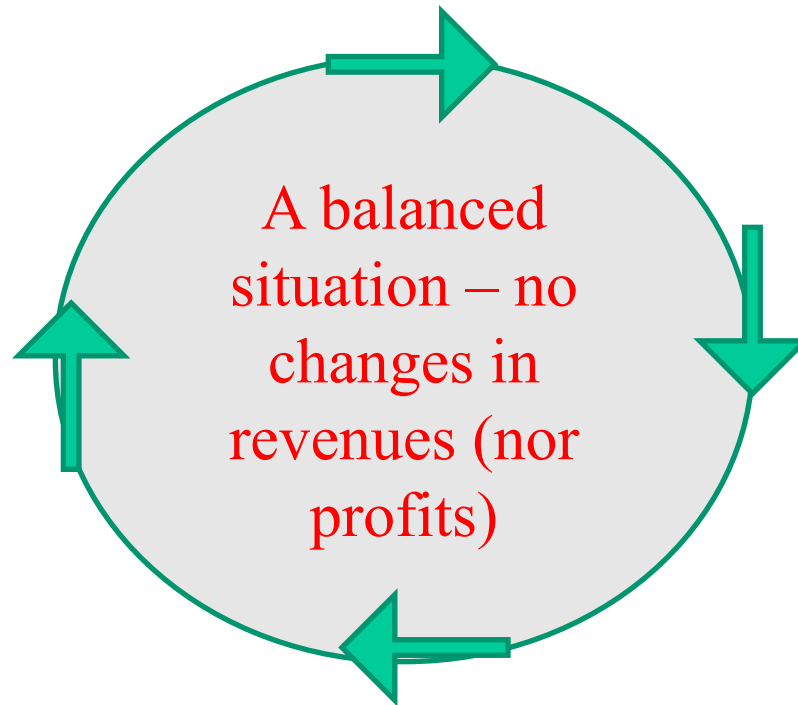


3.1 Total Productivity Management (TPM), TQM, and Hoshin Kanri

- THREE TYPES OF PROBLEMS
- TOTAL PRODUCTIVITY MANAGEMENT, TPM
(Sumanth, David, J. 1998. CRC Press LLC. 373 p.)
- HOSHIN KANRI
- HOSHIN PLANNING
- ITIL
- Case Honeywell

What does business growth require?

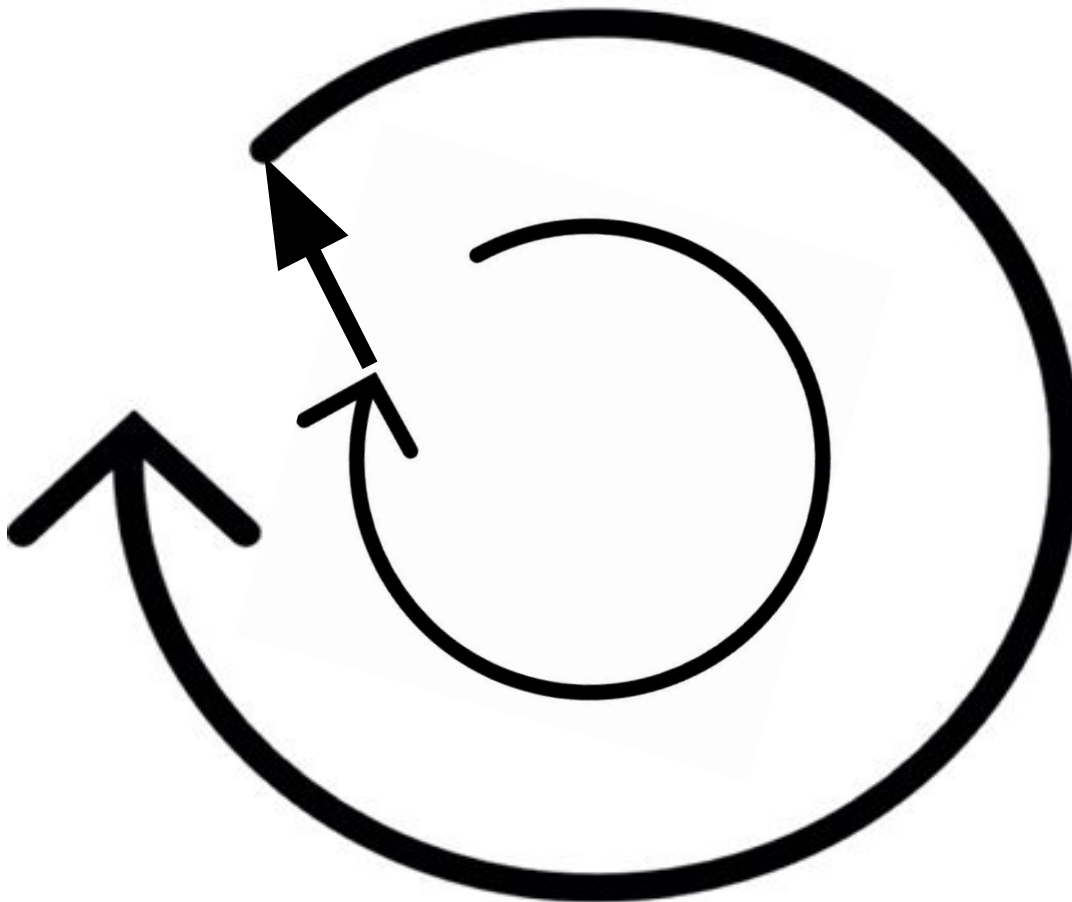


What does business growth require?



A steady yearly
growth by small
steps improvement
and investments
based on yearly
profits

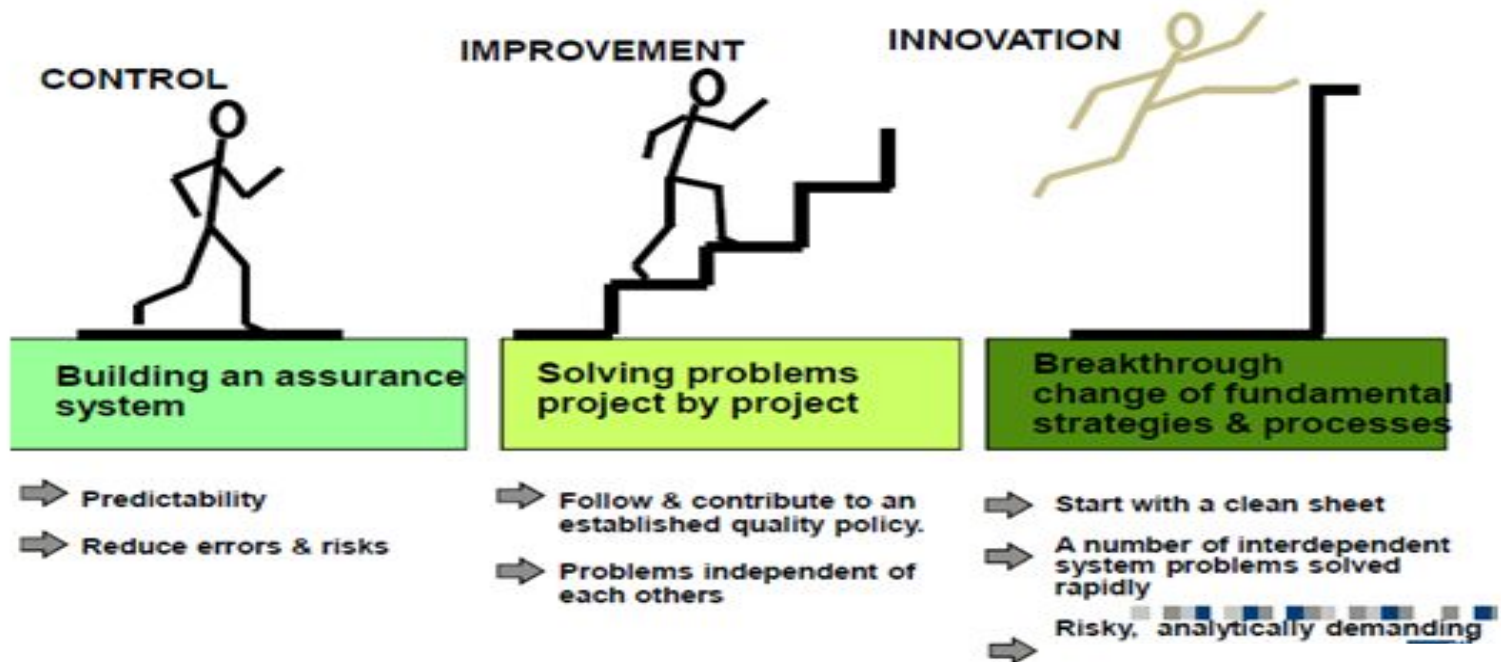
What does business growth require?



Or giant tiger leap
by investment – by
new own capital or
loaned capital

=> High risks and
opportunities

THREE TYPES OF PROBLEMS



Define processes
and create metrics
Stabilize

Analyze and
improve
processes and
performance
continuously
JAP

Strategy
planning RISK
management

Where do you
normally find the
biggest quality
problem?

How does TQM solve the business problems?

Describe the framework of TQM!

TQM

competitiveness

Customer satisfaction
external and internal

Common
goal

Profitability and
continuity

Continuous improvement of
processes

Society and
environment

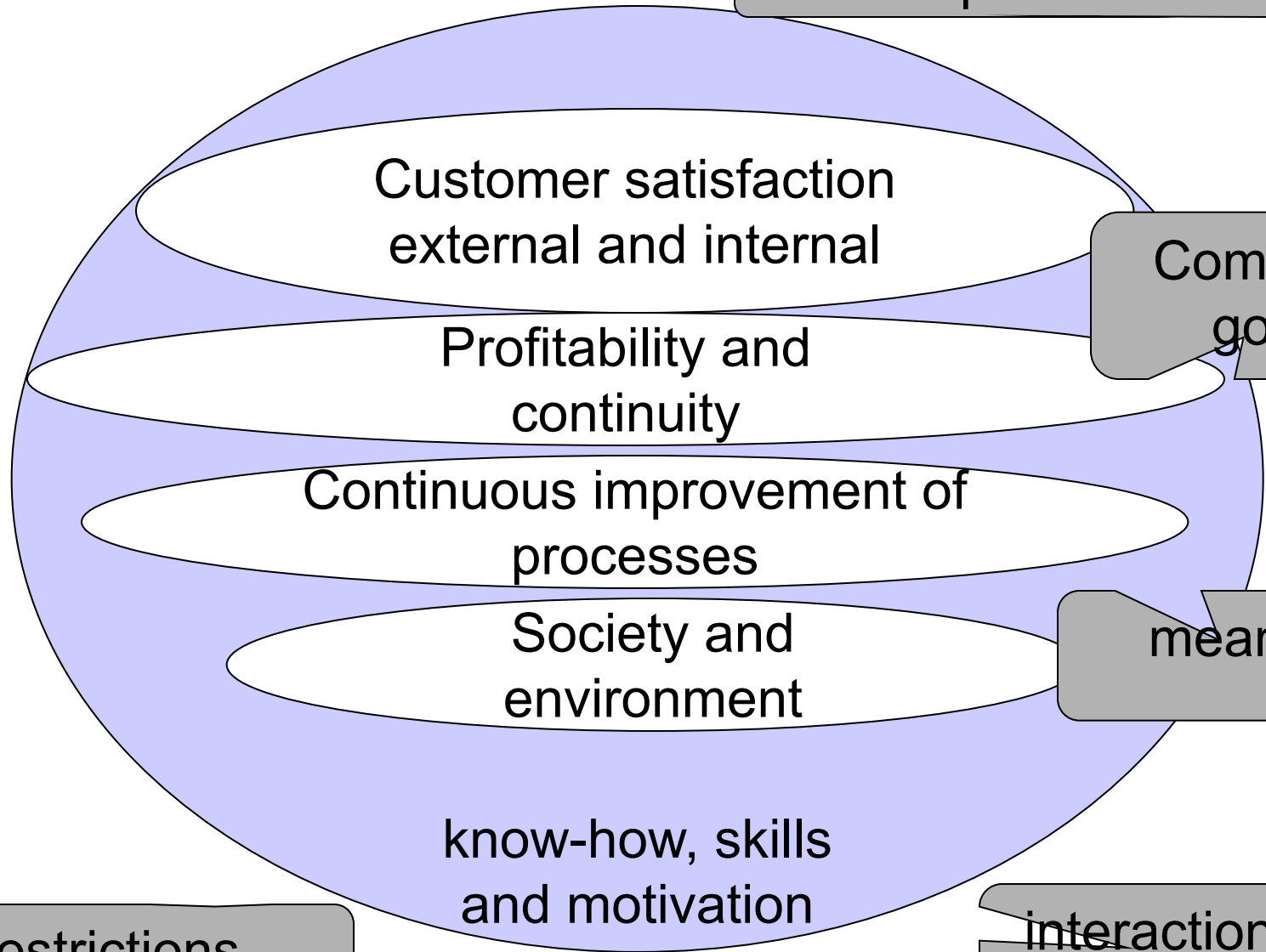
means

know-how, skills
and motivation

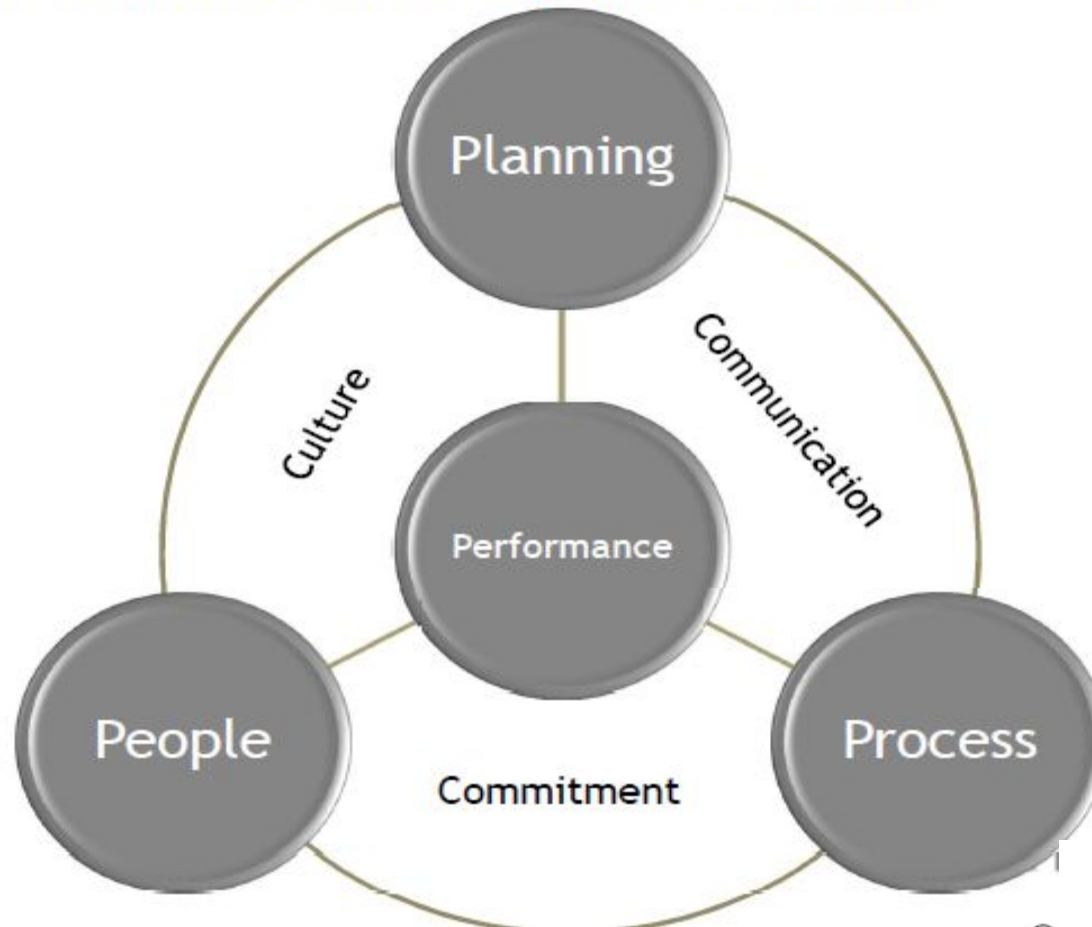
restrictions

interaction

JAP



OAKLANDIN 's TQM / OPERATIONAL EXCELLENCE MODEL



OAKLANDIN 4P/3C -MALLI MODEL

- *Planning, people and processes* are the keys to delivering quality products and services to customers and generally improving overall *performance*.
- These four Ps form a structure of ‘hard management necessities’ for a simple TQM and Operational Excellence (OpEx) model
- The three Cs of *culture, communication, and commitment* provide the glue or ‘soft outcomes’ of the model which will take organizations successfully into the twenty-first century.

THE TOTAL QUALITY MANAGEMENT APPROACH (OAKLAND 2014)

- TQM is a comprehensive approach to improving competitiveness, effectiveness and flexibility through planning, organizing and understanding each activity, and involving each individual at each level; it is useful in all types of organization.
- TQM ensures that management adopts a strategic overview of quality and focuses on prevention, not detection, of problems.
- TQM often requires a mindset change to break down existing barriers.
- Managements that doubt the applicability of TQM should ask questions about the operation's costs, errors, wastes, standards, systems, training and job instructions.

Unique Features of TOTAL PRODUCTIVITY MANAGEMENT, TPM, Employee Creativity

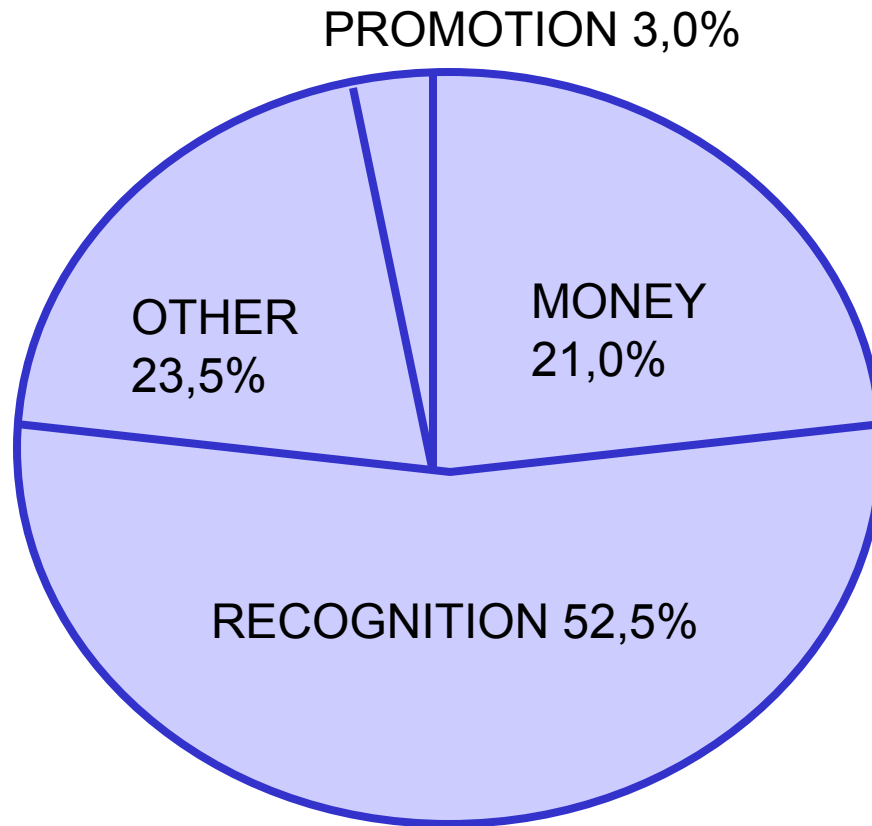


FIGURE 1. Importance of recognition and money in fostering creativity. (Source: "Productivity and Quality: IIE Evaluates Improvement by Productivity Engineers," Industrial Engineering, p. 57, May 1989)

This is merely one example of what has been proven by many behavioural scientists - that a recognized and motivated group of individuals provide a positive performance environment for themselves and for the enterprise for which they work. A special report published by the Institute of Industrial Engineers showed that recognition and money accounted for 73.5% of the responses offering ideas to improve performance (Figure 1).

Matsushita, generally considered the largest consumer electronics company in the world, knows the importance of people. "Matsushita's Seven Objectives" (Figure 2), as the company calls them, all revolve around people. No wonder it has been such a successful company.

"MATSUSHITA'S SEVEN OBJECTIVES"

1. NATIONAL SERVICE THROUGH INDUSTRY

Our purpose shall be not solely to gain wealth nor display industrial strength, but to contribute to the progress and welfare of the community and nation.

2. FAIRNESS

We shall be fair and just in all our business and individual dealings. Without this spirit no man can win respect nor can he respect himself no matter how wise or capable he may be.

FIGURE 2. People at the centre of attention in Matsushita. (Courtesy of Matsushita Corporation.)

3. HARMONY AND COOPERATION

Alone we are weak, together we are strong. We shall work together as a family in mutual trust and responsibility. An association of talented men is but an unruly mob unless each member is imbued with this spirit.

4. STRUGGLE FOR BETTERMENT

It shall be our policy to encourage trust and self-reliance that each may gain self-respect through his own endeavour and to struggle hard for betterment. Without this spirit, true peace and progress cannot be achieved.

FIGURE 2. People at the centre of attention in Matsushita. (Courtesy of Matsushita Corporation.)

5. COURTESIES AND HUMILITY

We shall respect the rights of others. We shall be cordial and modest. We shall praise and encourage freely. Without this spirit there is no social order.

6. ADJUSTMENTS AND ASSIMILATION

Progress cannot be achieved unless we adjust to the ever-changing conditions around us. As the world moves forward, we must keep in step.

FIGURE 2. People at the centre of attention in Matsushita. (Courtesy of Matsushita Corporation.)

7. GRATITUDE

We shall repay the kindness of our associates, our community, our nation and our foreign friends with gratitude. This spirit of gratitude will give us peace, joy and unlimited strength to overcome all difficulties.

FIGURE 2. People at the centre of attention in Matsushita. (Courtesy of Matsushita Corporation.)

In summary, managers who design their companies around the "people building" theme will be more successful than those who design with any other central focus, such as profits or technology.

The TPM philosophy creates and sustains the people-building emphasis; therefore, the power of technologies designed by such people is long lasting and totally productive. The people building thinking in TPM ensures an enthusiastic work ethic, job security, organizational stability, and employee stability.

Instituting innovations and creating technological or structural changes in such an environment are easier because of the "organizational resilience" for adaptability and accommodation.

Quality at Nokia Networks What does quality mean at
Nokia Networks - See more at:
[http://networks.nokia.com/about-us/company/quality#
sthash.Kdtt5arZ.dpuf](http://networks.nokia.com/about-us/company/quality#sthash.Kdtt5arZ.dpuf)

[http://networks.nokia.com/about
-us/company/quality](http://networks.nokia.com/about-us/company/quality)

Quality at Nokia Networks

What does quality mean at Nokia Networks?

For us, quality is simply about putting the customer at the centre of everything we do, not only in technology and services, but also in our behaviours.

We are putting quality into practice every day through three quality principles that sum up the Nokia Networks way: **Customer First**, **Execution Excellence** and **I Own Quality**.

These principles, along with the aspiration of our talented people to be the best-in-class, are forming the unique foundation of Nokia Networks' quality DNA.

Nokia Networks is built on solid quality principles

Customer First encourages employees to adopt 'outside in' thinking and to focus on the needs of the customer, rather than looking inwards at ourselves. It implies carrying the voice of the customer inside the organization to collaborate across functions. Ensuring that the impact on the customer is understood fully and that we are delivering high quality products, services and solutions to maximize the investments customers are making with us.

Execution Excellence is about doing it right the first time. With this we mean proactive quality through early detection and containment.

I Own Quality means that every Nokia Networks employee takes personal responsibility on a daily basis for their actions and decision making to achieve high quality for our customers.

Join the Nokia Networks quality journey

An important part of the Nokia Networks quality journey is developing a partnering relationship with our customers, jointly working with them to achieve and exceed their expectations – to delight them.

Nokia Networks is determined to achieve the goal of **delighting our customers and making quality a key differentiator in the marketplace.**

Hoshin means objectives or directions (a course, a policy, a plan, an aim)

Kanri means control or management (administration, management, control, charge of, care for)

⇒ **Hoshin Kanri** means policy management or management of objectives (Policy Deployment)

Nichijo means daily.

⇒ **Nichojo Kanri** means daily management

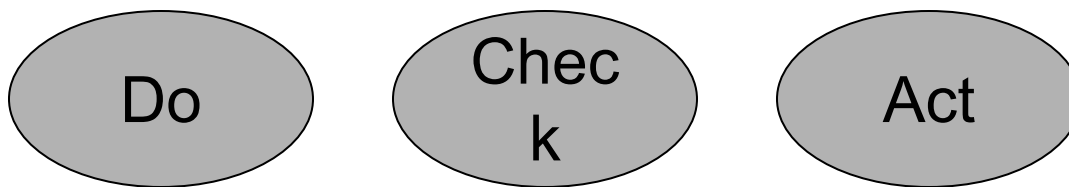
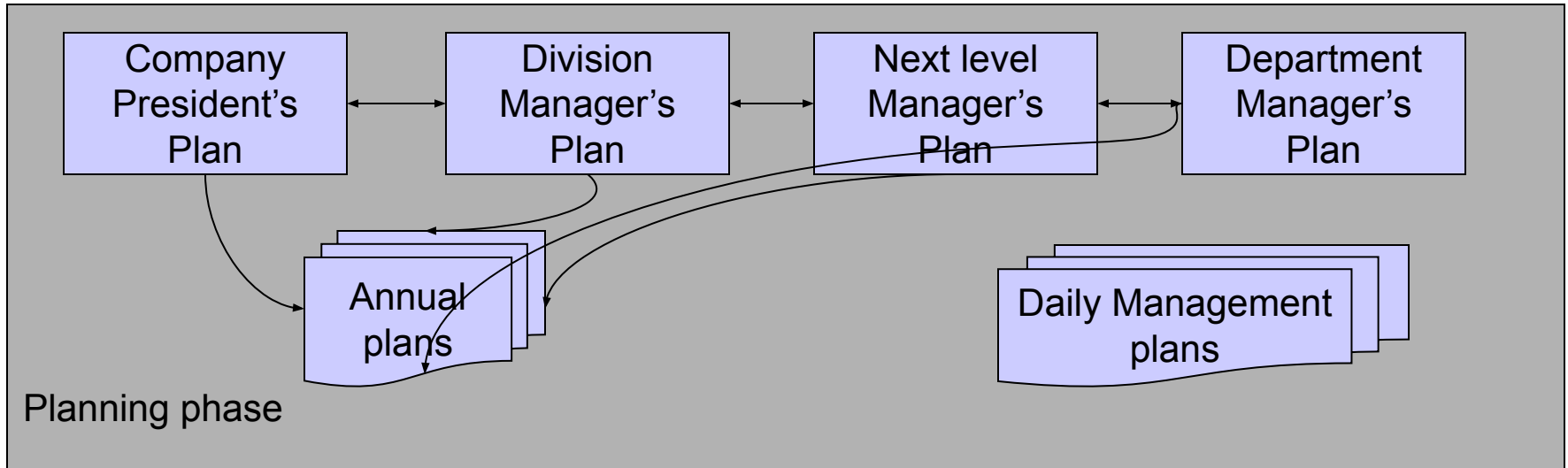
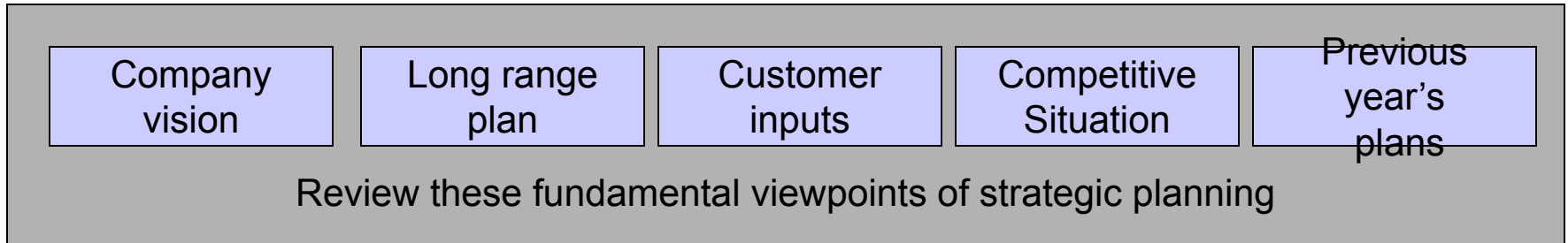
Hoshin Kanri was developed in Japan 1960 at Bridgestone Tire Company. the philosophy originates with ancient military traditions and efficiency.

The purpose of Hoshin Kanri is to make it possible to get away from the status quo and make a major performance improvement by analyzing current problems and deploying strategies that respond to environmental conditions.

There are two levels:

- The Strategic Planning Strategies — Business Simulations
- The Daily Management Strategies — Business Operations

Hoshin planning process - flowchart



TOP-DOWN vs. BOTTOM – UP vs. HOSHIN KANRI PLANNING

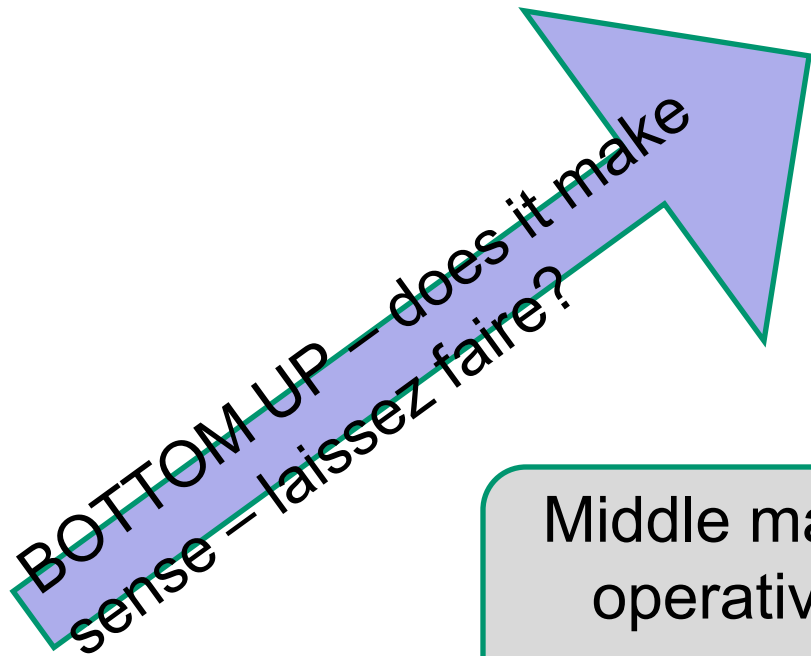
Top management's
financial goals

Middle management's
operative plan and to
achieve financial goals

Employees' operative
goals

TOP – DOWN – where is
the commitment – fear?

BOTTOM – UP PLANNING



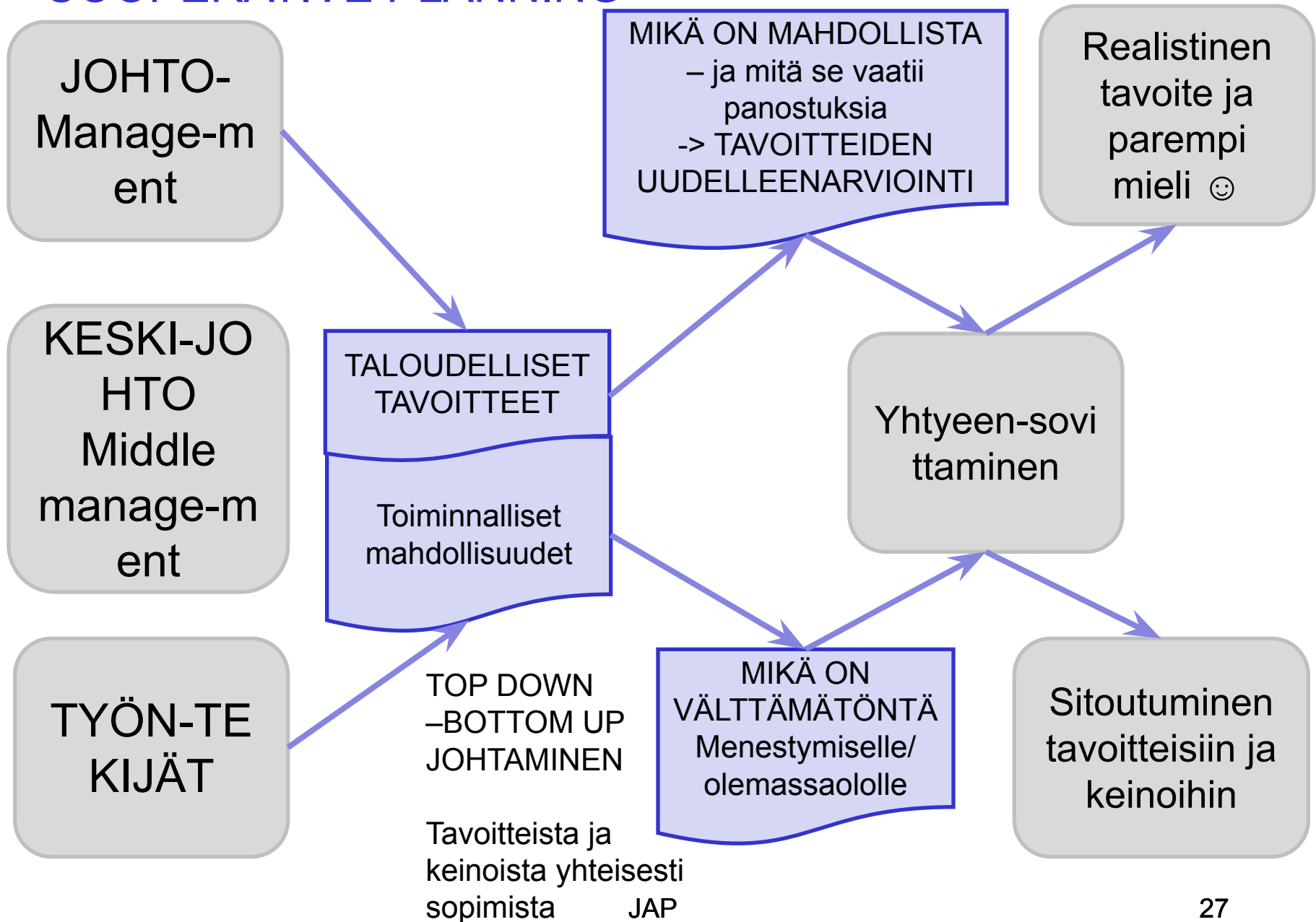
Top management's financial goals

Middle management's operative plan and goals

Employees' operative goals and plan

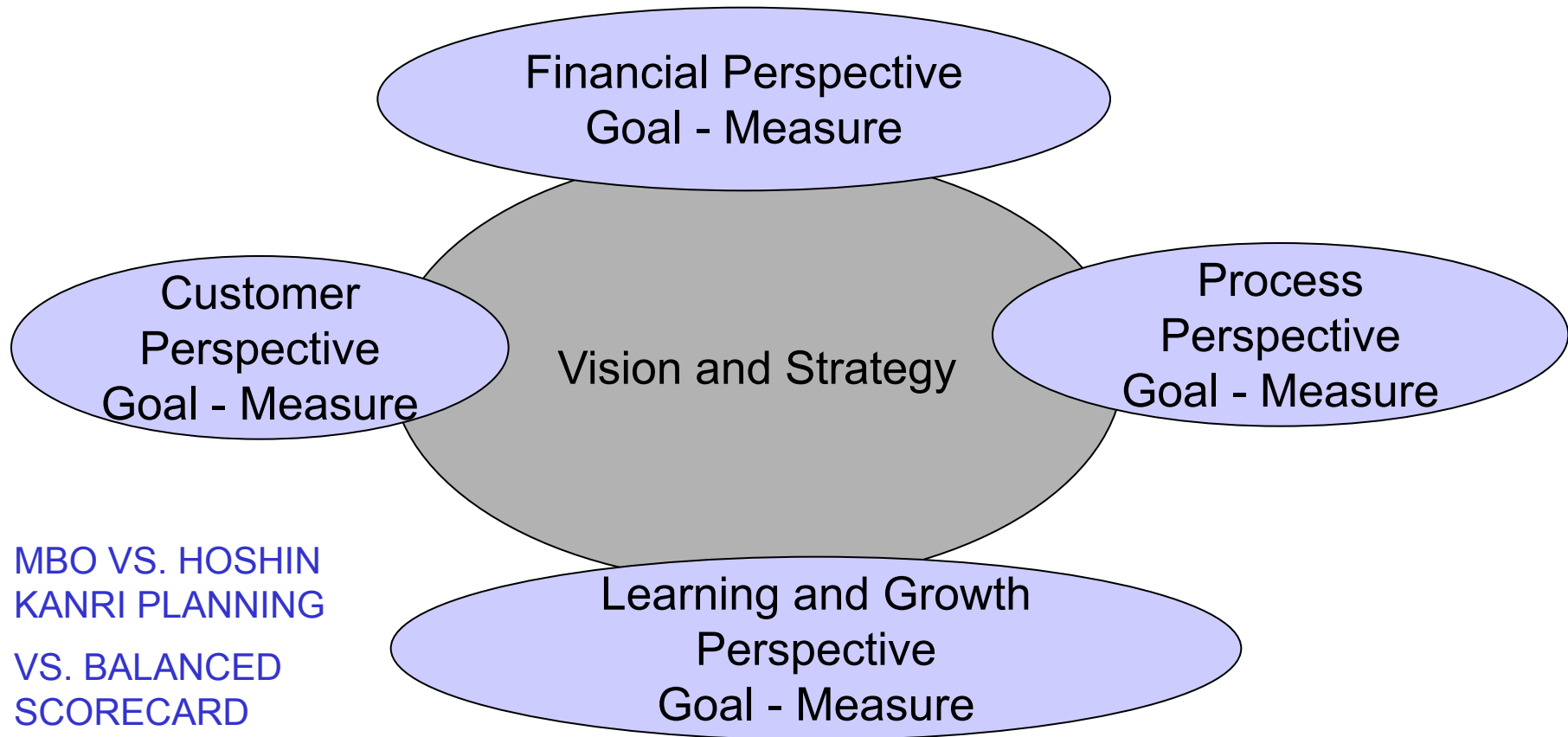
Very high commitment – inevitable in creative and scientific jobs!

COOPERATIVE PLANNING



Balanced Scorecard , BSC – a Strategic Performance Measurement Framework (Kaplan & Norton 1996)

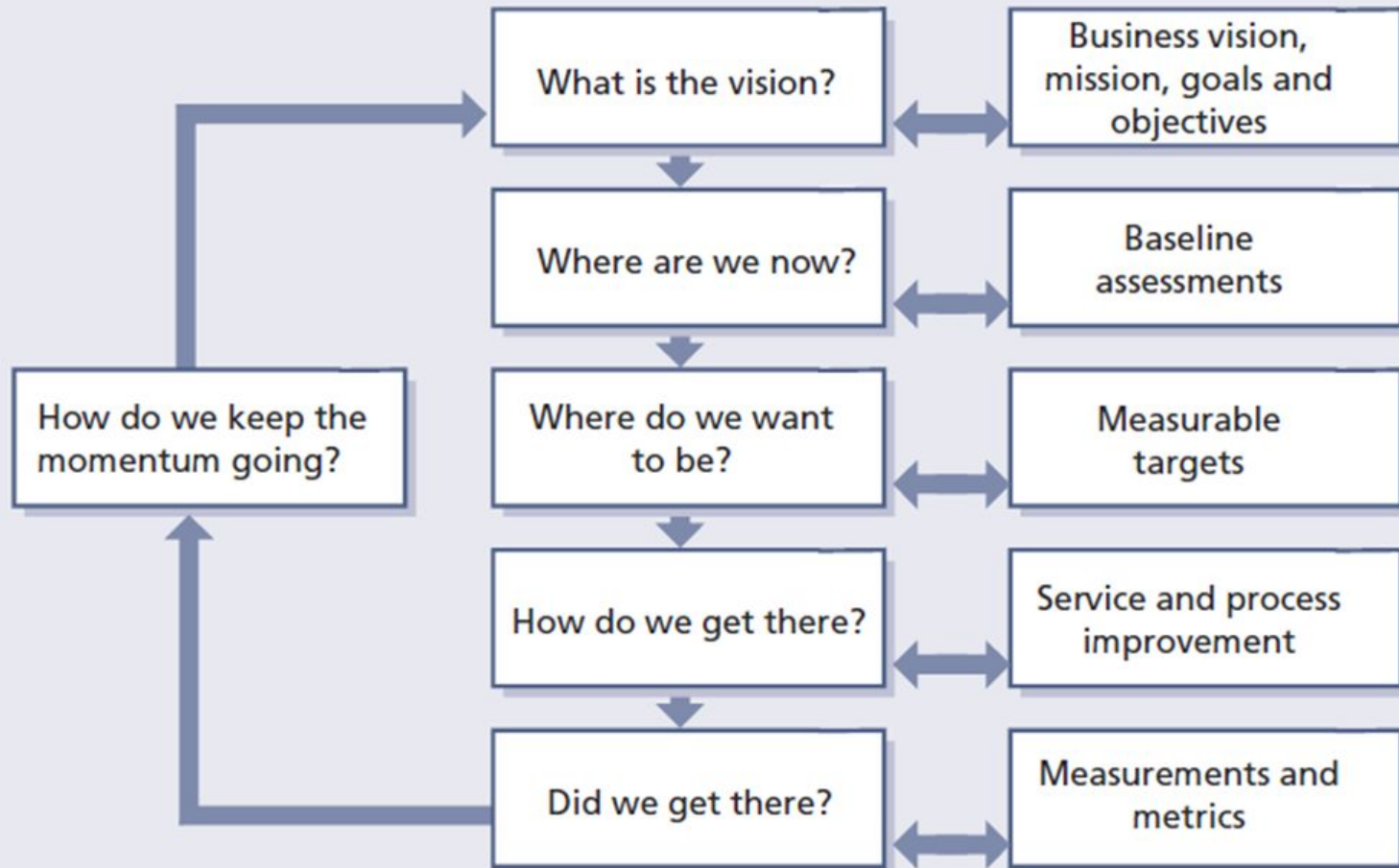
http://www.youtube.com/watch?v=_A02vKgE4NQ

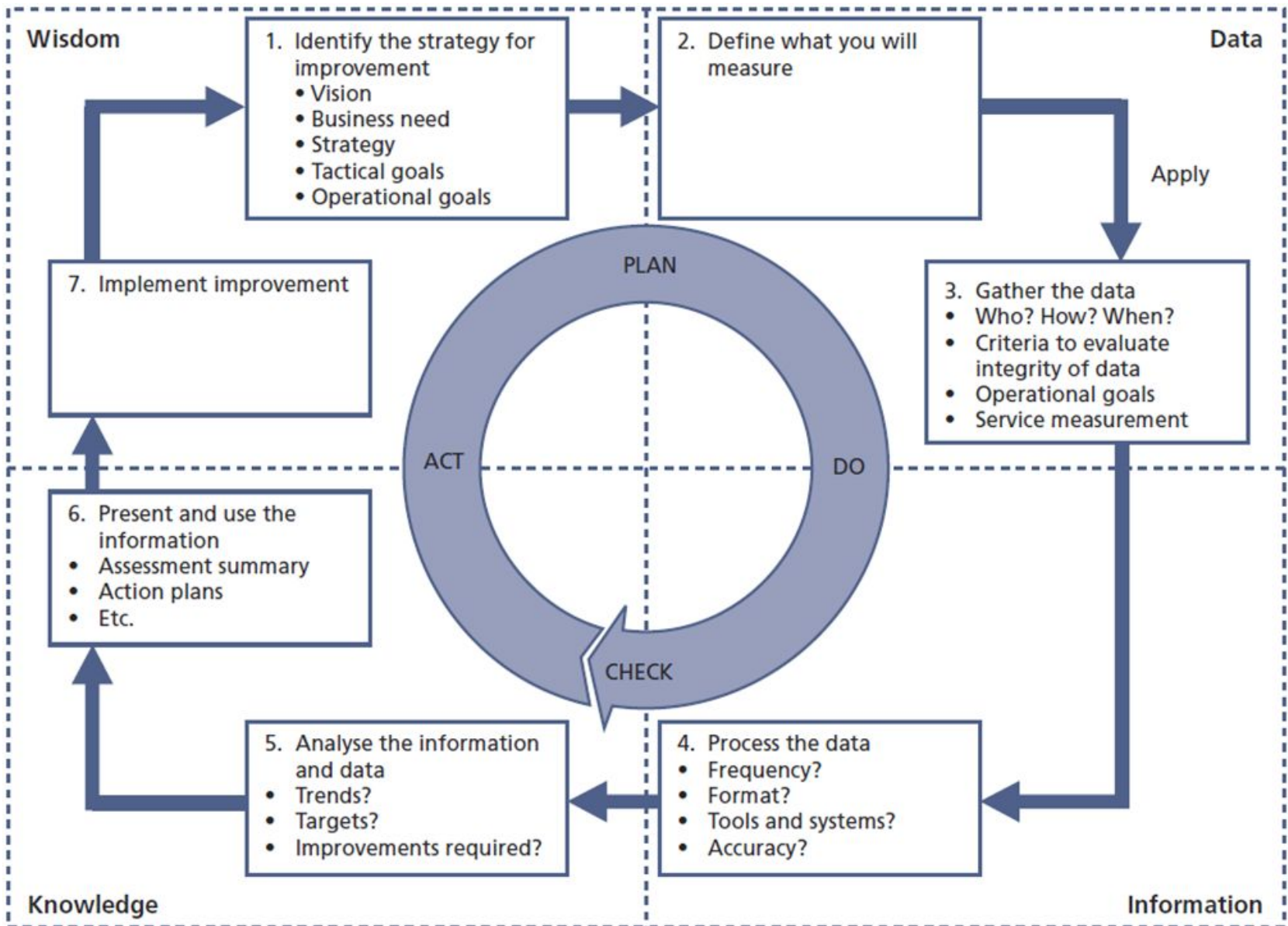


MBO VS. HOSHIN
KANRI PLANNING
VS. BALANCED
SCORECARD

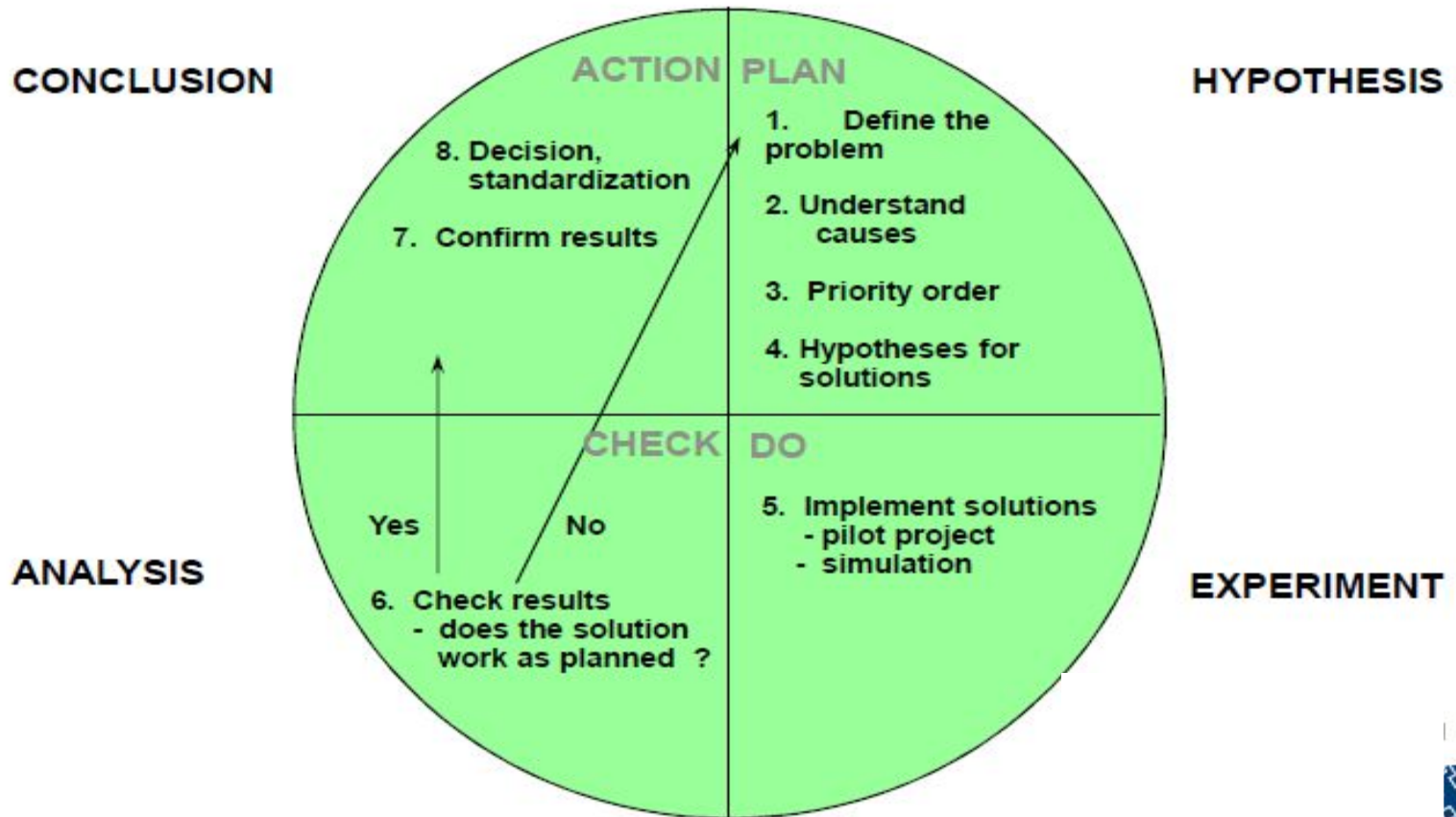
ITIL, formerly known as the Information Technology Infrastructure Library, is a set of practices for IT service management (ITSM) that focuses on aligning IT services with the needs of business. In its current form (known as ITIL 2011 edition), ITIL is published as a series of five core volumes, each of which covers a different ITSM lifecycle stage. Although ITIL underpins ISO/IEC 20000 (previously BS15000), the International Service Management Standard for IT service management, the two frameworks do have some differences

ITIL describes processes, procedures, tasks, and checklists which are not organization-specific, but can be applied by an organization for establishing integration with the organization's strategy, delivering value, and maintaining a minimum level of competency. It allows the organization to establish a baseline from which it can plan, implement, and measure. It is used to demonstrate compliance and to measure improvement





THE PDCA CYCLE



Summary of TQM – Total Quality Management

Comparison with Balanced Score Gard - BSC





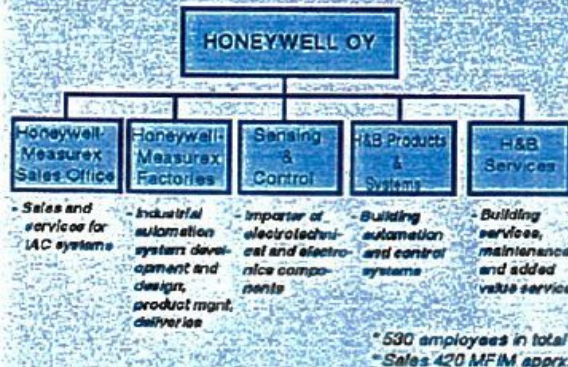
ADD
Social responsibility
and Sustainable development



ADD
Continuous improvement -
Struggle for betterment

Quality Management at Honeywell Oy

Mission, Vision and Values



OUR PURPOSE IS TO GREATE VALUE FOR SHAREHOLDERS

Our Vision

Is to delight our customer by helping to fulfill global needs for energy efficiency, a cleaner environment, greater productivity, increased safety, enhanced comfort and peace. This will enable Honeywell to achieve undisputed global leadership in control and to grow profitably, reaching our full potential for our customers, employees, investors and communities.

How We Will Reach Our Vision

- People
- Commitment to Total Quality
- Technology
- Global Presence
- Ethics and Corporate Citizenship

Our Strategies for Growth

- To increase Honeywell's business with current customers
- To build on our strength in systems integrable
- To pursue vertical markets with growth opportunities
- To expand our global presence
- To expand through world-wide changes and complementary acquisitions

What We Value

- Integrity and the highest ethical standards
- Communication that is open, respectful and two-way
- Continuous improvement, development and learning in all we do
- Performance with recognition for results
- Mutual Respect and trust in our working relationships
- Diversity of people, cultures and ideas
- Teamwork and meeting our commitments to one another
- Innovation and encouragement to challenge the status quo



Environment, Health and Safety Policy (EH&S Policy)

ENVIRONMENT, HEALTH AND SAFETY POLICY : EUROPE, AFRICA AND MIDDLE EAST REGION

It is Company policy to:

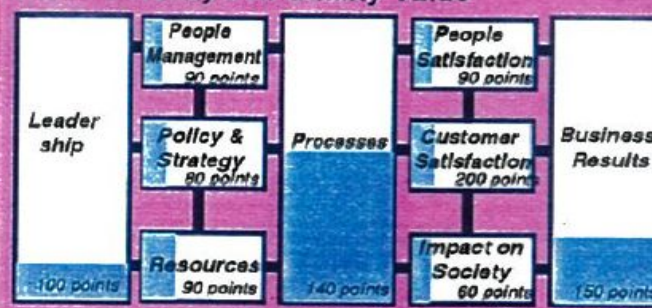
- provide a safe and healthy work environment and to manage all aspects of company business in ways that minimize impact on the environment, conserve natural resources and protect human health and safety
- comply with all applicable environmental, health and safety laws and regulations and establish and comply with company standard practices where laws or regulations are not adequately protective or do not exist and such practices are necessary to protect human health or the environment
- provide training to enable employees to work safely and ensure that all employees are aware of potential hazards and hazardous materials in the workplace
- actively minimize the risk of environmental contamination
- strive for continuous, measured improvement in environmental, health and safety performance
- assign responsibility and accountability for environmental, health and safety activities

Implementation of this policy through managed programs and systems is a management responsibility and every Honeywell employee will actively participate in its execution.

Each unit shall issue such policies and practices as necessary to implement the requirements of this policy.

Honeywell Code of Ethics & Business Conduct

HQV = Honeywell Quality Value



HQV is based on European Quality Award criteria and implementation started in 1994

Covered by ISO 9000

EH&S Management system at Honeywell Oy is based on SFS-EN 14001 standard

EH&S Balance

- Paper consuming: 5.4 Million A4-sheets
- Electricity consuming: 2264 MWh
- Waste hazardous / landfill: ~1 460 m3
- Sewage discharging: 2479 m3
- Transport fuel consuming: 4000 l
- Recycling: 70 tons

Environment risk: 3-10E-4

HQV Self-assessment



The Role of HQV:

- A value creating management system
- A Way to integrate valid management practices
- A comprehensive way to communicate
- A realistic self-assessment tool
- A mechanism to continued improvement
- A framework for ongoing learning
- A vehicle for recognition

ENABLERS

Following nine criteria must be evaluated annually

RESULTS

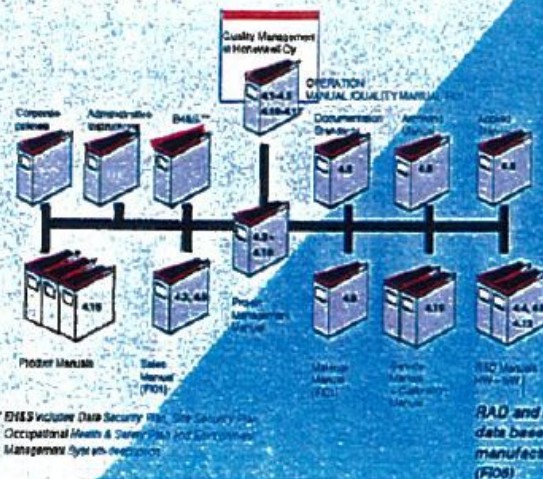
ISO 9001: Model for quality assurance in design, development, production, installation and servicing

Scope

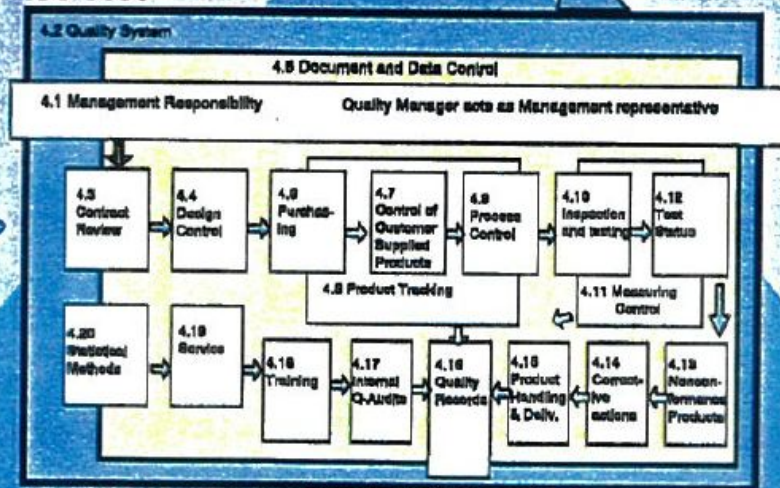
Standard specifies quality system requirements for use where a supplier's capability to design and supply conforming product needs to be demonstrated.

The requirements specified are aimed primarily at achieving customer satisfaction by preventing non-conformity at all stages from design through to servicing.

Quality Documentation



ISO 9001



The main items by which we can evidence our ISO 9001 compliance

- All tenders, contract or orders shall be reviewed
-> record of reviews shall be maintained
- The effective handling of customer complaints
- The supplier shall define and document how the requirements for quality will be met
- Design reviews shall be documented
- Documents and data shall be reviewed and approved for adequacy by authorised personnel prior to issue. Note coding of documents!
- The supplier shall evaluate and select subcontractors on the basis of their ability to meet requirements
- Product identification and traceability
- Measuring and test equipment shall be calibrated
- Nonconformance products shall be identified
- Design verification and validation

Quality in Delivery Projects



ISO 9001 Certificates



Personal Quality

- Set your personal quality goals
- Control your quality level continuously
- Treat your associates in the same way as the external customers
- Keep your working environment clean and tidy
- Avoid mistakes - anticipate risks
- Do your tasks better - document the results understandably
- Use your resources sensibly
- Be committed - give and receive feedback
- Require quality also from the others

Customer does not pay for

- unnecessary work
- mistakes
- waste of time
- bureaucracy

but is ready to pay for

- high quality
- high processed products & services
- long term cooperation

Continuous Improvement

- Everything can be done better
- We are all involved in the development process
- Any problem can be solved to be a strength
- It is most important to inform of the problems and bring out any suggestions
- Write down your finding, otherwise you'll forget it
- Problems can be solved, creativity needs maturing time
- Take advantage of others' expertise and experience
- Progress gives savings and improves operation
- Carry out improvement actions quickly