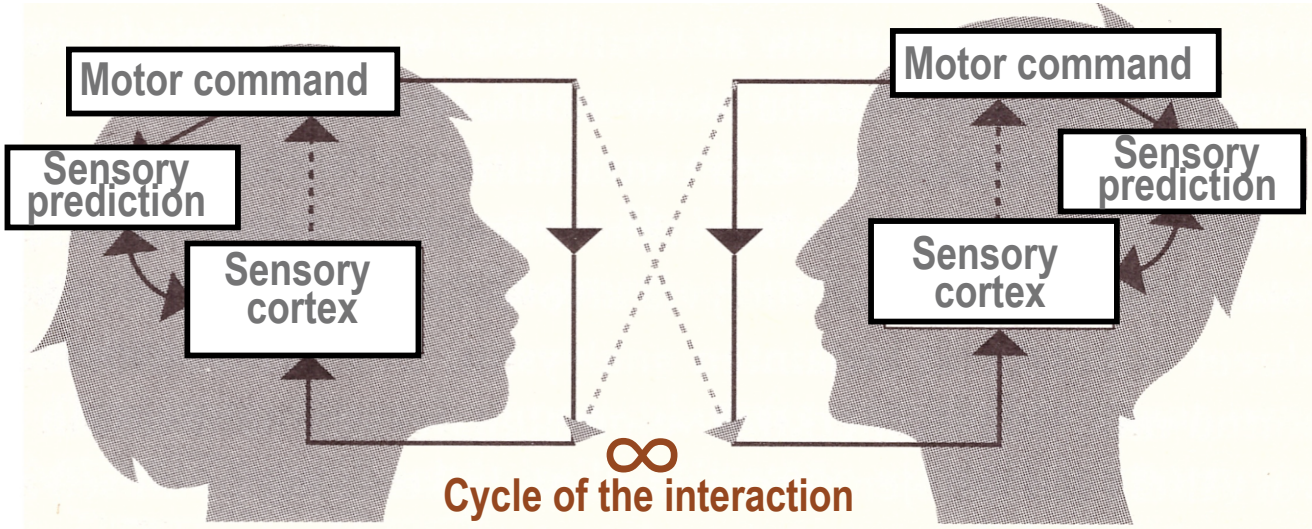
The most significant aspects of human being:
To be human to man

- Intentions (purposes)
- Collaboration (action+resulting object)
- Perception of the object (degree of satisfaction)

The quality archetype:

The original pattern, from which all quality objects, relations, concepts and principles are derived, and which explicates the phenomena and objects with regard to quality.

The archetype of the quality phenomena: An intentional interaction of two self-conscious independent persons



The **essential features of the quality archetype**:

- **Interactivity, intentionality and awareness** are intrinsic human properties.
- The parties **independently affect and respond** to each other and **co-create tangible or intangible** interaction results (**the objects or the products**).
- The parties **perceive the features of the object** and **realize the degree of satisfaction** with regard to their own particular intentions (needs and expectations).
- The parties or the expert observers can **characterize the perceived** object by the means of the traditional quality expressions and linguistic descriptions.
- The interaction can take place through **technology based products** (extensions of senses*).
- The person-to-person archetype can be extended to interactions of **organizations** as manageable systems and processes and **societal networks** of many independent actors.

(*) McLuhan: Technology as extensions of body and senses

Reviving the quality concept: Consistency in the reality and the classical, everyday and professional languages

Content coherence in the quality conceptualization:

- ✓ Ontological foundation (The quality archetype)
- ✓ Original concept of Aristotle (350 BC) and Cicero (45 BC)
- ✓ General everyday language of the Oxford English Dictionary
- ✓ Standardized professional ISO 9000:2015 definition

The standardized ISO 9000:2015 definition of quality concept is well advisable in professional contexts and ontologically valid and aligned with the everyday and traditional meaning:

degree to which a set of inherent characteristics of an object fulfils requirements

or

perceived fulfillment of the needs and expectations

Requirements are needs and expectations of the involved parties. Perception is always linked with the object, which always has certain inherent characteristics.
This definition has been refined during more than thirty years of the existence of ISO 9000 standards by the international experts and been used everywhere in the world in millions organizations.

Quality Integration - Conceptual foundation

Quality:
Perceived fulfillment of the needs and expectations

Quality management:
Managing the organization with regard to quality

Quality improvement:
Increasing the ability to fulfill quality requirements

Quality assurance:
Providing confidence that quality requirements will be fulfilled

From quality to quality management

According to the archetype model, quality management takes place through the object creating processes of the interacting persons or groups of persons.
Consistent strive for quality is based on the management of the processes:

- Individual processes
- Interlinked processes as the operational system (organization)

The standardized ISO 9000:2015 definition of quality management is well aligned with our ontological foundation and compatible with the definition of the quality concept:

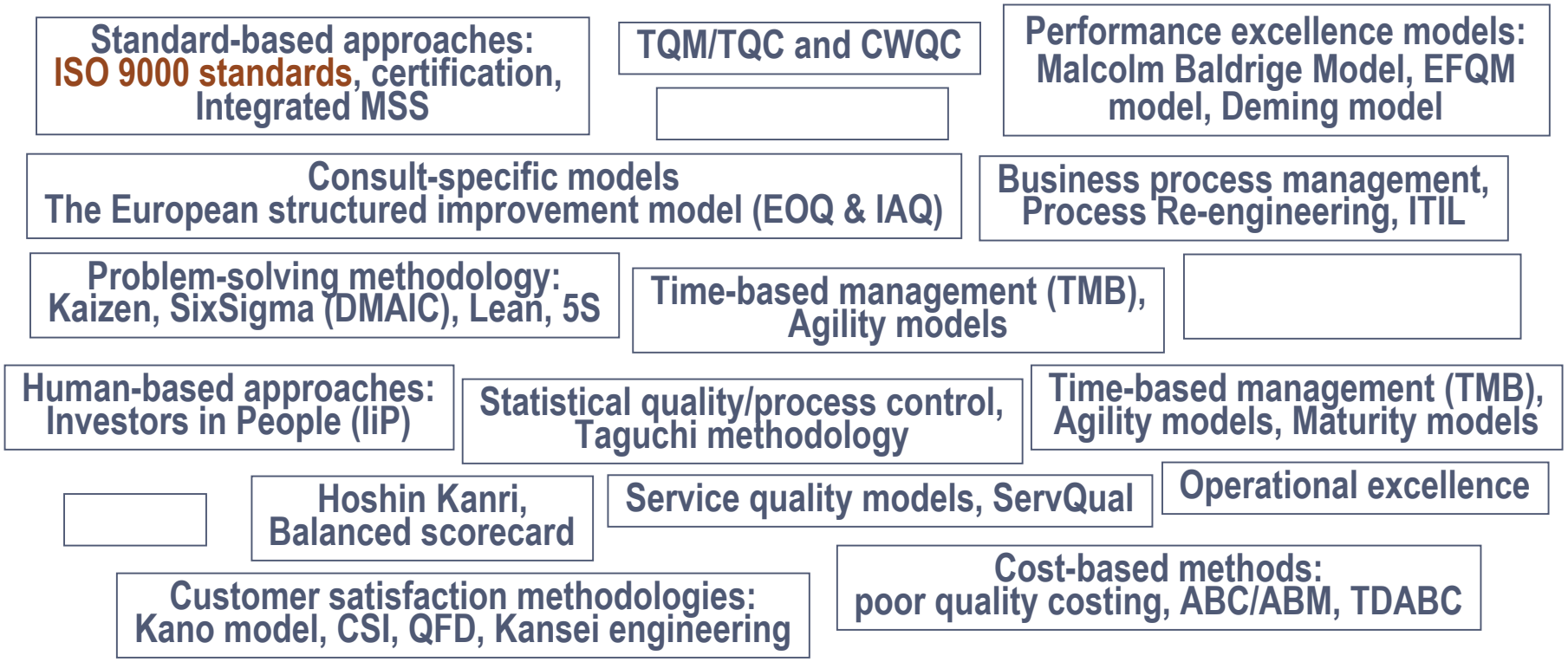
> *direct and control an person or a group of people with regard to quality*

Here the person and the group (the organization) have their own objectives or targets to be achieved.

Management of quality is not possible directly,
it always takes place indirectly through managing people (the organization).

Quality management -- How to get quality happen in practice -- is tool-fragmented

During more than 100 years many practical approaches have been developed, which has led to the fragmentation of quality management practices and at least caused confusing in understanding the concept and in its implementation. Comprehension of the whole lost.



Also competing disciplines have come or emerged in the field of quality.

ISO 9001:2015 – A questionable reform. What should the implementing organizations understand and do?

ISO 9001, the most used reference in the context of quality management!

Serious problems revealed by the study:

- Poor business-relevance of the standard text now and in the future
- Vagueness of the terms and definitions
- Ambiguity of the text and superficiality and backwardness of the contents

Consequences observed:

- Standard requirements can be understood to mean almost anything.
- Threat of arbitrary interpretations of certifiers and consultants is increasing.
- The standard does not represent modernity nor anticipate the future but leads to stagnation.
- Appreciation of the whole standardization suffers.

Justifying the findings and their reasons with factual information:

- Analyzing the standard text
- Analyzing standard-creating process
- Observing early experiences of the first year after publishing

Guidance to the implementing organizations

- Clarifying pros and cons and possibilities of the standardization
- Emphasizing the responsibilities of the implementing organizations

Our viewpoints of the research:

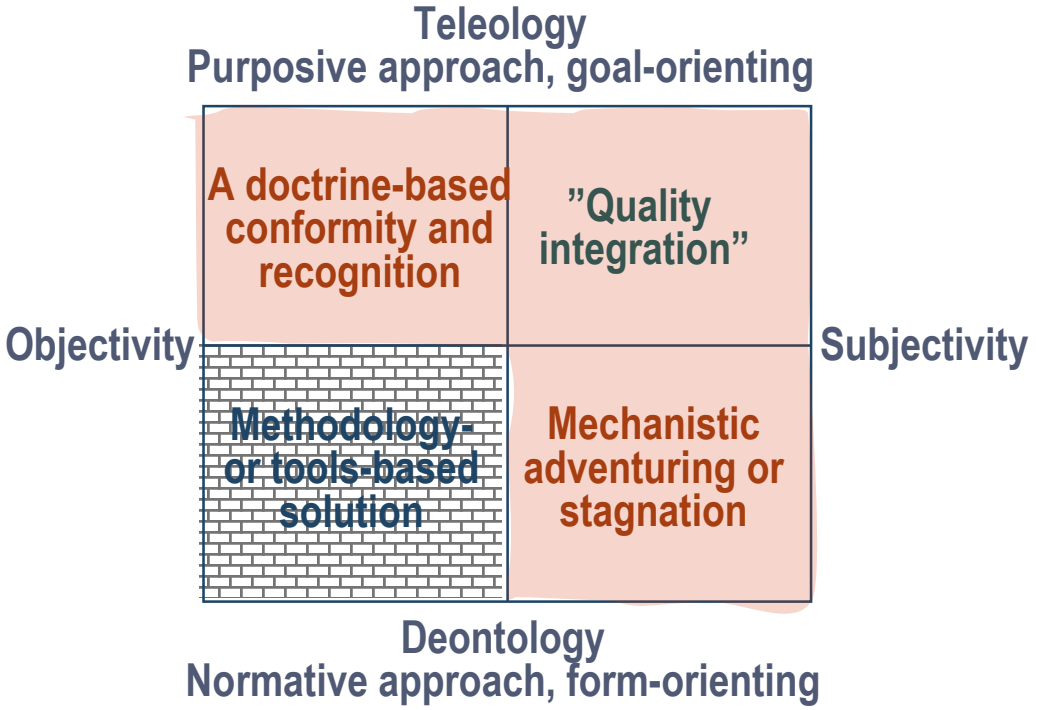
- Standard understood with its extensive world-wide usage and role as a requirement standard
- Our viewpoints as long term practitioners and standardization experts

Paradigm mapping for the theoretical foundation for categorizing different quality management practices

Conceptually, the general definition of quality management is quite clear: **Management (of an organization) with regard to quality**

In practice, quality management **implementations are fragmented and mainly based on instrumental means of the different methodological schools**, which is confusing and detrimental to the understanding the concept itself.

Paradigm mapping (*) is to obtain an overall understanding of the different practices.



Quality renaissance solution:
The most original and natural practical quality management concept are the teleological solutions that strive for organization-specific quality targets, which we call "**Quality integration**".

(*) Burrell & Morgan

Quality Integration - The approach

Quality Integration:

The concept and paradigm to describe various organization-wide arrangements, where **quality management** practices* are seamlessly embedded within the normal management activities and purposefully contribute to the organization's business goals.

* Including various management system standards (MSS), performance excellence models, and the best expertise knowledge and practices (**'3in1 principle'**)

Problems in quality assurance undermine credibility

Quality assurance (a part of quality management): Providing confidence among parties?

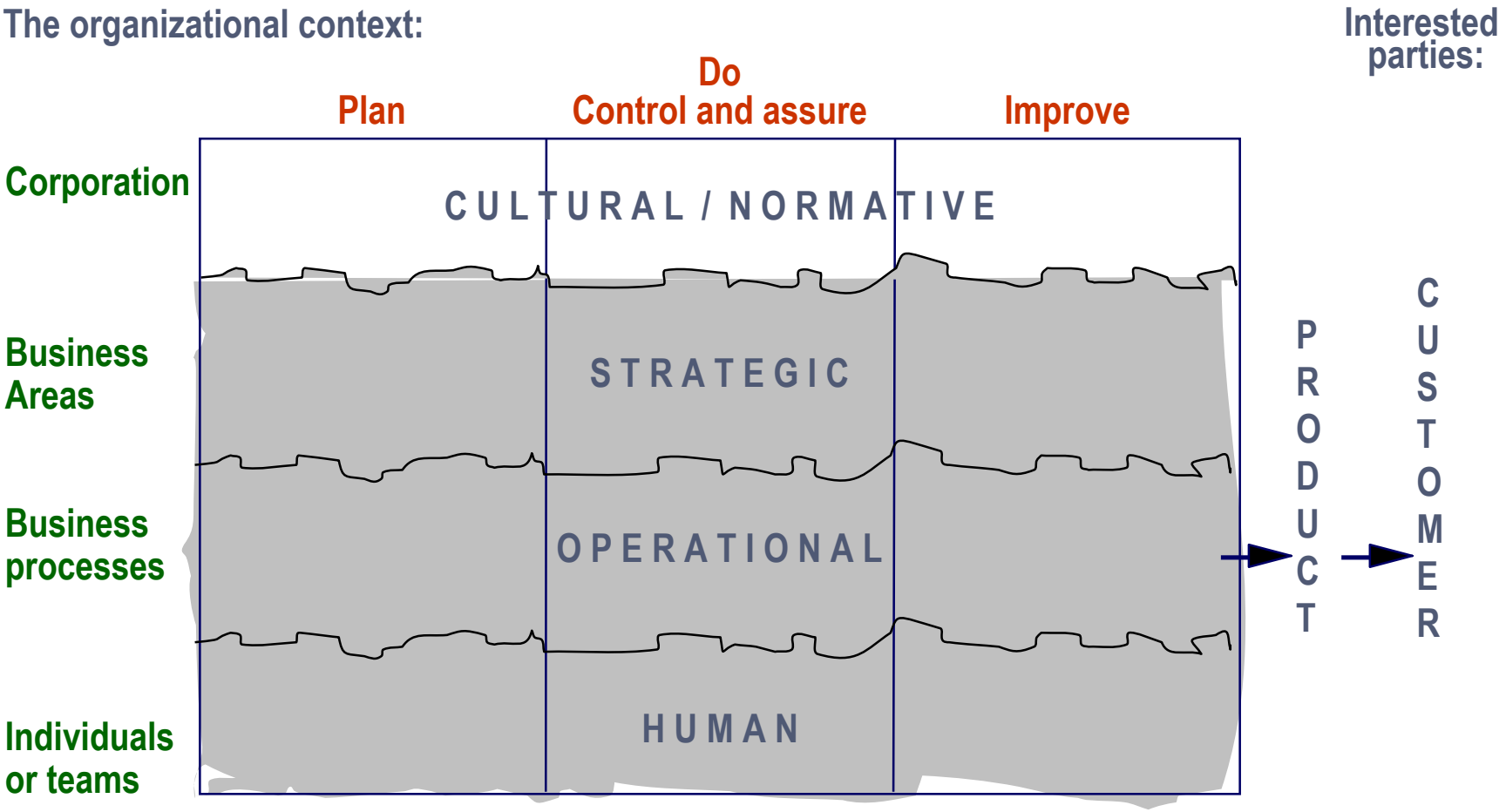
Third party ISO 9001 certification is a pseudo solution:

- There is a broad consensus that the certificate does no guarantee quality or compliance
- Number of certificates globally represent only c. 0.5% of the companies. The certification has reached the saturation level and became less attractive as a sign of quality.
- Presence or absence of ISO 9001 certification is a poor predictor of organizational performance and product quality
- General requirement standardization (ISO 9001) has caused increasing trade barriers as defined by the WTO.
- Commercialized certification has been the major factor "to detriment of the primary use of standards" and "the corruption of the core concept of ISO 9000 standards"*
  - In fact, this has harmful influence on the whole quality discipline especially in the circumstances where we have a lot of alternative truths and options.

The problems are widely recognized, but nobody has done anything to remedy the situation ("Functional stupidity").**

* ISO Central Office 1994; ** Alvesson and Spicer

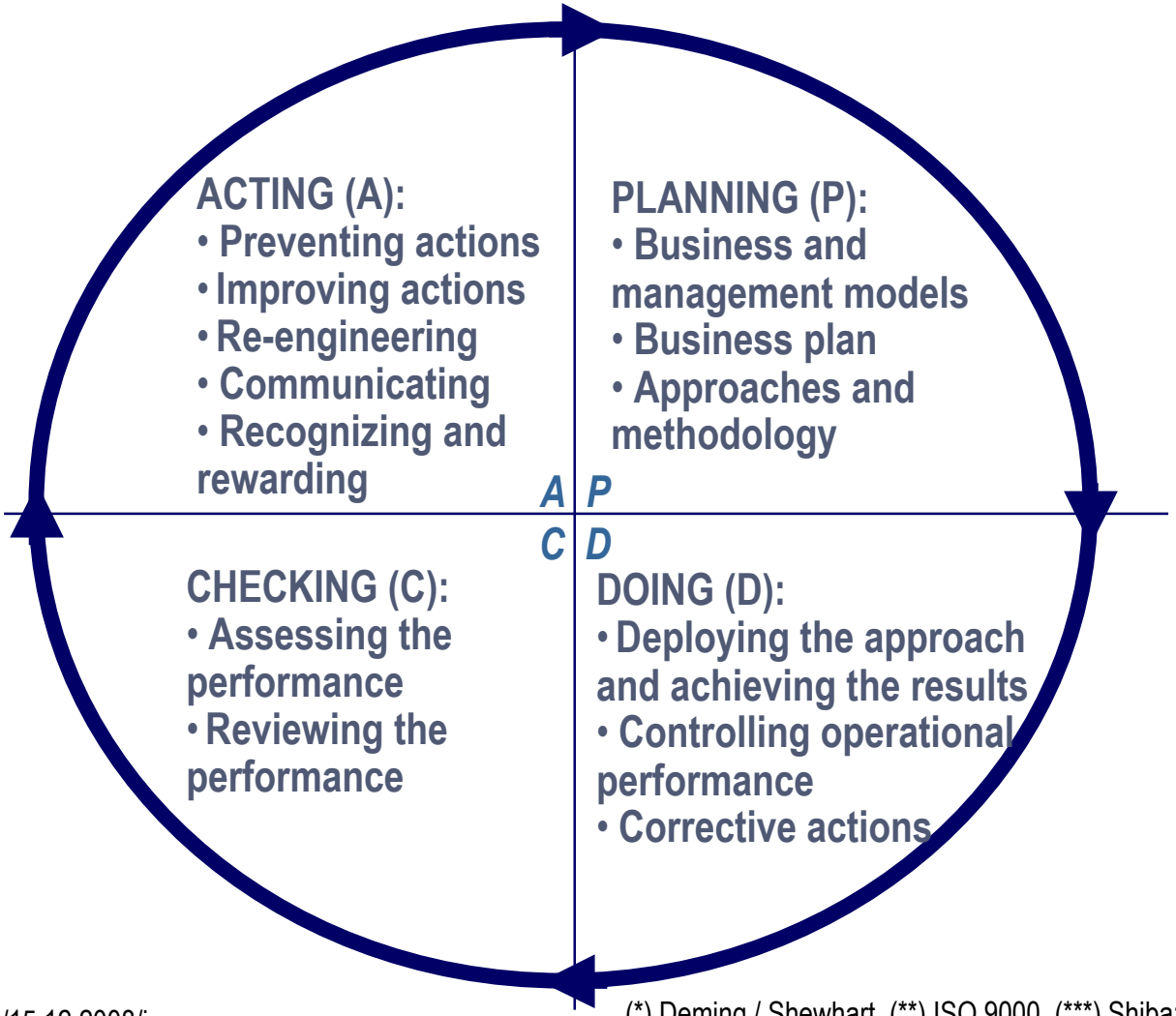
Quality Integration - Organization-wide integration



(Ref. D. Seghezzi, G. Rummler & A Brace, J. Juran)

A triple PDCA (*), a good model for management:

Coordinated activities to direct and control an organization (**)



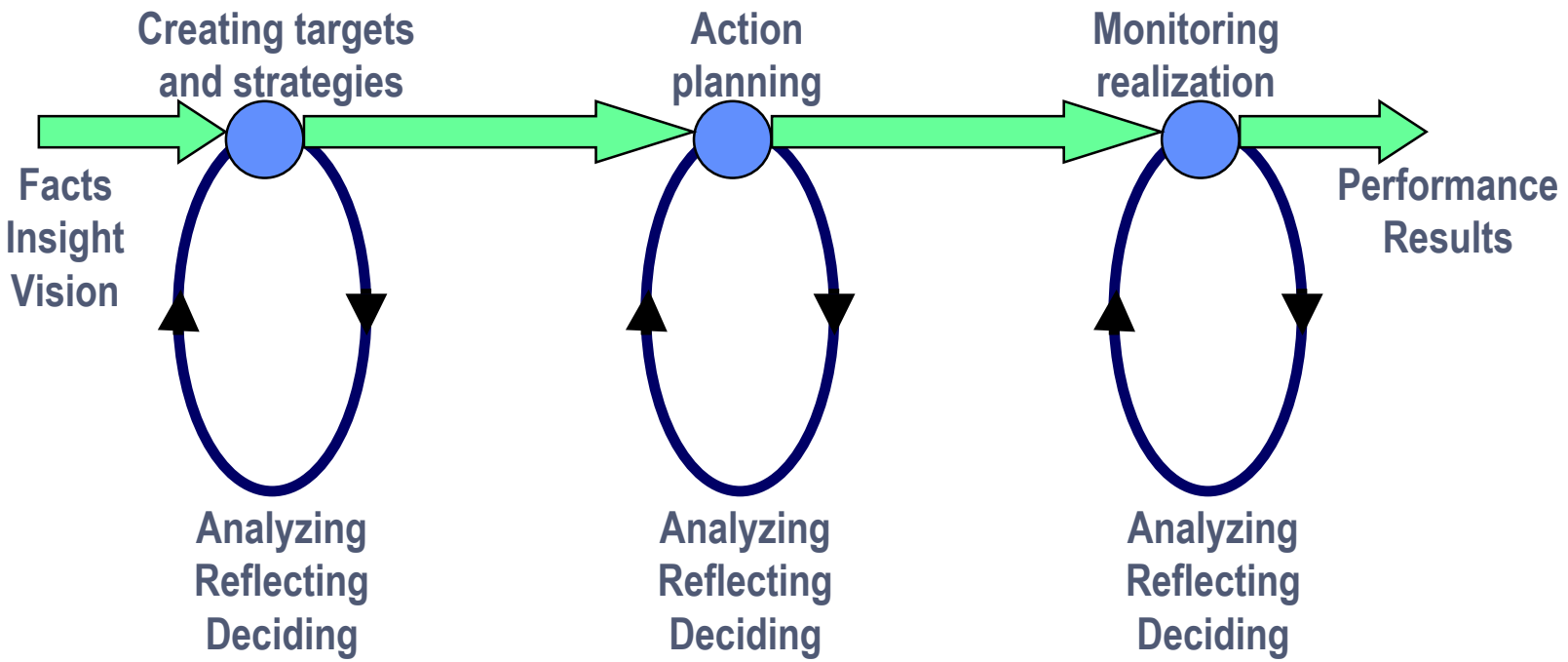
Applying a triple PDCA model ("The Eyes of Buddha" (***)):

1. Rational control (operational)
2. Continual rational small step improvement (operational), "Kaizen" approach
3. **Innovative breakthrough changes (strategic)**

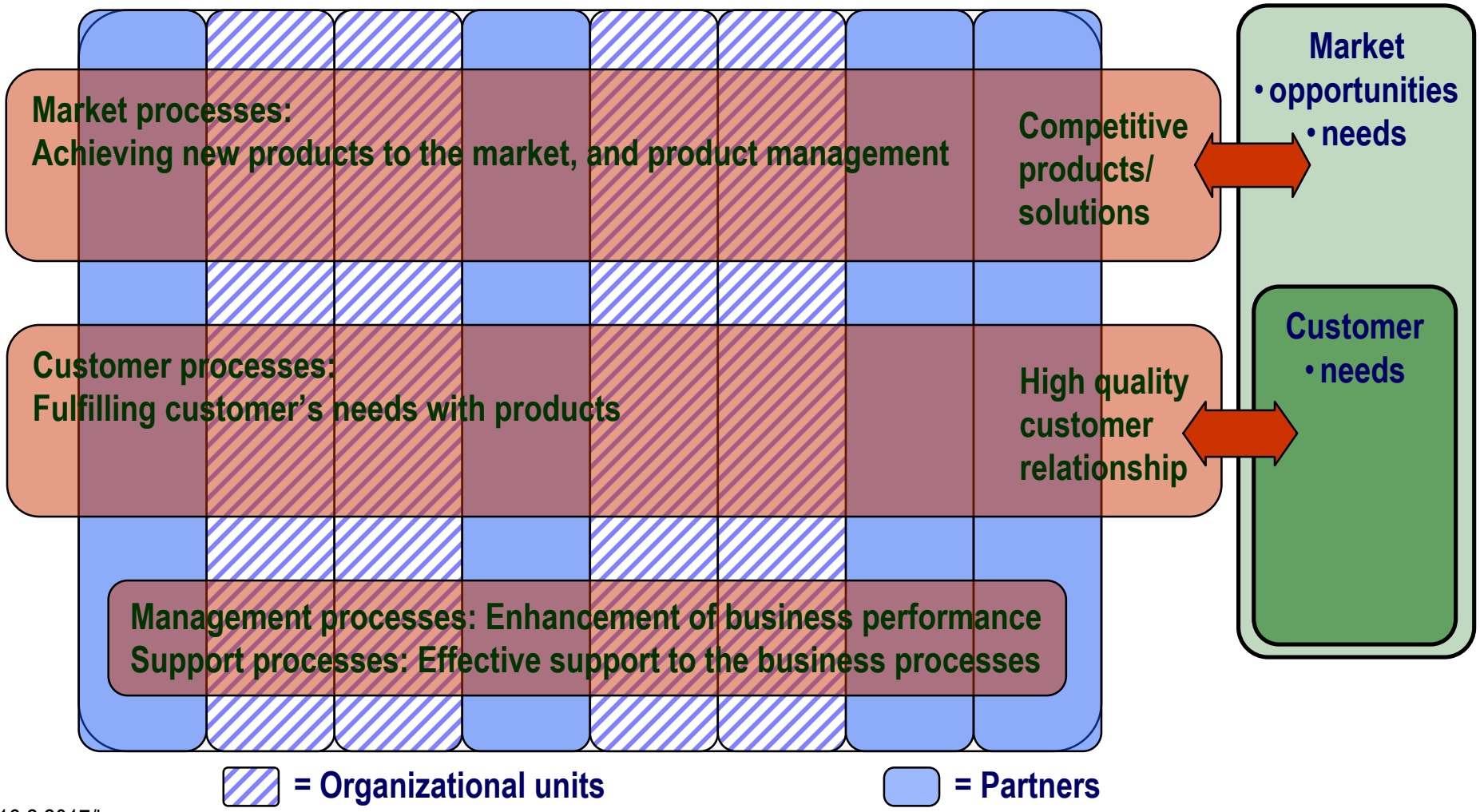
(*) Deming / Shewhart, (**) ISO 9000, (***) Shiba; Bodhnath Stupa, Kathmandu

Quality Integration - Strategic integration

Quality management practices integrated within organization's strategic management process



Quality Integration - Strategic process structure

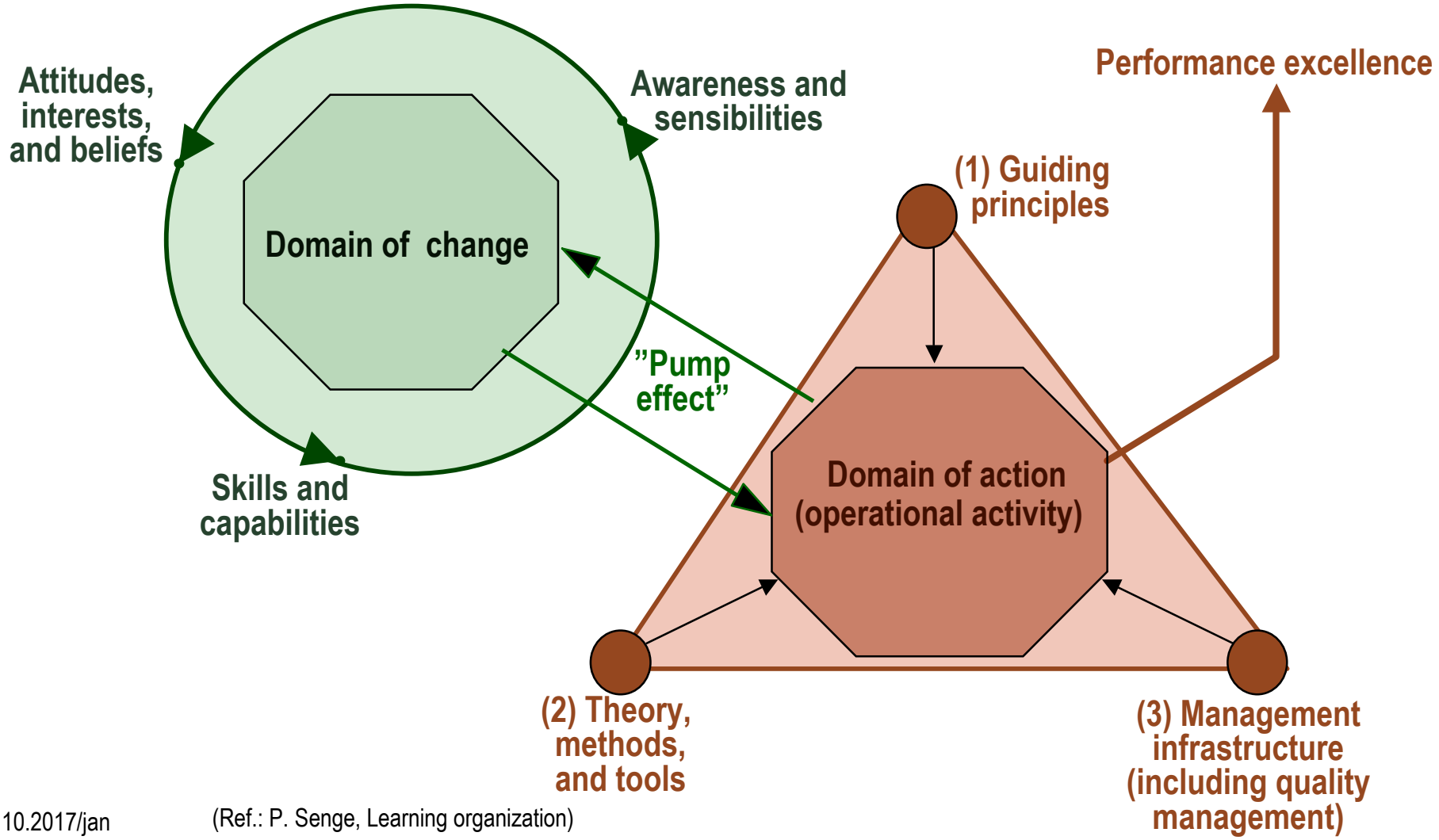


Quality Integration - Process management (Process plan)

Business process: <XYZ-process> Process owner: <donald.duck@xyz.com>	Purpose of the process: Strategic focus of the process 20XX:	
Inputs:	Activities:	Outputs:
Performance indicators:	Target values or limits for the performance indicators:	Performance measurement, recording, and reporting:
Notes (e.g. risk management):		
Signatures: Process owner	Business leader	Links to more detailed documented information:

Quality Integration - Strategic breakthrough change management

Quality Integration - Quality improvement through organizational learning for quality



(Ref.: P. Senge, Learning organization)

Quality integration - Strategic performance evaluations

Strategic performance evaluations of quality management:

- Evaluation of the management of the organization with regard to quality
- Quality in the broad sense according to its definition: Degree to fulfill the needs and expectations of the organization's all interested parties
- Evaluations made as self-assessment strategic decisions and enhancing organizational performance

Major models and methodologies for the strategic evaluations:

➔ **Excellence models:** Focus on performance growth through organizational learning, process refining, innovation and integration; both enablers and results assessed

➔ **Maturity models:** Focus on fulfilling prescribed maturity level criteria based on the best practices; only enablers assessed

Quality Integration - Performance evaluation and management

Managerial questions for reflecting the organizational quality improvement towards excellence:

1. How to consider interlinked processes as enablers producing organizational results?
2. How to evaluate the the overall organizational quality performance?
3. What is the current situation of performance?
4. What is the current situation of the best competitors of the sector?
5. What is the World Class level of performance (Level of the best organization of all sectors in the world)?
6. What is the strategic target for the development of the organizational quality?
7. What is the expected level of the best competitors in the future?
8. What measures and how should they be implemented in processes in order to achieve the target?

Challenges to the quality profession for the quality renaissance

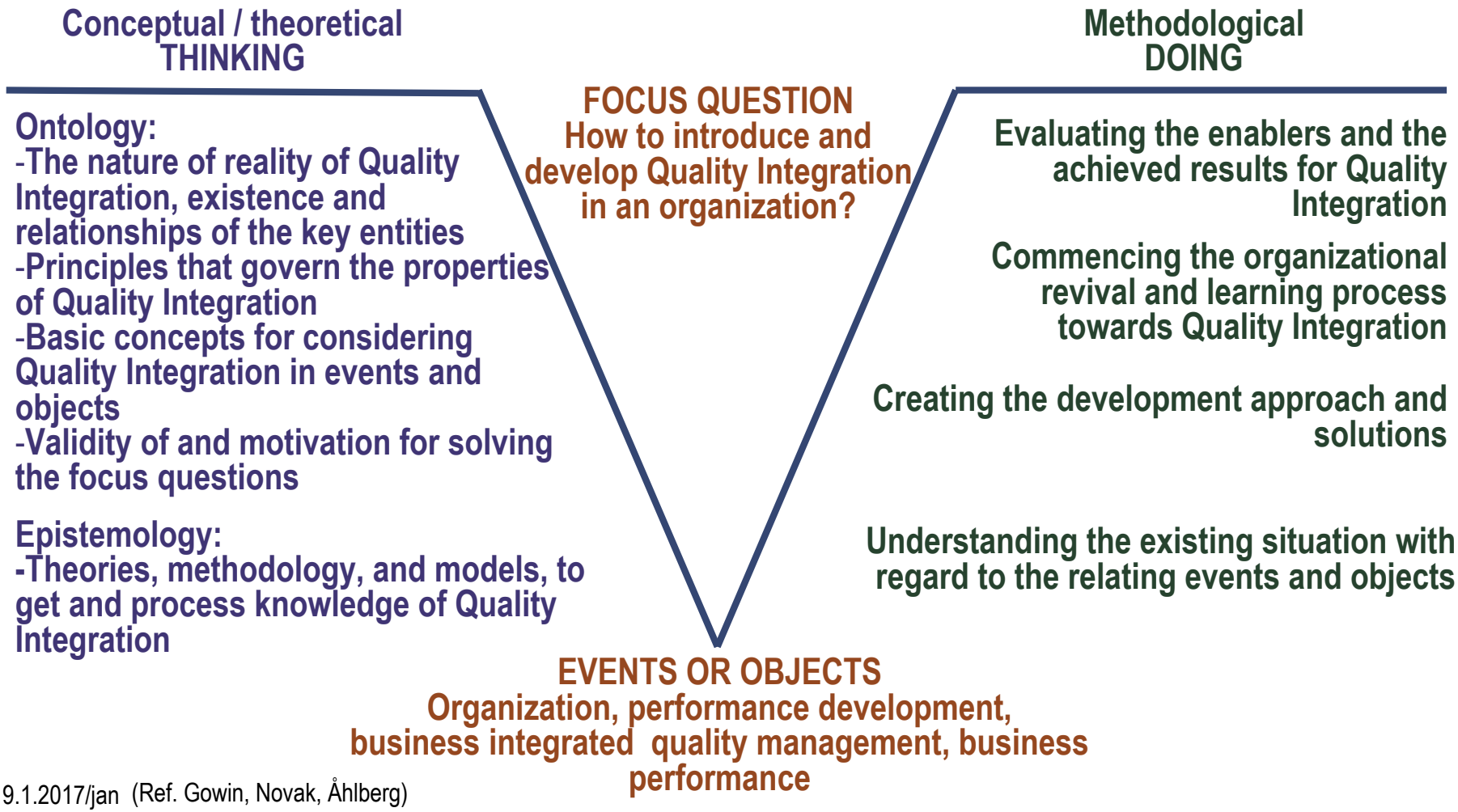
A. Quality and quality management of individuals - Quality of life

B. Quality and quality management for the society - Quality of society (including the 4th Industrial Revolution, the Industry 4.0 and Smart City)

C. Quality management in SMEs and startups

Especially consistent research and innovations are needed!

Bridging the chasm between theory and practice in Quality Integration (Vee heuristics)



4267/19.1.2017/jan (Ref. Gowin, Novak, Åhlberg)

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