

**55<sup>th</sup> EOQ Congress**  
World Quality Congress  
Budapest, Hungary - June 20-23, 2011

"Navigating Global Quality in a New Era"



**June 21, 2011 (Tuesday) 55<sup>th</sup> EOQ Congress**

**CONCURRENT SESSIONS**  
**KEMPINSKI HOTEL CORVINUS**

**Tuesday 13:30 – 17:30**  
**Erzsébet tér 7-8, Budapest V.**

**REGINA BALLROOM II.**

**Tuesday 13:30 – 15:00**

**11.1. REPOSITIONING QUALITY FOR MANUFACTURING I.**

**13:30 – 15:00**

**Session Chair:** *Hans Dieter Seghezzi, University St. Gallen, Switzerland*

**14.30 “Practical Program of Revolutions in Factories (PPORF) 20 Keys”<sup>®</sup> in Russia - Holistic Continuous Business Improvement System**

*Yury Nikolayevich Samoylov, Russian Organization for Quality, Russia*

**Samoylov, Yury Nikolayevich (Russia)**

From 1975 he was a serviceman of the Russian Air Force. In 1986 was an engineer of commercial service and economist of commercial exploitation of international airlines, Regional Commercial Directorate for Trans-Siberian and Trans-Asian Airlines of Aeroflot International Commercial Department. From 1988 he held top managerial posts in affiliated companies of Aeroflot in Russia and abroad, and in various Russia – America joint companies.

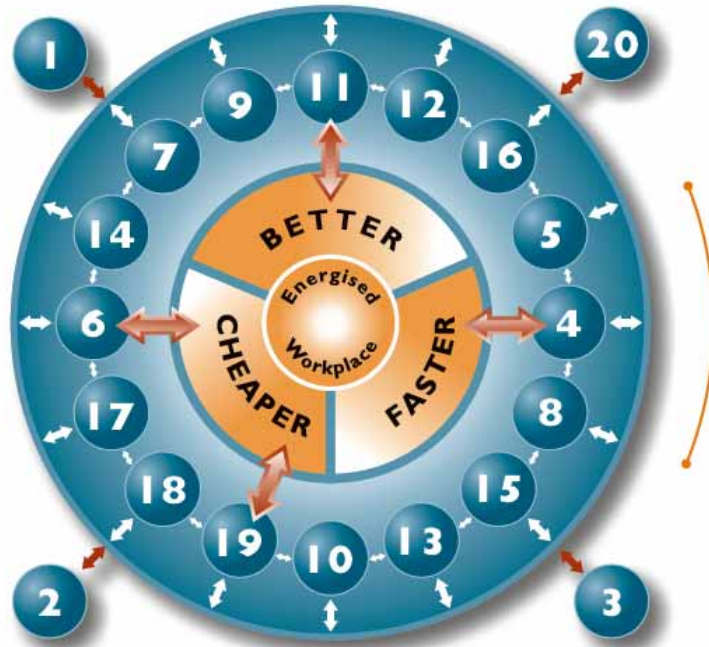
Today Samoylov is Executive Director of the Russian Organization for Quality. In this position he often participates in the organization of annual conferences devoted to World Quality Day and the European Quality Week in the Russian Federation and he leads Russian delegations to international conferences of the European Organization for Quality (EOQ), American Society of Quality (ASQ), Asian Network for Quality (ANQ). As Vice-President of the Russian benchmarking club “Business Excellence” he has implemented a lot of international projects of Russian companies.

He has got several government decorations.



# *Facilitator's Manual*

# Relationship Diagram



- |   |  |
|---|--|
| 1 Cleaning & Organising to Make Work Easy   | 11 Quality Assurance                         |
| 2 Rationalising the System / Goal Alignment | 12 Developing your Suppliers                 |
| 3 Small Group Activities                    | 13 Eliminating Waste                         |
| 4 Reducing Work-in-Process                  | 14 Empowering Employees to Make Improvements |
| 5 Quick Changeover Technology               | 15 Skill Versatility and Cross Training      |
| 6 Kaizen of Operations                      | 16 Production Scheduling                     |
| 7 Zero Monitor Manufacturing / Production   | 17 Efficiency Control                        |
| 8 Coupled Manufacturing / Production        | 18 Using Information Systems                 |
| 9 Maintaining Machines & Equipment          | 19 Conserving Energy and Materials           |
| 10 Workplace Discipline                     | 20 Leading Technology / Site Technology      |

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# chapter 1

FACILITATOR'S MANUAL

## Introduction to the 20 Keys Programme



### 1.1 Introduction

Companies all around the globe find themselves in a different world from a few years ago: a market with different demands, a workforce with different needs, a game with different and new players. An oil crisis looms, a clash of civilizations seems imminent, travel and communication is easier than ever before, African economies are growing, China is booming, global warming threatens to change the things that we take for granted and globalisation continues to complicate and simplify, all at the same time...

Subsequently, organisations wanting to stay relevant and profitable need to become masters of change. Changing before you need to change becomes a skill that distinguishes victors from victims. And, the companies that have adopted change as a way of doing business, find themselves not only able to adapt to an unpredictable world, but they also find opportunities where they never even thought of searching!



#### IMPORTANT INFORMATION

*"The only thing harder than changing, is paying the price for failing to change."*

Norman Augustine, former Chairman of the Lockheed Martin Corporation.

*"You cannot step twice into the same river, for other waters are continually flowing in."*

ca. 500 BCE - Heraclites



## IMPORTANT INFORMATION

*"It takes a lot of courage to release the familiar and seemingly secure, to embrace the new. But there is no real security in what is no longer meaningful. There is more security in the adventurous and exciting, for in movement there is life, and in change there is power." - Alan Cohen.*

And on the lighter side, a word from W. Edwards Deming:  
*"It is not necessary to change. Survival is not mandatory."*

**Continuously improving is continuously changing - *proactively*.** Changing proactively and continuously puts your company in the best possible position to counter and absorb changes in the business environment. It is, by far, the best guarantee for a company's survival and growth in the long-term. For this very reason, the 20 Keys programme was developed; to equip companies in changing times and to lead them to world class ahead of their competitors.

The 20 Keys is the vehicle with which your company can:

- Create a culture of continuous improvement in the business
- Implement world class practices in the organisation in a sustainable, holistic and participative way
- Benchmark yourself against world class practices
- Ultimately survive and grow in a changing world.

In short, the 20 Keys is an implementation approach used for implementing a comprehensive range of world class practices. Many books have been written to define what best practices are, but it certainly has proven to be easier to define best practice than it has been to implement it in a holistic and sustainable way. The 20 Keys provides an approach which is based on the experience of other companies who have successfully navigated the journey of implementing best practice. It is also based on the lean philosophy.



## IMPORTANT INFORMATION

What people say about Prof. Kobayashi's book, "20 Keys to Workplace Improvement" - reviews posted on [www.amazon.com](http://www.amazon.com)

*"20 Keys is a powerful 'white-glove test' for a lean-type environment ... If you understand lean practices, 20 Keys may simply help you to identify where to start and where to proceed to; you select the right tools from all those already at your disposal to create a coordinated strategy."* Larry R. Graham, USA

*"This is probably the finest book of the world class journey ever written, not in theory, but the things we have to do to keep on the journey. Prof Kobayashi brings to light the 20 different skills in a broad perspective that any organization can use effectively to make the journey possible. To truly understand the subtle secrets you will eventually read this book 20 times."* Greg, RSA

*"This is a must-read for all production personnel interested in understanding how to obtain more throughput from existing resources. The twenty steps are proven techniques and you do not need an advanced degree or significant training to fully implement these methods for reducing costs of inventory, maintenance, loss time searching for tools or components."* Unknown.

## 1.2 Aims and objectives of the 20 Keys programme

- Achieve the strategic goals of the business
- Improve the speed of learning and innovation of the business and improve the productivity and flexibility of the organisation to adapt more readily to changing market requirements
- Eliminate all forms of waste (non value-adding activities) to improve customer satisfaction and market share by making products and services better, faster and cheaper
- Energise and motivate employees to work towards the achievement of the company's goals
- Improve competitiveness, profitability and long-term sustainable business success.

## 1.3 Benefits of the 20 Keys programme

- Measurable improvements in the strength of first-line management
- Immediate application of learning in the workplace
- Strengthening of bottom-up management
- Improved goal alignment
- Coaching is focused on individual development needs
- Establishes a culture of learning
- Delivers results in terms of quality, cost, delivery, safety and morale.



### DID YOU KNOW?

Several 20 Keys clients from all over the world have shown some remarkable results through dedicated implementation of the 20 Keys programme. They have shown results such as:

- Doubling of productivity
- Reduction of defects by up to 80%
- Reduction of work-in-process by up to 50%.

The most remarkable benefit of the programme is the level of involvement which is created in the organisation, and Prof. Kobayashi says:

*“When all employees are aware  
of the company's position  
in relation to other enterprises,  
a true feeling of competition is developed  
and they will do whatever they can to win”.*

*“Management and workers will cooperate in their efforts to raise quality and productivity.”*





## IMPORTANT INFORMATION

### Productivity definition in the 20 Keys

Productivity in the 20 Keys is defined as output per man-hour. Company executives are generally interested in the monetary value associated with output per operator. However, currency and inflation fluctuations make it easier for first-line managers and operators to understand the productivity goal if quantities (actual number of products produced) are used to measure productivity. Motivation is enhanced when the goal is given in an easily understandable format. Remember that the 20 Keys programme caters for all employees - it is not only a programme for “clever” people.

### Case study examples: Doubling of productivity

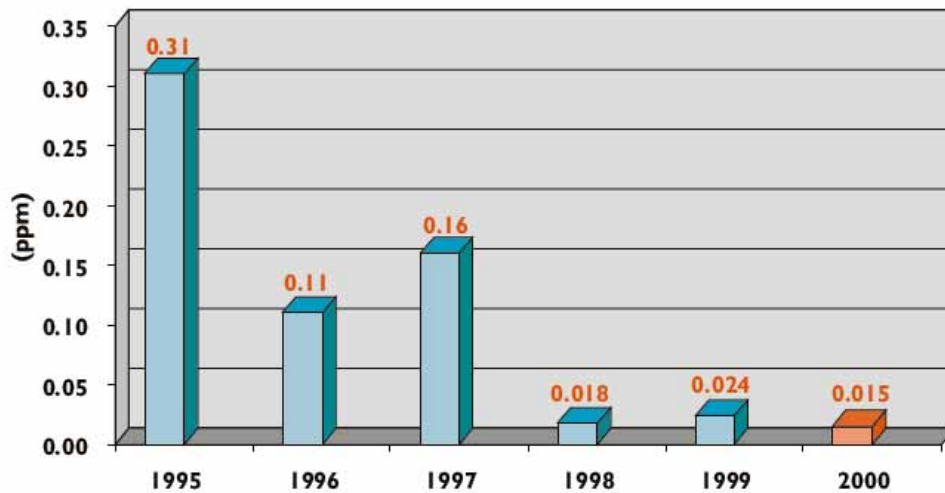
| Profile of Companies Visited |                            |           |            |                   | 20 Keys Results |               |  |  |                     |
|------------------------------|----------------------------|-----------|------------|-------------------|-----------------|---------------|--|--|---------------------|
| Company                      | Type of Business           | Employees | Turnover   | Period in 20 Keys | Opening Score   | Present Score | Productivity Improvement               | Quality Defect Rate                    | Work-in-process     |
| Seiko Morioka                | Watches                    | 90        | ¥23 bn     | 8 years           | 38              | 80            | Trebled                                | Over 95% reduced                       | Reduced by over 80% |
| Konica                       | Films                      | 517       | ¥15 bn     | 3 years           | 34              | 60            | 2.5 times                              | Over 90% reduced                       | Reduced by over 35% |
| Sanyo Electric               | Household appliances       | 935       | ¥50 bill   | 18 months         | 32              | 62            | Improved by 84%                        | From 9.5 to 2.1%                       | Reduced by 76%      |
| Kosmec                       | Processing equipment       | 100       | ¥2.5 bn    | 4 years           | 34              | 64            | Improved by 53%                        | Over 80% reduced                       |                     |
| Sanyo                        | Cooling products for shops | 700       | ¥51 bn     | 3 years           | 31              | 68            | 86%                                    | Reduced by 76%                         |                     |
| Nichiro                      | Fish products              | 400       | ¥170 bn    | 6 years           | 33              | 72            | Doubled                                | Reduced by 82%                         | Reduced by 78%      |
| Seiko Singapore              | Wrist watches              | 860       | \$S192 mil | 7 years           | 38              | 78            | From 100 to 408 PCS / MAN / Year, 300% | 18205 60 3600 ppm, reduced by over 80% | Reduced by over 80% |

Seiko Instruments Inc.'s company goal is to become the world's strongest watch manufacturing and sales group. The mission of the company is to please customers throughout the world - by “*Respecting people and respecting performance.*” - as the company philosophy.

Morioka Factory was selected as a model plant when the Seiko Instruments Group decided to implement the 20 Keys in November 1990. 20 Keys study sessions commenced under the leadership of Prof. Kobayashi in February 1991, and the official kick-off occurred in October 1991.

## Why was the 20 Keys programme created?

1) To make products and services **Better**



Reduced defects by 90%

2) To deliver products and services **Faster**

**eldim 2**



**Eldim:**  
**Jet Engine Parts Manufacturer,**  
**The Netherlands**

Reduced lead time from six weeks to <1  
week  
(+80% improvement)

3) To deliver products and services **Cheaper**



**Parmalat Cheese Factory,  
Bonnievale**

Doubled productivity and reduced cheese  
waste by 80%

## 1.4 Reasons for implementing the 20 Keys

Over 300 companies have already implemented the 20 Keys and their reasons for adopting this approach varies from company to company, and depends on their particular situation.

Some companies face a crisis, whilst others introduce it for future growth and development. Below is a list of common reasons found in companies wishing to improve their constitution through the 20 Keys:

- To “survive”
- To increase productivity, quality and delivery performance
- To reduce costs
- To become more flexible and adaptable to changing market conditions
- To revolutionise the delivery system
- To make more effective improvements
- To meet customer demands
- To provide focus for improvement efforts
- To build upon and make initiatives like TPM and TQM a success
- To energise the organisation
- To utilise a holistic systems approach in order to achieve improvement goals.

In sum, companies introduce the 20 Keys programme to achieve the strategic goals of the business as well as long-term sustainable profitability and competitiveness, and to create an environment in which the company is able to continuously improve itself.

3) To deliver products and services **Cheaper**



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