ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ АВТОНОМНОЕ ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ «САМАРСКИЙ НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИМЕНИ АКАДЕМИКА С.П. КОРОЛЕВА» (САМАРСКИЙ УНИВЕРСИТЕТ)

#### Ю.Е. МИШИНА

# **ENGLISH FOR TQM STUDENTS**

# АНГЛИЙСКИЙ ЯЗЫК ДЛЯ СТУДЕНТОВ НАПРАВЛЕНИЯ «УПРАВЛЕНИЕ КАЧЕСТВОМ»

Рекомендовано редакционно-издательским советом федерального государственного автономного образовательного учреждения высшего образования «Самарский национальный исследовательский университет имени академика С.П. Королева» в качестве учебного пособия для студентов, обучающихся по основной образовательной программе высшего образования по направлению подготовки 27.03.02 Управление качеством

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#### **UNIT 1. HISTORY OF TQM**

#### LEAD-IN

- 1. What does TQM stand for?
- 2. What is quality?
- 3. When did the idea of quality management first appear?



#### **READING**

1. a) Find the given words in the dictionary. Write down their transcription and Russian equivalents.

quality	
prominence	
scientific	
measure	
variability	
technique	
assurance	
distinguish	
assignable	
require	
sufficient	
emphasis	
sophisticated	

- b) Practise reading the given words.
- 2. Match the phrases with their Russian equivalents.
- 1 competitive strategy of A определять цели организации business
- 2 poor quality product B обеспечить достаточную уверенность

3	to contribute	C	постоянное развитие	
	significantly			
4	to determine	D	сложные методы управлен	КИН
	organizational objectives		качеством	
5	to provide sufficient	F	конкурентная страте	гия
	confidence		бизнеса	
6	sophisticated quality	G	внести значительный вклад	
	management techniques			
7	continuous development	Н	товар низкого качества	

- 3. Read the text about the history of Quality Management and choose the heading for each paragraph from the list. Mind one extra heading.
  - Total Quality Management philosophy
  - Outstanding contributors to TQM
  - Quality inspection
  - Basic Quality principles
  - Quality control
  - Quality concept evolution
  - Quality assurance
  - Quality and variability
  - General direction of Quality development
  - Modern approach

#### HOW OLD IS THE QUALITY CONCEPT?

- A) TQM in its various forms appears to dominate business life nowadays. Quality in fact has been around for quite a long time and has progressed from stages of playing a purely reactive role (inspection) to its present prominence in shaping the competitive strategy of business.
- B) Quality did not emerge until the era of mass production, as part of Frederick Taylor's scientific management preaching. One role of **supervisors** was to carry out inspection of the work of their **subordinates**. However, the man who spearheaded the quality movement was W. A.

Shewhart, who in 1931 gave a clearer **definition** of Total Quality Control, how to measure and control it. Shewhart argued that **variability** has to be accepted as a way of life and that **differences** between parts, peoples' skills and process parameters, lead to differences between the **same** (**different**) goods produced. He debated that by using statistical and probability techniques, variability can be better understood, monitored and controlled. C) The evolution of Total Quality Management has taken place in a number of stages. The four stages of quality evolution can be categorized as follows: quality inspection, quality control, quality assurance and Total Quality Management.

- D) On the first stage the inspectors were to find the **poor quality** product and separate it from the **acceptable quality** product so that then it would be scrapped, reworked or sold as **lower quality**.
- E) With further industrial **advancement** came the second stage of TQM development and quality was controlled through supervised skills, written specification, measurement and standardization. The **development** of control charts and accepting sampling methods by Shewhart and Dodge-Roming during the period 1924–1931 helped this era to prosper further from the previous inspection era. Sampling presupposed checking a limited number of items representing the whole batch to find out about overall state of quality. At this stage Shewhart introduced the idea that quality control can help to distinguish and separate two types of process variation; firstly the variation resulting from **random** causes and secondly the variation resulting from **assignable** or special causes. The main processes which help products and services to **meet** customers' needs are inspection and quality control which **require** greater process control and lower evidence of nonconformance.
- F) The third stage of this development, i.e. quality assurance contains all the previous stages in order to provide sufficient confidence that a product or service will **satisfy** customers' needs. At this stage there was also an emphasis on change from detection activities towards prevention of **bad quality**.

- G) The fourth level, i.e. Total Quality Management involves the understanding and implementation of quality management principles and concepts in every aspect of business activities. Total Quality Management **demands** that the principles of quality management must be applied at every level, every stage and in every department of the organization. The idea of Total Quality Management philosophy must also be enriched by the application of sophisticated quality management techniques. The process of quality management would also be beyond the inner organization in order to develop close collaboration with suppliers.
- H) The development of total quality management from 1950 onwards can be credited to the works of various American experts. Among them, Dr Edward Deming, Dr Joseph Juran and Philip Crosby have contributed significantly towards the continuous development of the subject.
- I) The quality movement has carried on progressing until the present day, when quality has taken a central place in **determining** organizational objectives and competitive indices. It seems that the whole world has suddenly woken up from a long sleep to be updated on all the potential benefits of quality when adopted as a way of conducting business.

#### 4. Match the words with their definitions. State their part of speech.

dominate	an indicator, sign, or measure of something	
	<u> </u>	
emerge	the maintenance of a desired level of	
	quality in a service or product,	
	especially by means of attention to	
	every stage of the process of	
	delivery or production	
supervisor	as good as or better than others of a	
	comparable nature	
subordinate	not influenced by personal feelings	
	or opinions	
enrich	liable to change	

	, , , , , ,	
carry out	move out of something and come	
	into view	
competitive	make available for use	
index	a person under authority or control	
	of another within an organization	
update (on)	meet the expectations, needs, or	
	desires	
objective	improve or enhance the quality or	
	value of	
quality assurance	the taking of a sample or samples of	
	something for analysis	
provide	give (something, especially money)	
	in order to help achieve or provide	
	something	
variable	exercise control over smb or smth	
sampling	put through, implement	
satisfy	make more modern	
contribute	a person who supervises a person or	
	an activity	

5. In the text, find 7 pairs of synonyms and 4 antonyms among the words in
bold.
1.Demand=require

6. a) In the preceding text, find derivatives (having the same root) of the
following words. Define their part of speech.
a) specify (v) - specification (n)
b) measure
c) standardize
d) organize
e) inspect
f) supervise
i) detect
j) prevent
k) apply
l) vary
b) Fill in the gaps with the words above.
The history of quality management can be traced all the way back to
The Middle Ages. Work completed by journeymen and apprentices was
1) and 2) by the skilled worker to ensure that quality
3) were met in all aspects of the finished product.
It was during the 1920's when quality management systems, as we know
them today, started to surface. While the focus of quality management was
still on the end product, it was the first 4)of statistical theory to
product quality control.
Product quality control was determined through 5) This involved
6), 7) and testing the products, processes and services. This
algorithm worked for quite some time. Over time, however, businesses began
to grow and expand. More and more products were manufactured throughout
the day.
8) started to experience difficulties with quality control
standards. It became evident that there was a great need for change and
development.
The latter were brought forth during the 1940's by industry leaders and

experts like Deming, Dodge, Juran and Roming. This would be the beginning of Total Quality Management.

Since then many companies have adopted TQM philosophy. TQM spread like wild fire. Many companies saw significant gains in 9)\_\_\_\_\_\_ vs. 10)\_\_\_\_\_ approach to quality. TQM is evolving. Experts introduce 11)\_\_\_\_\_ new methods that support TQM.

#### c) Translate the text into Russian.

Words and phrases to remember		
to dominate business life	доминировать в деловой жизни	
quality assurance	гарантия качества	
mass production	массовое производство	
non-conformance	несоответствие	
variability	разнообразие	
competitive indices	конкурентные показатели	
quality inspection	проверка качества	
acceptable quality product	товар приемлемого качества	
industrial advancement	развитие промышленности	
sampling method	метод выборки	
overall state of quality	общее состояние качества	
to result from	быть результатом	
to meet customers' needs	соответствовать требованиям	
	потребителей	
Total Quality Management	общее управление качеством	
potential benefits	потенциальные преимущества	

#### **GRAMMAR**

#### 1. Study the following table.

TENSE	FORM	USE	EXAMPLE
present		fact/permanent	Water boils at
simple		situations	100*C.
		regular activities	We usually start at 8
			o'clock.

	V/Vs	describing stories	The film takes place in the US.
		describing states	They seem very nice.
		fixed future events (on timetables or schedules)	The Dallas flight arrives at 9.45.
		after if, when, as soon as in clauses of time and condition	As soon as she arrives, I'll call you.
present continuous	am is + V ing	actions happening now	Hurry up! The taxi is waiting.
	are	temporary situations	She's studying TQM now.
		criticizing someone	You are always missing classes.
		changes and trends	The economy is getting worse.
		future arrangements	I've got tickets. We are sitting in the front row.
present perfect	have	actions/experiences in our lives until now	My father has worked for different companies.
	+ V3 has	a past action with present results for recent events	They have gone out. (So they are not here at the moment.)
		actions in a time period that is still continuing	I've driven 400 km this week.
		giving news	The new exhibition has opened in Samara.

present		continuing	We've been waiting
perfect	have been +	actions/situations	for hours.
continuous	Ving	until now	
	has been +	emphasizing the	
	Ving	time	
		to explain the	I'm wet because
		present situation	I've been washing
			the car.

#### Correct the mistakes in these sentences.

- 1. TQM dominate business life today.
- 2. Quality was around for quite a long period of time now and made considerable progress.
  - 3. Sales increase a lot at the moment in China.
  - 4. I'm usually going to University by tram.
- 5. Inspection and quality control are requiring greater process control and lower evidence of non-conformance.
  - 6. The quality movement carried on progressing until the present day.
- 2. Choose the correct question from the two options for each answer.
  - 1. Q: What are you doing? What do you do?
    - A: I'm a consultant.
  - 2. Q: What do you do? What are you doing?
    - A: I'm helping with the project in China at the moment.
  - 3. Q: Do you specialize in TQM? Are you specializing in TQM?
    - A: No, not really. I work in a number of different areas.
- 4. Q: How often do the inspectors separate the poor quality product from the acceptable quality product? How often are the inspectors separating the poor quality product from the acceptable quality product?
  - A: Rather often.
  - 5. Q: Where are you staying? What do you stay?
    - A: I'm in a hotel near the airport.

6. Q: Does TQM in its various forms dominate business life nowadays? Is TQM in its various forms dominating business life nowadays?

A: Sure.

3. State some well-known facts concerning:

```
quality control
```

lower quality goods

**TQM** 

suppliers

variation

4. Make 5 sentences in the Present Simple with the following stative verbs:

think

see

prefer

include

belong

5. Work in pairs. Ask your partner about his\her plans for:

the coming weekend

next Sunday

next week

tomorrow

this evening

Find out the plans you have in common with your partner and tell the class about them.

6. Make up sentences using the Present Perfect according to the model.

Model: That, important, problem, he, solve. – That is the most important problem he has ever solved.

- 1. That, ancient, monument, they, see.
- 2. She, nice, person, we, know.
- 3. This, silly, thing, he, do, in his life.
- 4. That, delicious, dish, I, eat.

- 5. This, silly, question, I, hear.
- 6. This, unusual, show, we, attend.
- 7. This, fast, car, she, drive.
- 8. That, bad, mistake, you, make.
- 9. This, expensive, dress, she, wear.
- 10. It, interesting, play, he, stage.
- 7. Translate the sentences into English paying special attention to the use of Present tenses.
- 1. Менеджмент качества играет важную роль в современной деловой жизни.
- 2. Изменчивость ведет к различиям между производимыми товарами.
  - 3. Мои коллеги в соседней комнате обсуждают новый бизнес проект.
- 5. Мозг удивительный орган. Он начинает работать, когда вы просыпаетесь утром, и не останавливается, пока вы не доберетесь до Университета.
  - 6. Наш профессор математики говорит на пяти языках.
  - 7. Мы все надеемся успешно сдать экзамены.
  - 8. Он всегда с тобой соглашается, не так ли?
- 9. Она сейчас усиленно изучает английский, поскольку собирается работать в международной компании.
  - 10. Я никогда не была в Японии и мечтаю туда попасть.
  - 11. Я не голодна, спасибо. Я только что пообедала.
  - 12. Бен принес свои рисунки. Давай посмотрим, хорошо?
  - 13. Мы уже получили сотни писем в поддержку.
  - 14. Мои родители никогда не пытались вмешиваться в мои дела.
  - 15. Эволюция системы управления качеством проходила поэтапно.

#### **SPEAKING**

Advances in TQM would hardly be possible without most remarkable contribution of a number of outstanding scientists and experts. Some of them are enlisted in the box.

Kaoru Ishikawa Joseph M. Juran Genichi Taguchi Armand V. Feingenbaum Bill Conway W. G. Ouchi W. E. Deming Philip B. Crossby

Work in pairs and research into the life of a scientist whose ideas in your opinion are critical for TQM development. Make a presentation (300-350 words) specifying the following points:

- personal data (date and place of birth, family);
- education (qualification, degree);
- the sphere of activity, achievements, inventions, discoveries, the contribution to TQM;
- recognition (awards).

#### WRITING

1. You are asked to write an article about the history of TQM and its role in the modern world.

Before you begin:

- think of your target reader;
- decide on the style you would adhere to (formal, informal, neutral);
- search for information you would include;
- consider expressive means that would make your article interesting for the reader (e.g. a catchy title, gripping beginning, questions in the narrative, a thought-provoking ending, etc.)
- 2. Work out an outline for the article and take notes of what you are going to say.
- 3. Write an article following your outline. Make use of your notes.

#### **UNIT 2. THE TQM PYRAMID**

#### LEAD-IN

- 1. What is a pyramid? How many faces does it usually have?
- 2. What features of a pyramid make it possible to use it for visualizing complex notions?
- 3. Do you know any management pyramids?



#### **READING**

1. a) Find the given words in the dictionary. Write down their transcription and Russian equivalents.

foundation	
journey	
pyramid	
argue	
challenge	
inherent	
achieve	
participation	
vital	
accordance	
annually	
audit	
obstacle	
implicitly	

b) Practise reading the given words.

2. Match the phrases with their Russian equivalents.

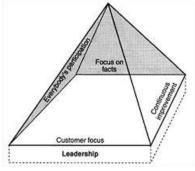
	•		1
1.	management pyramid	A	соответствовать, оправдывать
			ожидания
2.	tear down	В	активное участие руководства
3.	arguing instead for the need	C	обязательства руководства
4.	meaningful action plans	D	определить цели качества
5.	inherent challenges	E	в соответствии с
6.	management's commitment	F	опровергать
7.	in accordance with	G	пирамида управления
8.	to outline quality goals	Н	присущие проблемы
9.	live up to	I	вместо этого настаивая на
			необходимости
10.	active participation of	J	значимые планы действий
	management		

- 3. Before you read the text about the TQM pyramid decide which statements are probably true and which ones are probably false.
  - 1. TQM pyramid is unique in Management.
  - 2. Any management pyramid satisfies the definition of TQM.
  - 3. Customers' needs make up the foundation of TQM pyramid.
  - 4. Company traditions are of prime importance and should never be broken.

Now read the text and find out whether your ideas were correct.

# THE FOUNDATION AND THE FOUR SIDES OF THE TQM PYRAMID

The Quality Journey tears down outdated management pyramids, arguing instead for the need to build a whole new management pyramid, the one which can live up to the vision and challenges inherent in the definition of TQM. Management at all levels and in all departments just could not see that



'total quality' can only be achieved with the active participation of management. An apt name for this pyramid would be the TQM pyramid.

TQM pyramid allows for graphic representation of the basic principles of TQM. TQM is characterized by five principles:

- 1. Management's commitment (leadership);
- 2. Focus on the customer and the employee;
- 3. Focus on facts;
- 4. Continuous improvements (KAIZEN);
- 5. Everybody's participation.

The above mentioned principles make up the four sides of the pyramid with Leadership, or Management's commitment, as its foundation. A vital task for any management is to outline quality goals, quality policies and quality plans in accordance with the four sides of the TQM pyramid.

This is extremely important. So important in fact that, in many firms, top management (the board of directors) ought to review the firm's quality goals and policies and if necessary reformulate them so that they conform to the four sides of the TQM pyramid.

The firm's quality goals give all employees a clear indication of what is going to be achieved concerning quality. The firm's quality policies, on the other hand, describe in more detail how employees are to achieve that goal. The firm's quality policies must also conform to the four sides of the TQM pyramid.

Quality goals and quality policies must be followed by meaningful action plans. Experience from firms which have understood and realized the TQM vision shows that firms ought to concentrate on short-term plans (one-year plans) and long-term plans, the latter often being three-year plans which are revised annually in connection with an annual quality audit.

The basic notions of TQM reflected in the pyramid are in accordance with Deming's seven principles:

- 1. Management must agree about goals, conditions and obstacles to the introduction of TQM.
  - 2. Management must have the courage to break with tradition.
- 3. In building up a new 'quality organization', management must appoint a manager for quality improvements who has direct access to top management.
- 4. Management must, as quickly as possible, build up an organization to advise on the carrying out of continuous improvements throughout the firm.
- 5. Management must explain to employees why changes are necessary and that they will involve everybody in the company.
- 6. Management must explain that every activity and every job has its own customers and suppliers.
- 7. Management must ensure that every employee in the company participates actively in a team (work team, quality circle).

The above points implicitly include all four sides of the TQM pyramid.

- 4. In the text find derivatives (having the same root) of the following words. Define their part of speech. Use 5 derivatives in the sentences of your own.
  - a) organize (v) organization (n)
  - b) manage
  - c) commit
  - d) part
  - e) direct
  - f) form
  - g) improve
  - h) accord
  - i) found

- 5. Scan the text to find the words that mean the following. State their part of speech.
  - 1. give reasons in support of the idea
  - 2. something that is wanted or required
  - 3. suitable in the circumstances
  - 4. give opportunity for
  - 5. state of being dedicated to a cause, activity
  - 6. without interruption
  - 7. absolutely necessary, essential
  - 8. define the shape of
  - 9. principle of action adopted by an organization
  - 10. practical contact with and observation of facts and events
  - 11. conduct a systematic review of
  - 12. a thing that blocks one's way or hinders progress
  - 13. the ability to do something that frightens one

#### 6. Answer the following questions.

- 1. Is the TQM pyramid the first attempt to represent management principles graphically?
- 2. Why are these management pyramids described as outdated?
- 3. Why is it necessary to build a new management pyramid?
- 4. What does TQM pyramid allow for?
- 5. What principles are reflected on the sides of the pyramid?
- 6. What makes up its foundation?
- 7. What is the most important task for any management?
- 8. Why do firms sometimes reformulate their goals?
- 9. What is the difference between firm's goals and firm's policies?
- 10. What demand should both goals and policies satisfy?
- 11. How could goals and policies be implemented and controlled?
- 12. What principles include all the faces of TQM pyramid?

7. Skim the text again and find the topic sentence in each paragraph. Do they make up the 'backbone' of the text? Write down the outline of the text.

Retell the text using your outline.

Words and phrases to remember			
ensure	обеспечивать		
outdated	устаревший		
management's commitment	обязательства руководства		
direct access	прямой доступ		
continuous improvements	постоянные улучшения		
participate actively in a team	активно работать в команде		
short-term plans	краткосрочные планы		
quality audit	аудит качества		
to outline quality policies	определить политику качества		
the board of directors	совет директоров		
to review the quality goals	пересмотреть цели качества		
indication	указание, знак		
conform to	соответствовать		
have the courage	иметь мужество		
to advise on	давать рекомендации		
management pyramid	пирамида управления		
employee	работник		

#### **GRAMMAR**

1. Study the list below and find in the text 'THE FOUNDATION AND THE FOUR SIDES OF THE TQM PYRAMID' the sentences with these items.

build up

carry out

concentrate on

conform to

make up

focus on

allow for

live up arguing for

Which of them could be described as phrasal verbs? Explain how the postpositive changes their initial meaning. Use them in the sentences of your own.

#### 2. Study the following table.

TENSE	FORM	USE	EXAMPLE
past simple		finished actions in	I passed my driving
		the past	test last week.
	Ved / V 2	repeated actions in	She phoned her
		the past	parents every day.
		a series of past	We arrived in Rome
		actions	and took a taxi to the
			apartment.
		past situations	He lived from 1700
			to 1739.
past	was	actions at around a	I was not feeling
continuous	+ V ing	time in the past	well that day.
	were	temporary	We were living in
		situations in the	London in the time
		past	of 2012 Olympics.
		one action	The bus was going
		interrupted by	too fast and it hit the
		another action	car.
		plans that didn't	I was hoping to
		happen	study Medicine.
		a scene in the past	When we arrived,
			the sun was shining.
past perfect		an earlier action in	Before I found a
		the past	job, I had been to
	had + V3		forty interviews.

		giving reasons for	She was unhappy
		past	because her
		actions/feelings	husband hadn't
			bought her a
			present.
past perfect		continuing past	Julia had been
continuous		actions that were	working in sales for
		happening before	2 years when Paul
	had been +	another action/time	joined the team.
	Ving	emphasizing time	It had been selling
			well for ten years.
		giving reasons for	He was tired as he
		past	had been driving the
		feelings/actions	whole afternoon.

#### Correct the mistakes in these sentences.

- 1. The quality movement in Japan begins in 1946.
- 2. He has established education for Japan's top executives in the management of quality in 1960s.
- 3. Within a decade since 1950, JUSE has trained nearly 20,000 engineers in SQC methods.
- 4. In 1954, Dr. Joseph M. Juran of the United States was raised the level of quality management from the factory to the total organization.
- 5. Companies that had competing for the Deming Prize made extensive use of such charts.
- 6. Companies that had receive ISO 9000 certification also posted the process information required for each machine.

#### 3. Make past tense questions and answers using the words given.

- 1. Be | there | a need | build | a new | management | pyramid?
- 2. Management | see | the advantages | of | TQM.
- 3. How | the firm | achieve | such impressive results?
- 4. They | not have | courage | break | with tradition.

- 5. The company | revise | its policy | and review | its goals | last year.
- 6. When | I | come | to the firm | they | carry out | a number of improvements.
- 7. Who | put forward | the concept of | TQM pyramid?
- 8. Be | TQM pyramid | popular | in 1940s?
- 9. Why | be | TQM pyramid | develop?
- The | boxes | break | because they | make | of low quality materials.

#### 4. Read the following text. Render it into the Past.

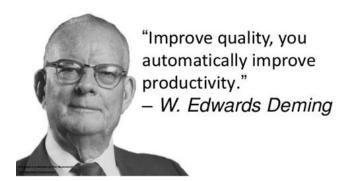
There is a need to build a brand new management pyramid as 'The Quality Journey' firmly believes in demolishing out-of-date management pyramids. This new pyramid known as the 'TQM pyramid' is built such that it can live up to the vision and demands inbuilt in the definition of TQM. The TQM Pyramid is a simple pyramid with a base foundation and four sides. Hence, TQM is built and relies on the five principles represented by the four sides and base of the TOM Pyramid.

- 5. Split into teams of 2 or 3. Each team chooses a famous parson in history. The rival teams try to guess who he/she was by asking 5 general questions in the Past Simple about the personality. If they fail to guess, they can ask 3 special questions. The teams get 1 point off for grammar mistakes.
- 6. Say what your friend/friends was/were doing while you were
  - 1. ... watching TV.
  - 2. ... speaking on the phone.
  - 3. ... working on the computer.
  - 4. ... trying to open the door.
  - 5. ... washing up in the kitchen.
  - 6. ... playing with your brother.
  - 7. ... making dinner.
  - 8. ... doing your home task.
  - 9. ... discussing the history of TQM.
  - 10. ... writing an essay.
  - 11. ... travelling in the mountains.
  - 12. ... sunbathing.

- 7. Translate the sentences into English paying special attention to the use of Past tenses.
  - 1. Каждый человек, вовлеченный в процесс производства, был ответственен за определенную часть этого производства.
  - 2. Я узнала о пирамиде, когда читала книгу об истории системы управления качеством.
  - 3. Качество было достигнуто благодаря активному участию руководства и работников.
  - 4. Эта пирамида получила название Пирамида TQM.
  - 5. Совет директоров пересмотрел политику компании в области качества.
  - 6. Когда я вошел, управляющий рассказывал, как работники должны были достичь этой цели.
  - 7. К сожалению, я не знала, что Деминг сформулировал эти принципы уже давно.
  - 8. Над чем босс работал в то время? Он переформулировал цели компании в области качества.
  - 9. Никто из нас не знал, кто сформулировал эти принципы и когда он это сделал.
  - 10. Когда я вышла на улицу, я обнаружила, что оставила бумаги на столе в кабинете.
  - 11. После того как исполнительный директор высказал свое мнение по поводу внедрения принципов управления качеством, Совет директоров перешел к голосованию.
  - 12. Вопрос оказался гораздо сложнее, чем мы думали, поэтому мы попросили еще немного времени, чтобы обдумать его.
  - 13. Я была приятно поражена. Компания внедряла TQM полгода и добилась отличных результатов.
  - 14. Мы удивились, что менеджер по улучшению качества отказался принимать участие в нашей дискуссии.
  - 15. Я была рада найти книгу. Я ее так долго искала.

#### **SPEAKING**

Study the given quotations. Make sure you understand them.



"Excellent firms don't believe in excellence - only in constant improvement and constant change." - Tom Peters

"Management is doing things right; leadership is doing the right things." - Peter Drucker

"Your most unhappy customers are your greatest source of learning." - Bill Gates

"QUALITY MEANS DOING IT RIGHT WHEN NO ONE IS LOOKING." - HENRY FORD

"Quality is never an accident. It is always the result of intelligent effort." - John Ruskin

"Quality is everyone's responsibility." - W. Edwards Deming

"It is not necessary to change. Survival is not mandatory." - W. Edwards Deming

Choose the one that appeals to you most. Comment on the quotation (15 - 20 sentences) specifying the following points:

- Why have you chosen this very quotation?
- How do you understand the quotation? What does it mean?
- Can you think of any examples to illustrate it?
- What do think about its message?
- Do you agree or disagree with the statement?
- In either case provide 3 arguments to support your point of view.
- Illustrate your point with real-life examples.

#### **WRITING**

Summarize the information in the following passage, arrange it into an outline

#### WHAT IS TOTAL QUALITY CONTROL?

Total Quality Control (TQC) has been defined in a variety of ways, all of which emphasize its important role in focusing on the various activities within organisations. TQC has for example been described as: 'A management framework to ensure continuing excellence'.

This management framework was suggested to include the following statements/ programmes for action:

- TQC is a business philosophy which groups together manufacturing, engineering, marketing and sales amongst others, linked together by a two way flow of information;
- TQC should be considered as a mind-set to approve only criteria which lead to better than acceptable quality (via the use of continuous improvement);

- TQC is a continuous process for improvement where current standards present the opportunity for the achievement of new and higher targets (standards);
- TQC provides reliability and consistency in the delivered product service as a check-and-balance system.

In TQC we apply a number of important management principles and the statistical control of quality to all stages of planning, design, production, service, marketing, accounting and administration. It aims at achieving disruption-free, error-free activities that produce defect-free products and services at a quality cost suited to their market, and with dependable delivery.

TQC represents a unique concept in business management style that involves every member of any business organisation, from the top executive to the person on the lowest rung of the organisational hierarchy, in solving quality, cost and production problems. It is the statistical control of quality applied to the total operation of an organisation to produce goods and services at a low cost suited to the market.

Company Wide Quality Control is another term for TQC which is used in Japan. The emphasis here is once again on the total control of quality organisation and with the contribution of every department and every individual within the organisation. CWQC looks at the process of serving customers from the point of view of the customer-supplier chain (both internally and externally). It therefore assumes that all the roles have to be conducted with quality, efficiency, speed of response, etc.

#### UNIT 3. THE PLAN-DO-CHECK-ACT CYCLE

#### LEAD-IN

Look at the picture illustrating the Plan-Do-Check-Act cycle and think about the following:

- 1. What do the words in bold stand for in the questions 'How should it be?' and 'What do we do and how?'
- 2. Why is the model of carrying out change represented as a cycle?
- 3. How can this cycle be linked to the idea of continuous improvement?



#### **READING**

1. a) Find the given words in the dictionary. Write down their transcription and Russian equivalents.

b) Practise reading the given words.

#### 2. Match the phrases with their Russian equivalents.

1.	an iterative four-step	A	улучшить или изменить цель	
	management method			
2.	continual improvement	В	фактический результат	
3.	implement the plan	C	в любом случае	
4.	actual results	D	ключевой конкурентный	
			фактор	
5.	to convert the collected	E	оправдать затраченные	
	data into information		усилия	
6.	in either case	F	постоянное улучшение	
7.	provide feedback		выполнить план	
8.	to refine or alter the goal		итеративный	
			четырехступенчатый метод	
			управления	
9.	a key competitive factor	I	преобразовать собранные	
			данные в информацию	
10.	to justify the effort expended	J	обеспечить обратную связь	

3. Before you read the text look at the tittle. What does the word 'wheel' mean? Explain it in your own words. Now look it up in the dictionary and check. What might be running on PDCA wheels? Make a prediction. Share your ideas with the rest of the class.

Now read the text and find out whether your predictions were correct.

#### RUNNING ON PDCA WHEELS

PDCA (plan-do-check-act) is an iterative four-step management method used in business for the control and continual improvement of processes and products. It is also known as the Deming circle/cycle/wheel, the Shewhart cycle, or the control circle/cycle. PDCA was made popular by W. Edwards Deming, however, he always referred to it as the "Shewhart cycle".

The concept of PDCA is based on the scientific method developed by Francis Bacon which can be written as "hypothesis-experiment-evaluation" or as

"plan—do—check". Walter A. Shewhart described manufacture under "control" as a three-step process of specification, production, and inspection. He intended the analyst to take action based on the conclusions of the evaluation and, thus, help to improve the quality of goods. In the early 1950s, the Japanese participants of Deming's lectures shortened the steps to the now traditional plan, do, check, act.

During the Plan phase one is to establish the objectives and processes necessary to deliver results in accordance with the expected output (the target or goals). The completeness and accuracy of the specification is also a part of the targeted improvement.

During the Do phase we are to implement the plan, execute the process, make the product, as well as collect data for charting and analysis in the following check and act steps.

In the Check phase the actual results are studied and compared against the expected results from the Plan phase to ascertain any differences. Charting data can make it much easier to see trends over several PDCA cycles and to convert the collected data into information needed for the next step: Act.

If the Check phase shows that the Plan phase which was implemented in Do phase is an improvement to the prior standard (baseline), then that becomes the new standard (baseline) for how the organization should act going forward. Instead, if the Check phase shows that the Plan phase which was implemented in Do phase is not an improvement, then the existing standard (baseline) will remain in place. In either case, if the Check phase showed something different than expected (whether better or worse), then there is some more learning to be done.

A fundamental principle of the scientific method and PDCA is iteration—once a hypothesis is confirmed (or negated), executing the cycle again will extend the knowledge further. Repeating the PDCA cycle can bring its users closer to the goal, usually a perfect operation and output. Another fundamental function of PDCA is separation of each phase.

Each complete cycle indicates an increase in our knowledge of the system under study. This approach is based on the belief that our knowledge and skills are limited, but improving. Especially at the start of a project, key information may not be known; the PDCA provides feedback to justify hypotheses and increase knowledge. With improved knowledge, one may choose to refine or alter the goal. The aim of the PDCA cycle is to bring its users closer to whatever goal they choose.

When PDCA is used for complex projects or products, checking should happen before the Do stage, since changes to projects and products that are already in detailed design can be costly; this is also seen as Plan-Check-Do-Act.

Rate of improvement is a key competitive factor in today's world. PDCA allows for major "jumps" in performance, as well as kaizen (frequent small improvements). In the United States a PDCA approach is usually associated with a sizable project, and thus managers want to see large "breakthrough" improvements to justify the effort expended. However, the scientific method and PDCA apply to all sorts of projects and improvement activities.

#### 4. Read the text again. Are these sentences true or false?

- a. PDCA is an iterative five-step management method.
- b. Key information is known at any stage of the project, even at the start.
- c. If the Check phase shows that the Plan phase which was implemented in Do phase is an improvement, then the existing standard will remain in place.
- d. The Plan-Do-Check-Act cycle was invented by W. Edwards Deming.
- e. Each complete cycle indicates an increase in our knowledge of the system under study.
- f. When PDCA is used checking should always happen before the Do stage.
- g. PCDA is used for complex projects or products.
- h. In the Check phase we are to implement the plan, execute the process and make the product.

5. Scan the text to find the words from the left-hand column. State their part of speech. Match the words with their definitions. Provide Russian equivalents.

hypothesis	1. involving repetition		
deliver	2. something produced: such as; mineral,		
	agricultural, or industrial production		
prior	3. to institute (something, such as a law)		
	permanently by enactment or agreement;		
	settle		
action	4. freedom from mistake or error, correctness		
iterative	5. relating to, characterized by, or based on		
	competition		
extend	6. the act or process of specifying		
accuracy	7. preceding in time or order, previous		
standard	8. carry out, perform or do		
output	9. the general course or prevailing tendency		
forward	10. a proposition, or set of propositions, set forth		
	as an explanation for the occurrence of some		
	specified group of phenomena		
establish	11. to carry, bring and give		
trend	12. something considered by an authority or by		
	general consent as a basis of comparison		
specification	13. toward the front, onward		
execute	14. stretch out, expand		
competitive	15. something done or performed, deed		

#### 6. Answer the following questions.

- 1. What is PDCA?
- 2. Who invented PDCA cycle?
- 3. What concept is PDCA based upon?
- 4. How did W. Shewhart describe manufacture under control?
- 5. How should the analyst act according to W. Shewhart?
- 6. What is to be established during the Plan phase?

- 7. What should we do during the Do phase? What is to be collected for the following stages?
- 8. What are the goals of the Check phase? How does it influence the Act phase?
- 9. Why is iteration the fundamental principle of PDCA?
- 10. How does implementing of the PDCA cycle modify our knowledge?
- 11. What is the difference between PDCA and PCDA? When should the latter be implemented?
- 12. What is the sphere of PDCA application?

#### 7. Retell the text using the questions as an outline.

Words and phrases to remember			
an iterative method	итеративный подход		
to establish the objectives	устанавливать новые цели		
to deliver results	доставлять результаты		
an expected output	ожидаемый результат		
accuracy	точность		
collect data	собирать данные		
charting data	данные диаграммы		
prior standard	исходный стандарт		
to go forward	двигаться вперед		
to confirm a hypothesis	подтвердить гипотезу		
to execute the cycle	выполнить цикл		
to extend the knowledge	расширить знания		
rate of improvement	уровень улучшения		
specification	технические условия,		
	техническое задание		
to take action	действовать		
to ascertain differences	определить различия		
performance	эффективность, производительность		
to see trends	видеть тенденции		
a key competitive factor	основной конкурентный фактор		
to allow for	обеспечивать, позволять		

### **GRAMMAR**

## 1. Study the following table

TENSE	FORM	USE	EXAMPLE
future		things we think will	In future people will
simple	will	happen	live on other
	+ <b>V</b>		planets.
	shall	certain future	New Year's Day
			will fall on Tuesday
			next year.
		immediate decisions	I'm tired, I think I'll
			go to bed now.
		offers, promises,	I'll get you a drink.
		warnings	What would you
			like?
		future actions in	Are you sure that he
		object clauses of a	will keep his
		compound sentence	promise?
future	will be	continuing actions	Come to the main
continuous	+ V ing	at/around a time in	door – we'll be
	shall be	the future	waiting for you.
		future actions with	I'll be meeting my
		possible results	friends after work,
			so I may be home
		7 7.	late.
		to ask polite	Will we be stopping
6.		questions about plans	for a break?
future		actions completed by	We'll have got back
perfect		a time in the future	to the hotel by seven
	will have + V3		o'clock.
	+ <b>V</b> 3		
future		continuing action up	By next Friday, I'll
perfect	will have	to a time in the future	have been waiting
continuous	been +	,	for over two
	Ving		months.
		to explain a reason	We'll be skiing all
		for a future situation	day, so we'll be
		- "	starving!

We can use will, going to and the Present Continuous to speak about the future. Study the sentences and underline the future verb forms.

- 1. I'll call you at the end of the month.
- 2. Are you going to push this process immediately?
- 3. I'm seeing our directors tomorrow.
- 4. I'll check and I can get back to you on that.
- 5. Companies in Norway are going to fix quotas for women in management.
- 6. We're introducing this change next year.

Mind the form.

1. There is no to after will or shall:

The results of the tests will be ready after the summer.

2. You need the verb to be with the **present continuous** and the **going to** forms:

We are implementing this innovation next summer.

When are you going to report the results?

<i>Now match each of these future forms to the correct grammar rule (a - c).</i>							
will		going to		present continuous			

A To describe decisions and plans we have already made

**B** To describe fixed future arrangements, especially for personal travel and meetings

C To describe future actions which we decide to do at the moment of speaking, especially when we promise or offer to do something

- 2. Correct the mistakes in these sentences.
  - 1. Don't worry. I'll to solve the problem immediately.
  - 2. Sorry, that's my telephone ringing. I'm turning it off.
  - 3. I can't come for lunch with you. I'll do some training in the gym.
  - 4. You look stressed. I'm going to help you with this report if you want.
  - 5. I'm going to fly to Moscow tomorrow at 11.55.

- 3. Choose the correct sentence.
  - 1. You are reminding the colleague about the programme for tomorrow.
    - a. Remember that you'll meet the supplier at 12 o'clock.
    - b. Remember that you are meeting the supplier at 12 o'clock.
  - 2. You're discussing the future visit by the inspectors.
    - a. The inspectors won't allow us to store spare parts in this cupboard.
    - b. The inspectors are not allowing us to store spare parts in this cupboard.
  - 3. You are discussing the car models with airbags.
    - a. The use of airbags is going to save more lives in the future.
    - b. The use of airbags is going to save more lives in the future.
  - 4. A senior manager isn't looking forward to next week because he is worried about the tests.
    - a. Tests will be carried out next week.
    - b. Tests are being carried out next week.
  - 5. There is a problem with the new product.
    - a. I know. I'm going to discuss it with the person responsible later today.
    - b. I know. I'll discuss it with the person responsible later today.
  - 6. Two managers need the results from some research before October.
    - a. They won't be able to complete the research before October.
    - b. They aren't completing the research before October.
- 4. A salesman is describing a new product to the customer. Complete what they say with will or won't and a verb from the box.

give operate deal take be contact install provide need revolutionize warm see

S: this is an excellent new material which 1	_ the use of sola	r panels.
C: I see, and how many hours of sunshine 2	we	to
produce energy?		

S: It 3	necessary to have suns	hine. It 4	in daylight only.
C: 5	itenough energ	gy to warm the buil	ding in winter?
S: It 6	the building but you	may need additiona	al heating when it
is very cold.			
C: What abou	ıt installation?		
	it for you. It 8 ffective it is. We 10		
	ny problems we 11		-
C: When will	you be able to install it?		•
S: As soon a suitable date.	as we receive your order	we 12	you to discuss a
5. Split into t	eams of 2 or 3. Each team	n makes predictions	for the future of
	nt will it be like in a hundn nd choose those which sou	•	? Compare your
6. Make a few	v resolutions to do somethi	ng important. Use i	the cues:

- 2. I'll ... from now on.
  - 3. Next year I'll ...
  - 4. After I graduate from the University I'll ...

Starting from tomorrow I will ...

- 7. Translate the sentences into English. Use the appropriate form to express the future action.
- 1. Я оставлю вам свой электронный адрес. Пожалуйста, пришлите мне фактические результаты.
- 2. Надеюсь, лекарство ей поможет, и она скоро поправится.
- 3. Завтра в 11 часов профессор Браун будет читать лекцию об итеративном четырехступенчатом методе управления производством.
- 4. Как вы собираетесь модифицировать цель? Вы еще не рассказывали мне о своих планах.
- 5. Кто бы ни победил на выборах, все равно ничего не изменится, я уверен.

- 6. Боюсь, будет очень трудно убедить руководство компании внедрить метод контроля и постоянного улучшения процессов.
- 7. Не доверяйте этому человеку. Он обманет вас.
- 8. Наша компания намерена внедрить новый стандарт. Более того, мы уверены, что мы получим от этого выгоду.
- 9. Сколько приглашений они собираются разослать? Они говорят, что на вечере будет более ста гостей.
- 10. Не убирай инструменты. Они мне понадобятся завтра утром.
- 11. Ты веришь, что когда-нибудь Олимпийские игры будут проводиться в нашем городе?
- 12. Неважно как вы будете это делать, это все равно потребует массу времени и сил.
- 13. Норвегия намерена ввести систему квот в течение ближайших пяти пет
- 14. Почему он думает, что потребуется время, чтобы изменить ситуацию?
- 15. Глава компании собирается посетить нас в следующем месяце. Он приезжает поездом. Думаю, он пробудет здесь не меньше недели.

### **SPEAKING**

Study the picture illustrating Assessing the Impact of Company's Activity. Compare it with the one in the beginning of the unit. Point out similarities and differences. Specify the activities that should be taken at each stage.

You may find some information at

Plan Act What changes Objective Predicitions are to be made? · Plan to carry out the Next cycle? cycle (who, what, where, when) · Plan for data collection Study Do Analyse data · Carry out the plan Compare results Document to predictions observations Summarise Record data what was learned

https://en.wikipedia.org/wiki/PDCA useful.

#### WRITING

Work in pairs and discuss the following questions:

- 1. Have you ever written a summary?
- 2. Why do we write them?
- 3. How long should the summary be?

Now compare your answers with the following statements. Do you agree with any of them?

- A summary is written to show that you clearly understand the main points of the text and to communicate them to other people.
- A summary is a shortened version of a larger text, giving its main ideas.
- A summary is written in your own words without comments or evaluation.

Study the list and tick the features of a good summary.

1	The author's name and the tittle of the text
2	Graphs and tables
3	Detailed explanations
4	The authors main idea
5	Details to support the idea
6	Your own views on the problem
7	As much of the original text as possible
8	Quotations
9	Formal expressions, linking words

In a summary we report what other people say or think, so we use reporting verbs. To make the summary cohesive we use linking words and phrases that indicate in what order the ideas are discussed. In the following expressions underline the reporting verbs and circle the linking phrases.

A	In the article 'No Name', Name Surname argues that
В	At the beginning of the article the author points out/emphasizes
С	Next / Further on, he raises such problems as
D	In addition, the reader is informed that
Е	Then, the author examines / studies such points as
F	The author suggests / assumes / claims that
G	Finally, the author concludes / assumes that
Н	The research the author conducted demonstrates that

Imagine you have read an article from 'RUNNING ON PDCA WHEELS' by Jamie O'Neil. Summarize the article in writing, making use of the reporting verbs and phrases showing the order of events. Use the checklist that follows and read your summary critically before you submit it.

		S 1	S 2	S 3
1.	The summary is short.		•	
2.	The summary reflects the main idea of the author.			
3.	The title of the article and the author's name are included.			
4.	It is written in the language different from the author's.			
5.	There are no detailed explanations.			
6.	Quotations are not included.			
7.	It is written in a formal style.			

# UNIT 4. ISO 9000 PRINCIPLES OF QUALITY MANAGEMENT

#### LEAD-IN

Look at the picture and think about the following:

- 1. What do the letters ISO stand for?
- 2. What do the figures 9000 stand for?
- 3. What does the picture symbolize? Pay attention to the shape itself, the words, the symbol (bird)?



#### **READING**

1. a) Find the given words in the dictionary. Write down their transcription and Russian equivalents.

strive	
ISO	
internal	
efficiency	
consumer	
embed	
ensure	
guidelines	
flexibility	
subtle	
loyalty	
encourage	
allow	
certify	
alignment	

b) Practise reading the given words.

## 2. Match the words and phrases with their Russian equivalents.

1. to achieve quality	A	вносить положительный
		вклад
2. up to one's expectations	В	внедрять систему в
		организацию
3. as standards go	C	взаимовыгодное
		сотрудничество
4. to embed system within an	D	достигать качества
organization		
5. to be most widely recognized	E	процессно-
		ориентированный
		подход
6. a collection of guidelines	F	обеспечивать
		важнейшие качества
7. process-oriented approach	G	в соответствии с
		ожиданиями
8. to make a positive	Η	что касается стандартов
contribution		
9. to ensure vital features	I	иметь широкое
		признание
10 mutually beneficial	J	руководство, свод
relationship		правил, рекомендаций

- 3. Before you read the text look at the list of possible titles for it.
  - BENEFITS OF ISO 9000
  - EVOLUTION OF ISO 9000
  - HISTORY OF ISO 9000
  - ISO 9000 AND OTHER QUALITY MANAGEMENT STANDARDS
  - THE BASIC PRINCIPLES OF ISO 9000

Scan the text for 2 minutes and choose the most suitable title. Explain your choice.

Now read the text and find out whether your predictions were correct.

Quality is something every company strives for and is often very difficult to achieve. Complications concerning efficiency and quality present themselves everyday in business, whether an important document cannot be found or a consumer finds a product not up to their expectations. How can a company increase the quality of its products and services? The answer is ISO 9000.

As standards go, ISO 9000 is one of the most widely recognized in the world. ISO 9000 is a quality management standard that presents guidelines intended to increase business efficiency and customer satisfaction. The goal of ISO 9000 is to embed a quality management system within an organization, increasing productivity, reducing unnecessary costs, and ensuring quality of processes and products.

ISO 9000 is set up as a collection of guidelines that help a company establish, maintain, and improve a quality management system. However, organizations still have flexibility in how they implement their quality management system. This freedom allows the ISO 9000 standard to be used in a wide range of organizations, and in businesses large and small.

One important aspect of ISO 9000 is its process-oriented approach. Instead of looking at a company's departments and individual processes, ISO 9000 requires that a company look at "the big picture." How do processes interact? Can they be integrated with one another? What are the important aspects of products and services?

Once this process-oriented approach is implemented, various audits can be done as a check of the effectiveness of your quality management system. There are three main types of audits – 1st, 2nd, and 3rd party audits. An internal audit is a 1st party audit. ISO 9000 encourages (and requires) this type of audit so that an organization can get feedback quickly from those who know the company best. However, this audit process cannot be viewed as impartial. Therefore, 2nd party audits allow for a consumer to evaluate the performance on an organization. As an alternative to a 2nd party audit, many companies choose to become certified with ISO 9000 through a 3rd party audit. In this case, an independent certification body comes into an

organization and evaluates it in terms of the ISO 9000 guidelines. With ISO 9000, an organization can identify the root of the problem, and therefore find a solution. By improving efficiency, profit can be maximized.

## The basic ISO 9000 principles are:

- 1. A Customer Focus, With knowledge of customer needs, resources can be allocated appropriately and efficiently and customer loyalty created.
- 2. Good Leadership. A team of good leaders will establish unity and direction quickly in a business environment so as to motivate everyone working on the project.
- 3. Involvement of people. The inclusion of everyone will lead to a personal investment in a project and in turn create motivated, committed workers eager to participate in the continual improvement that ISO 9000 facilitates.
- 4. Process approach to quality management. It can lower costs through the effective use of resources, personnel, and time.
- 5. Management system approach. Combining management groups can result in integration and alignment of key processes.
- 6. Continual Improvement. Through increased performance, a company can increase profits and gain an advantage over competitors.
- 7. Factual approach to decision making. Effective decisions are based on the analysis and interpretation of information and data. By making informed decisions, an organization will be more likely to make the right decision.
- 8. Supplier relationships. It is important to establish a mutually beneficial supplier relationship. Through close contact and interaction with a supplier, both organizations will be able to optimize resources and costs.

ISO 9000 stresses the importance of finding the root cause(s) of a problem. There may be multiple, subtle reasons why a process isn't working correctly. Identifying and correcting root causes will also lead to the reduction of unnecessary efforts which in turn will lower the cost of maintaining quality.

ISO standards make a positive contribution to the world we live in. They ensure vital features such as quality, ecology, safety, economy, reliability,

compatibility, efficiency and effectiveness. They facilitate trade, spread knowledge, and share technological advances and good management practices. (<a href="http://www.pjr.com/standards/iso-90012008/benefits-of-iso-9000">http://www.pjr.com/standards/iso-90012008/benefits-of-iso-9000</a>)

- 4. Read the text again. Are these sentences true or false?
- i. ISO 9000 is oriented on the processes and their interaction.
- j. Within ISO 9000 there are four main types of audits.
- k. Every company can achieve quality with no difficulty.
- 1. ISO 9000 was invented by W. Edwards Deming.

Make 5 statement of your own based on the text. Let your fellow-student decide whether they are true or false.

5. Scan the text to find the words from the left-hand column. State their part of speech. Match the words with their definitions. Provide Russian equivalents.

complication	1. strongly wanting to do or have smth
standard	2. make the best or most effective use of
recognize	3. he state of being joined as a whole
unnecessary	4. a state in which 2 things are able to exist
	without a conflict
advance	5. identify from having seen or known before
practice	6. move forwards, make progress
facilitate	7. a difficulty
compatibility	8. not needed
integration	9. obtain, increase the amount of
eager	10. far apart
unity	11. make easy or easier
gain	12. establish, place smth in position
widely	13. level of quality, smth used as a measure
set up	14. the process of integrating
optimize	15. the customary, habitual procedure

## 6. Answer the following questions.

- 1. What complications can a company face?
- 2. How can a company overcome these complications?
- 3. What is ISO 9000?
- 4. What is its goal?
- 5. How does ISO 9000 work?
- 6. What enables the ISO 9000 standard to be used in a wide range of organizations and businesses?
- 7. Why is ISO 9000 important?
- 8. What are the main types of audit?
- 9. What are the ISO 9000 Principles?
- 10. How does ISO 9000 contribute to the world we live in?

## 7. Retell the text using the questions as an outline.

Words	Words and phrases to remember		
strive for	стремиться к		
complications	трудности		
to embed QM system	внедрить систему УК		
ensure quality	обеспечить качество		
flexibility	гибкость		
to implement the approach	реализовать подход		
an internal audit	внутренний аудит		
2 <sup>nd</sup> /3d party audit	опрос потребителей / аудиторская		
	проверка		
reliability	надежность		
compatibility	конкурентоспособность		
facilitate trade	способствовать развитию		
	торговли		
multiple subtle reasons	множественные неявные причины		
to optimize costs	сокращать издержки		
decision making	принятие решений		
gain an advantage over smb	получить преимущество над кем-либо		
competitor	конкурент		

alignment of key processes		слаженность ключевых процессов	
customer loyalty		доверие потребителя	
independent	certification	независимый	сертификационный
body		орган	
to allow for sn	o allow for smb to do smth позволять кому-либо что-либо сдела		либо что-либо сделать

#### **GRAMMAR**

- 1. When we focus on the action more than on the person we use the passive. We form passive using the verb to be + the past participle (V3). Study the sentences and underline the passive forms.
  - 1. Firstly, any possible complications are discussed internally.
  - 2. The consumers are contacted.
  - 3. If they are available, they're interviewed immediately.

## Mind the form.

PASSIVE TENSE	STRUCTURE	EXAMPLE
simple present	am/is/are +V3	The goals <b>are achieved</b> .
present progressive	am/is/are being +V3	The problem is being
		studied.
present perfect	have/has been + V3	Has the process been
		improved?
simple past	was/were +V3	QM was implemented.
past progressive	was/were being+V3	We knew the company
		was being renovated.
past perfect	had been+V3	He informed the audit
		had been
		accomplished.
will future	will be+V3	The results will be
		announced soon.
future perfect	will have been+V3	The results will have
		<b>been announced</b> by
		Tuesday.

- 2. Correct the mistakes in these sentences.
  - 1. The coffee is normally make by our secretary.
  - 2. The report has prepared by the colleague yesterday.
  - 3. He was asked from his boss to meet a client at the airport.
  - 4. I am fascinating by your ideas.
  - 5. The email was sending yesterday.
- 3. Here is a list of changes which have taken place in a town between 2000 and today. Use these notes and the verbs given to write sentences describing these changes.

Example: Four hotels have been built.

000	today	verb
two hotels	six hotels	build
three factories	no factories	close
few offices	new office block	construct
no parks	two parks	establish
old narrow roads	new fast roads	reconstruct
120 cafes	250 cafes	open
river polluted	river clean	clean

4. Complete the text with the correct passive forms of the verbs in brackets.

HOW DOES ISO 9000 INTERACT WITH OTHER STANDARDS?

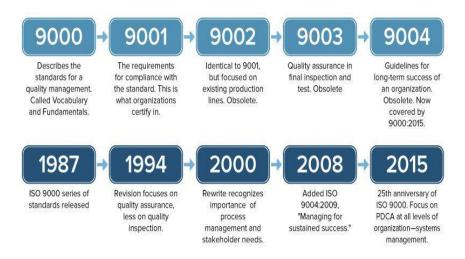
ISO 9000 is the standard for a quality management system that 1)
closely (CONNECT) with many other management systems. These
other systems 2) (BASE) on health, safety, the environment, and
business continuity. They 3) (INTEGRATE) into an overarching
business management system. Aligned interests, reduced costs, and
improved efficiency 4)(INCLUDE) into benefits of this system. With
one of these systems in place, it is easier to implement any of the others;
many documents required for a different standard 5) already
(PREPARE), and personnel 6) already (ACCUSTOM) to the
audit process. Using multiple standards not only the efficiency of an

organization 7)(ACHIEVE), but the integrity of its operations
8)(INCREASE).
ISO 9000 9) (CREATE) to make the attainment of quality
products easier by providing specific steps for development of an
organization's quality management system. This quality management system
10) (MEAN) to monitor the progress of a product or service as it goes
through each stage of production, from development to testing to assembly
to customer feedback.
One cornerstone of ISO 9000 is continual improvement. No
company 11) ever(SATISFY) with the conditions of a process
at the given moment; they are always be looking for ways to make these
processes more efficient and effective. ISO 9000 12) (write) with
the business world's insatiable desire for excellence in mind. This is why
continual improvement 13)(REQUIRE) by the standard - to
inspire progress and the pursuit of perfection. ISO 9000 14)(SEE)
in every sector of the business world,
5. Split into teams of 2 or 3. Write 3 sentences in different active tenses. Make
sure each sentence has both the subject and the object.
Example: The Chinese (sbj) invented paper (obj).
Let the other team change them into passive and name the subject and the object.
Example: Paper (sbj) was invented by the Chinese (obj).
6. Complete the sentences any way you like.
1. I was given for my last birthday.
2. I have often been given
3. I have never been given
7. Translate the sentences into English. Use the appropriate form to express
the future action.
1. Совет директоров все еще рассматривает ваше заявление.
2. Кто-нибудь спрашивал у Питера?
3. Тебе объяснят куда идти.
4. Он обнаружил, что у него украли все деньги.

- Стандартизация направлена на улучшение качества товаров и услуг.
- 6. Новый проект обсуждают в соседней комнате.
- 7. Я поняло правило только после того, как его объяснили на русском.
- 8. Издержки будут существенно уменьшены к следующему году.
- 9. Мы знали, что компания находится в процессе обновления.
- 10. Когда я вошел, обсуждалась стоимость проекта.
- 11. На скольких языках говорят в России?
- 12. Он исчез в прошлом году и с тех пор его не видели.
- 13. Сделанного не воротишь!
- *14*. Мне велели явиться в 8.30.
- 15. Когда Генри выходил на пенсию, ему подарили часы.

#### **SPEAKING**

Study the picture illustrating **Evolution of ISO 9000**. Discuss the basic steps of ISO 9000 evolution with your partner specifying differences and innovations. You may find some information at https://www.smartsheet.com/ultimate-guide-iso-9000 useful.



#### WRITING

Study the following text and summarize it in writing, making use of the reporting verbs and phrases showing the order of events. Use the checklist that follows and read your summary critically before you submit it.

#### **EVOLUTION OF ISO 9000**

ISO 9001 describes the framework of what an organization should have in its quality management system and how to ensure that you train employees within that framework. You can consider it a guide for the design of products or services. (Remember, organizations get certified only in 9001.)

Other standards in the 9000 series are only foundational and supporting. The organization intended ISO 9002 to describe a framework for production and installation, and 9003 provided guidelines for testing and inspection. However, today's professionals consider both to be obsolete. 9004 describes how organizations can sustain the success they have achieved through the implementation of quality improvement measures.

Since its initial release in 1987, ISO 9000 standards have received five updates, in 1994, 2000, 2005, 2008, and, most recently, 2015. Each year forms a suffix on standard document numbers, such as 9000:2005 or 9000:2015. ISO/TC 176, or technical committee 176, revises ISO 9000. Here are short explanations of the five updates:

- **9000:1994:** This version moved toward quality assurance, the process of monitoring requirements and processes in creation of an item or service, rather than merely inspecting the finished product.
- 9000:2000: This major revision recognized the vital importance of process management in quality management, including a focus on stakeholder needs (the types of principles expounded upon by total quality management) as foundational to the 9000 standard.
- 9000:2005: This update clarified key terms used to define the management system.
- **9000:2008:** This revision (ISO 9004:2009) is a quality management approach that focuses on an organization's long-term success.

• **9000:2015:** This 25th anniversary of the original release of the ISO 9000 standards contains considerable updates.

René Ffrench sees ISO 9000 as "the personification of the fourth generation of quality management methods, wherein products and processes focus more and more on meeting customer requirements." He sees the quality management evolution as follows:

- **1st Generation:** Quality control, with the inspection of output at the end of the production line.
- **2nd Generation:** Product assurance, with a focus on creating clear requirements, instructions, and documentation for the product before you begin production.
- 3rd Generation: Process assurance, with an emphasis on ensuring that
  the product-building process is sound. Ffrench believes that both the first
  iteration of ISO 9000 and the rewrite in 2000 addressed process
  assurance.
- 4th Generation: Systems assurance, with the understanding that a focus
  on quality happens not just on the production line, but also in other areas
  of the business, such as the HR department, who must hire qualified
  candidates who fit well with the team.

1.	The summary is short.	
2.	The summary reflects the main idea of the	
	author.	
3.	The title of the article and the author's name are	
	included.	
4.	It is written in the language different from the	
	author's.	
5.	There are no detailed explanations.	
6.	Quotations are not included.	
7.	It is written in a formal style.	

## **UNIT 5. WHAT IS SIX SIGMA?**

#### LEAD-IN

- 1. Look at the picture. How many symbols do you see? What are they?
- 2. What is '\sigma'? What does this symbol stand for in linguistics? mathematics? physics? statistics?
- 3. How is  $6\sigma$  related to Quality Management?



## **READING**

1. a) Find the given words in the dictionary. Write down their transcription and Russian equivalents.

The Thissient Equitioneris.	
philosophy	
eliminate	
nonconforming	
item	
robust	
variance	
augmentation	
simultaneously	
rigorous	
sequence	
implicit	
incumbent	
prioritize	
excellence	

b) Practise reading the given words.

2. Match the phrases with their Russian equivalents.

1. a set of techniques and большое Α уделять внимание tools улучшению 2. to eliminate defects В вопросы последовательности выполнения производственного процесса и брака 3. statistics-based approach уменьшение дисперсии C 4. as well as D строгая концепция 5. give importance to E ДЛЯ определения improve соответствующего уровня среднего квадратического отклонения 6. reduction in variance F равно как и 7. rigorous concept G следовать последовательности шагов 8. to follow a sequence of Η набор методов и инструментов steps 9. to determine I an статистический подход appropriate sigma level 10 process flow and waste J устранять дефекты

- 3. Before you read the text decide which statements are probably true and which ones are probably false.
  - 1. Six Sigma is the measure of quality that strives for near perfection.
  - 2. It is a disciplined, data-driven methodology focused on eliminating defects.
  - 3. A Six Sigma defect is defined as anything that falls outside of a customer's specifications.
  - 4. Six Sigma is a reference to a statistical measuring system, equivalent to just 3.4 defects per every million opportunities (Snee, 2003).

5.

issues

Now read the text and find out whether your ideas were correct.

#### SIX SIGMA METHODOLOGY

Six Sigma  $(6\sigma)$  is a set of techniques and tools for process improvement. It was introduced by engineer Bill Smith while working at Motorola in 1986. Jack Welch made it central to his business strategy at General Electric in 1995.

Six Sigma is a quality management philosophy as well as a methodology that focuses reducing on variation. eliminating defects and improving the quality of processes, products and services. In other words, Six Sigma Methodology is defined as a data-driven, statistics-based



approach and a project-driven management that improves processes, products and services of organization by continuously reducing both nonconforming items or mistakes and variation as well as costs in the organization.

In the literature, Six Sigma has also proven to be a customer-focused and a robust methodology. In practice, organizations should give importance to improve overall performance instead of detecting and counting defects. The application of Six Sigma methodology provides reduction in variance and augmentation in the process capability, and process performance, simultaneously. Significant improvement in process capability and process performance can be achieved after a successful implementation of Six Sigma methodology that is accepted as a rigorous concept of quality control with this feature.

Each Six Sigma project carried out within an organization follows a defined sequence of steps and has specific value targets, for example: reduce process cycle time, reduce pollution, reduce costs, increase customer satisfaction, and increase profits.

According to Allen (2006), tools that are used in Six Sigma methodology can be categorized as tools of statistical methods and quality management, which are very useful in identifying and eliminating causes of defects in business processes by examining the inputs, the outputs, and the relationship between the inputs and outputs.

The term "six sigma" comes from statistics and is used in statistical quality control, which evaluates process capability. Originally, it referred to the ability of manufacturing processes to produce a very high proportion of output within specification. Processes that operate with "six sigma quality" over the short term are assumed to produce long-term defect levels below 3.4 defects per million opportunities (DPMO). Six Sigma's implicit goal is to improve all processes, but not to the 3.4 DPMO level necessarily. Organizations need to determine an appropriate sigma level for each of their most important processes and strive to achieve these. As a result of this goal, it is incumbent on management of the organization to prioritize areas of improvement.

In recent years, some practitioners have combined Six Sigma ideas with lean manufacturing to create a methodology named Lean Six Sigma. The Lean Six Sigma methodology views lean manufacturing, which addresses process flow and waste issues, and Six Sigma, with its focus on variation and design, as complementary disciplines aimed at promoting "business and operational excellence". Companies such as GE and IBM use Lean Six Sigma to focus not just on efficiency but also on growth. It serves as a foundation for innovation throughout the organization, from manufacturing and software development to sales and service delivery functions.

- 4. In the text find derivatives (having the same root) of the following words. Define their part of speech. Use 5 derivatives in the sentences of your own.
- a) organize (v) organization (n)
- b) implement
- c) prior
- d) practise
- e) operate

- f) promote
- g) relate
- h) complement
- i) found
- j) conform
- 5. Match the words in the box with their definitions. Scan the text to find the words. State their part of speech.

excellence, implicit, issue, flow, simultaneously, implementation, promote, robust, item, innovation, process, input, output

- 1. article or unit which is part of the list or collection
- 2. suggested though not directly expressed
- 3. the process of putting the decision or plan into effect
- 4. a steady steam or supply of smth
- 5. the quality of being outstanding or especially good
- 6. a new idea, product, method, etc.
- 7. an important topic or problem for debate or discussion
- 8. a series of actions or steps taken in order to achieve a particular end
- 9. strong and healthy, vigorous
- 10. what is taken in or operated on by any process or system
- 11. at the same time
- 12. support, encourage or further the progress of
- 13. the amount of smth produced by a person, machine or industry
- 6. Answer the following questions.
  - 1. What is Six Sigma?
  - 2. When did this methodology first come into being?
  - 3. What does Six Sigma focus on?
  - 4. How can this methodology be defined?
  - 5. What does the application of Six Sigma methodology provide?

- 6. How can improvement in process capability and process performance be achieved?
- 7. What are the probable steps and targets of a Six Sigma project?
- 8. What are Six Sigma tools? How can they be used?
- 9. What does the term 'six sigma' originally mean?
- 10. Is sigma level rigid or variable?
- 11. What is Lean Six Sigma?
- 7. Skim the text again and find the topic sentence in each paragraph. Do they make up the 'backbone' of the text? Write down the outline of the text.

Retell the text using your outline.

Words and phrases to remember			
data-driven	управляемый данными		
a project-driven	управление, ориентированное на		
management	процесс (процессно-ориентированное)		
nonconforming item	изделие, не удовлетворяющее		
	техническим требованиям		
a robust methodology	надежный метод		
overall performance	качество в целом		
simultaneously	одновременно		
implementation	реализация, внедрение		
input / output	входящий поток / выходящий		
process capability	возможности технологического		
	процесса		
implicit goal	потенциальная цель		
lean manufacturing	бережливое производство		
to address the issues	обращаться к вопросам		
process flow	последовательность выполнения		
	производственного процесса		
complementary disciplines	смежные дисциплины		
a foundation for innovation	основа для инноваций		
excellence	высокое качество		
to promote	способствовать, продвигать		

## **GRAMMAR**

1. Study the table representing the use of Modal verbs. Translate the examples.

VERB	USE	EXAMPLE
able to	future/past ability or possibility	We were not able to participate in the
		meeting.
can / can't	present ability or	Can you speak
	possibility	Japanese?
	request	Can you help me with
		these bags?
	asking permission	Can I use your phone?
	negative rule	You can't smoke here.
could / couldn't	past ability or possibility	Could the first cameras
		take coloured photos?
	request (formal)	Could you help me with
		this?
	asking permission	Could we stay an extra
	(formal)	night in the hotel?
	suggestion/offer	We could watch a
		DVD.
	possible but unlikely to	We could give up our
	happen	studies and live on a
		desert island.
have to / had to	present/past action	When in a car you have
	necessary or not	to wear a seat belt. You
	necessary	don't have to get up so
		early on Sunday.
may / may not	permission (formal)	May I go out?
	uncertain, making a guess	The tickets may be all
	about the future	sold out.
might / might	uncertain, making a guess	This small shop might
not	about the future	be closed on Sunday.

must / must not	positive/negative rules	These lights must not
mast / mast not	positive, negative raies	be used outdoors.
	1' .1	
	recommending smth	You must try this cake.
	certain	It's not working. It must
		be the battery.
need to / needn't	necessary/not necessary	You needn't take any
		food. Lunch is
		provided.
should	expectations	He should be in the
		office by now.
	advice	Should I ask my boss
		for a pay rise?
ought to	advice	You look terrible. You
		ought to see a doctor.
shall	suggestion, offer	Shall we get a pizza this
		evening?
will	offer, promise	We'll drive you to the
		station if you lke.
	warning	Don't touch the cooker.
		You'll get burnt.
would	request (formal)	Would you tell the
		manager that I called?

#### 2. Correct the mistakes in these sentences.

- 1. I don't can swim.
- 2. I would like to can travel more.
- 3. I must work last Saturday and Sunday.
- 4. He should to work harder.
- 5. Could you telling me the time?
- 6. One day we can live without wars.
- 7. I promise I stop smoking.
- 8. May you park in this street on Sunday?
- 9. Joe musted go home yesterday.
- 10. Friday is a holiday we mustn't work.

- 3. Find modal verbs in the following sentences and identify their function. Translate the sentences.
  - 1. You ought to go and see Fred one of these days.
  - 2. We may win, but I don't think there is much chance.
  - 3. That can't be her daughter they are nearly the same age.
  - 4. You absolutely should go and see Liz.
  - 5. I think you must try to relax more.
  - 6. I promise i will stop smoking.
  - 7. You needn't laugh my haircut is not as funny as all that.
  - 8. When I was younger I could sing quite well.
  - 9. I will be able to see you at eight tomorrow.
  - 10. You can't get in without a ticket not a chance.
- 4. Here are some laws of nature. Join the beginnings and the ends.

BEGINNINGS	ENDS
After you have bought something,	it will.
If anything can go wrong,	somebody will.
If there are two good TV shows,	they will both be on the same
If you explain so clearly that nobody	time.
can misunderstand,	will always move faster.
If you throw something away,	
No matter how much you do,	will fall asleep first.
The one who snores	you will find it somewhere else
The other queue	cheaper.
	you'll need it the next day.
	you'll never do enough.

5. Complete the sentences with the verbs from the box.

could, can, can't, could have, can't have, must, must have, might not, should have, to be able, was able to

	l.	Elizabeth be in; I can see the light in her window.
2	2.	Perhaps you should take some cash with you. the restaurant
		accept credit cards.
3	3.	Good news. The engineer fix your computer yesterday, so
		you can use it again.
4	4.	You were lucky. You been badly hurt.
	5.	We go to the museum today; it's closed.
(	5.	There been a terrible storm. When Jeff got home he was
		soaking wet!
	7.	Those old photos been in the cupboard. I haven't looked in
		there for ages.
8	3.	Uncle Mike gone away. His car is still parked outside our
		house.
		Turn on your TV. They announced the winner by now.
-	10.	I'm having Spanish lessons. I want to speak the language
		when I go to Madrid.
	11.	Take some warm clothes. It be very cold there at this time
		of year.
6. M	ark	teting Game. Choose one point from the list below.
•		in your childhood you could
•	•	now you can,
•	•	you must,
•	•	you must never
•	•	you need to,
•	•	you needn't,
•	•	last year you had to,
•	•	in your childhood you were not able to
•	•	yesterday you were able to
	•	you will never
Writ	e it	down as a special question beginning with What Mind the word
orde		
Wha	ıt _	you do?

Interview each of your group mates and write down their answers. Summarize the results and report them to the class.

## 7. Translate the sentences into English paying special attention to the use of Modal verbs.

- 1. Чтобы поддерживать конкурентоспособность на мировом уровне организациям следует внедрять метод бти сигм.
- 2. Мы можем увеличить прибыль с помощью стратегий планирования.
- 3. Входящие потоки системы могут рассматриваться как исходящие.
- 4. Возможно, этот метод тормозит людей, когда они решают поставленные задачи.
- 5. Процесс, скорее всего, можно искусственно улучшить.
- 6. Все входящие потоки должны контролироваться напрямую.
- 7. Наиболее значимая ключевая переменная выхода (key output value), скорее всего, является средним значением от остальных ключевых переменных выхода.
- 8. Термин «процесс» может ввести в заблуждение.
- 9. В случае с относительно простыми повторяющимися операциями 6 сигм может помочь повысить производительность.
- 10. В случае с крупными сложными проектами 6 сигм может помочь направить их в нужное русло (go right) с самого начала.
- 11. Эти оценки могут помочь, стимулируя принятие результатов проектов.
- 12. Организациям следует отдать приоритет улучшению производительности в целом, а не поискам дефектов.
- 13. Достаточно быстро может быть достигнуто значительное увеличение производительности.
- 14. Методы 6-ти сигм можно классифицировать на инструменты статистики и управления качеством.
- 15. Если ваша компания конкурентоспособна в данный момент, это не значит, что вам нет нужды волноваться.

## **SPEAKING**

Six Sigma projects follow two project methodologies inspired by Deming's Plan-Do-Study-Act Cycle. These methodologies, composed of five phases each, bear the acronyms DMAIC and DMADV.

Study their graphical representations. Describe both, compare and contrast them specifying similarities and differences. Think of your own ways to represent these concepts graphically.

## The five steps of DMAIC



## The five steps of DMADV



You may find some information at <a href="https://en.wikipedia.org/wiki/Six Sigma">https://en.wikipedia.org/wiki/Six Sigma</a> useful.

## WRITING

Read the notes about the main ideas of the article. Make the glossary of new terms.

• author: Chris McCarthy

• title: 'LEAN SIGMA METRICS'

• measurements communicate values and priorities to an organization

• the object of the measurement is important → the selection of appropriate metrics is an essential starting point for process improvement

•

1. Time Metrics	2. Cost Metrics	3. Quality Metrics
How long it takes to produce a product/service? How much of that is processing time versus idle time?  1. Lead Time for process- total time (from start to finish from the customer's perspective including waiting time) to develop the product/service.  2. Typically expressed in days  3.Best and worst completion time  4.Percent on-time delivery	How much does the process cost to operate (FTEs)? Is there identifiable savings for the project?	How often does the process lead to mistakes that require rework?

5. Processing time- time to complete a process or process step, excluding wait time 6. Activity ratio – processing time divided by lead time, expressed as a percentage		
4. Output metrics	5. Process complexity	6. Organizational Metrics
How many were produced each month/year?		
1. Production  2. Backlog – number of products/services that have not been started or entered into the process  3. Work in process – things currently being processed  4. Inventory- a supply of raw materials, finished products, and/or unfinished products in excess	1 Process steps 2 Decisions 3. Handoffs 4. Loop backs 5. Black holes	1. Lean events conducted  2.Lean Event participation — number of employees  3. Lean training provided-number of employees attended.

Write a summary using reporting verbs and linking words from the boxes.

Reporting verbs	Links
state inform argue mention point out demonstrate discuss	At the beginning of the article, Next/Further on, In addition,, Then, Finally,, The research demonstrated

## ADDITIONAL TEXTS BANK

#### Text № 1

Read the text and summarize its main points. Translate it into Russian.

#### WHAT IS TOTAL QUALITY MANAGEMENT?

Total Quality Management, often called TQM, is a mindset and a set of well proven processes for achieving the mindset. The mindset is that everyone in your organization understands what their customers' expectations are and they meet those expectations every time. Understanding and meeting customer expectations is a challenging proposition and requires processes that support continuing progress toward the goal of meeting customer expectations the first time, every time.

There is a great deal of value to you if your organization adopts this mindset, right through the whole organization.

- 1. You will have satisfied customers who will want to continue doing business with you. A satisfied customer is the least expensive way to generate revenue and profit.
- 2. Your operating costs will be kept at a minimum because your employees will not be occupied with customer service problems, rework, etc. You should expect to see a 10% savings in your operating costs after six months using the David Butler TQM Process if you have a manufacturing company. If you are in a service business you should expect 20% reduction in operating overhead due to the higher personnel component of your business.
- 3. You will be able to expand your business without hiring additional staff. Your staff will be much more productive because they will have well documented processes for doing their job and no misunderstanding about what you and your customers expect of them.
- 4. You will have employees who are better motivated and satisfied with their jobs. Your hourly employees are the key to successful implementation of the TQM process because they know best the root cause of problems keep your

organization from meeting customer expectations. Once they understand you are committed to this mindset, their supervisors have the tools and knowhow to find and correct problems, and they are empowered to take a key role in improving their organization, you will have lots of happy campers!

#### Text № 2

Read the text and summarize its main points. Translate it into Russian.

## IS TOO MUCH QUALITY POSSIBLE?

Yes! The key is to understand your customers' expectations and meet, not exceed, them. Customers don't expect you to exceed their expectations because they know it costs you money to do so. If you customer expects two ounces of ice cream with his pie, he may be unhappy with you if you give him more - he will get fat.

TQM has been available for many years. It was originally developed in the US and the Japanese were the first to visualize its benefits and apply it successfully. They found that if management and employees could do joint problem solving; everyone was committed to the solution. If their organization had a set of tools for continuous learning, they were able to manage change much more easily and with less disruption. And when they really attacked and fixed the root causes of their problems, customer satisfaction rose and costs declined. Imagine – a system that lets you achieve those two objectives simultaneously!

Finally, they had a process for measuring the cost of non-quality (PONQ) which allowed them to solve their most costly problems first and to hold supervision accountable for achieving continuous improvement until customer satisfaction was achieved. TQM programs are a dime a dozen, what makes this one different and the one you should choose? After talking to many small business people, David Butler concluded there were only three key reasons to select a TQM product:

- 1. It had to be implementable with a minimum of outside help.
- 2. You and your staff have lots of demands on your time so this process has to be implementable on your time schedule, not that of an outsider.
- 3. Most TQM programs have failed during the implementation phase because there is no clear roadmap from concept to application. David Butler has developed clear and easily understandable directions for your supervisors and employees to learn and use the tools of TQM. If you need help, we will provide it to you.

#### Text № 3

Read the text and summarize its main points. Translate it into Russian.

#### WHAT IS QUALITY? DEFINITIONS AND CONTRASTS

The term quality means different things to different people. For example, a quality automobile may be one which has no defects and works exactly as we expect. Such a definition would fit with an oft-repeated definition by J.M Juran (1988): "Quality is fitness for use." However, there are other definitions widely discussed. Quality as "conformance to specifications" is a position that people in the manufacturing industry often promote. Why?

Presumably because manufacturing can do nothing to change the design; hence, this definition. Others promote wider views (Gitlow et al., 1989 or Ozeki and Asaka, 1990), which include the expectation that a product or service exceed the expectations of the customer. Such as Gitlow who believes quality is a judgment by customers or users of a product or service; it is the extent to which the customers or users believe the product or service surpasses their needs and expectations, and Ozeki and Asaka who believe. It means delivering products and services that:

- 1) meet customer standards,
- 2) meet and fulfill customer needs,
- 3) meet customer expectations, and
- 4) will meet unanticipated future needs and aspirations.

Still others simply ignore definitions and say "I'll know quality when I see it." It seems that we all 'know' or 'feel' somehow what quality is. A product or service that exceeds our preconceived idea about the quality of the product or service to be received is likely to be designated as a quality product or service. It is equally clear that the best of a group of bad products is not likely to be perceived as a quality product. So, possible definitions of quality are:

- 1. Customer-Based: Fitness for use, meeting customer expectations.
- 2. Manufacturing-Based: Conforming to design, specifications or requirements, having no defects.
- 3. Product-Based: The product has something that other similar products do not that adds value.
- 4. Value-Based: The product is the best combination of price and features.
- 5. Transcendent: It is not clear what it is, but it is something good.

#### Text № 4

Read the text and summarize its main points. Translate it into Russian.

The field of quality has its roots in agriculture. Early this century in Britain, R.A. Fisher conducted statistical research to assist farmers in understanding how to optimally plant and rotate crops. This work subsequently inspired Walter Shewhart at Bell Laboratories whose work subsequently motivated W. Edward Deming to devote his life to the teaching and improvement of quality methods. Arguably, Deming has become the best-known 'guru' of quality. His arch-rival, J.M. Juran, 88, runs a close second in prestige and respect in the field. Both Deming and Juran could find no interest in quality methodologies in the U.S. after World War II, and because of this disinterest, both went to Japan as consultants to 'spread the word' about quality. In Japan, they found a receptive audience for their ideas. The Japanese fully embraced quality ideas and methodologies and commenced to integrate the concepts into their industrial base. The results are well-known; the improvement in quality of products in Japan during the post-war period due to the revolutionary ideas of Deming and Juran should ultimately be viewed as legendary by historians who study quality.

There are many ways to view quality. For the purposes of this document, consider the diagram shown below. Much of the way that organizations are organized can be viewed as a relationship between customers, suppliers, and processes. In the largest sense, an entire organization can be viewed as the process in the diagram. External suppliers provide input to the entire organization and customers receive the output of the organization. Internal suppliers and customers represent the various internal suppliers and customers that make up the internal workings of an organization. If one duplicates this diagram many times, the entire operation of an organization can be represented. This model of an organization nicely shows how external suppliers and customers are related through the process of the organization. Less well recognized is the way of viewing internal customers and suppliers.

#### Text № 5

Read the text and summarize its main points. Translate it into Russian.

### TOTAL QUALITY MANAGEMENT (TQM)

Total quality management (TQM) (also known as total quality control (TQC)) is the application of quality principles to all facets of an organization. In America, most efforts in quality during the 40 years after World War II were relegated to the factory floor. Statistical process control (SPC) became the mainstay of quality efforts in America during this period. SPC is a method for assessing statistical variation and determining if any measurements fall outside what would be expected from the statistical characteristics of the data gathered. Hence, SPC became a methodology used to determine if parts conformed to specification, simply by measuring parameters of parts and comparing to specification. In contrast, TQM is a much broader concept - that is, applying quality methods to the entire organization, from management, to accounting, to manufacturing, service, and every other subentity in the organization (for example see, Mizuno, 1982). How is this possible?

Well, one clear definition of quality involves satisfying one's customer - this satisfaction has different meanings for different parts of an organization. In manufacturing, conformity to specifications may well satisfy a customer. However, in sales, simply conforming to specifications is unlikely to satisfy the customer. Hence, other metrics of quality must be sought. In the sales example, a customer might well be satisfied if his needs are adequately met; however, if his expectations are exceeded he would surely purchase from the firm again. Thus, another definition of quality - exceeding the customer specifications! Indeed, there are many definitions of quality and total quality. Next, some of the views of the so-called "quality gurus" will be briefly examined.

There have been many contributors to the concepts of quality during this century. The next paragraphs summarize the views of three leaders: W.W. Deming, J.J. Juran, and P. Crosby.

#### Text № 6

Read the text and summarize its main points. Translate it into Russian.

## QUALITY ASSURANCE AND RELIABILITY IN THE JAPANESE ELECTRONICS INDUSTRY

Quality and reliability are two attributes required for all Japanese products, although the JTEC panel found these attributes to be secondary to customer cost requirements. While our Japanese hosts gave presentations on the challenges of technology, cost, and miniaturization, quality and reliability were infrequently the focus of our discussions.

Quality and reliability were assumed to be sufficient to meet customer needs. Fujitsu's slogan, "quality built-in, with cost and performance as prime consideration," illustrates this point. Sony's definition of a next-generation

product is "one that is going to be half the size and half the price at the same performance of the existing one." Quality and reliability are so integral to Japan's electronics industry that they need no new emphasis.

The quality movement in Japan began in 1946 with the U.S. Occupation Force's mission to revive and restructure Japan's communications equipment industry. General Douglas MacArthur was committed to public education through radio. Homer Sarasohn was recruited to spearhead the effort by repairing and installing equipment, making materials and parts available, restarting factories, establishing the equipment test laboratory (ETL), and setting rigid quality standards for products (Tsurumi 1990). Sarasohn recommended individuals for company presidencies, like Koji Kobayashi of NEC, and he established education for Japan's top executives in the management of quality. Furthermore, upon Sarasohn's return to the United States, he recommended W. Edwards Deming to provide a seminar in Japan on statistical quality control (SQC).

Deming's 1950 lecture notes provided the basis for a 30-day seminar and provided the criteria for Japan's famed Deming Prize. Deming's work has impacted industries such as those for radios and parts, transistors, cameras, binoculars, and sewing machines. In 1960, Deming was recognized for his contribution to Japan's reindustrialization when the Prime Minister awarded him the Second Order of the Sacred Treasure.

#### Text № 7

Read the text and summarize its main points. Translate it into Russian.

#### ISO 9000 STANDARDS CERTIFICATION

The concept of certification and standards, however, breaks down when global competitiveness is at stake. Most recently, ISO 9000 certification has become a requirement for exports to Europe, and Japan has been forced to obtain ISO certification, not because it is a quality issue, but because it is a way of increasing market share. The Japanese companies provide some of the highest-quality products, typically using company product standards

(best commercial practices) rather than external standards like QML or any U.S. military standards.

The Japan Quality Association (JQA) is responsible for ISO certification. It was established in 1958 as the Japan Management Institute (JMI) under Japan's Ministry of International Trade and Industry for the purpose of export inspection. In 1960, JMI moved from inspection to process certification, and in October 1993, JMI was renamed JQA to more aptly identify its mission. It has provided ISO 9000 certification in Japan since 1990 after receiving training from the British Standards Institution's (BSI) quality assurance division, and it has memoranda of understanding with both BSI and Underwriters Laboratory in the US for reciprocal certification acceptance.

By October of 1993, JQA had ISO-certified 300 firms in Japan, about 80% of which were electronics firms; the rest were chemical firms. JQA expected to have about 540 companies certified by the end of 1994. It was already booked through 1994, and there was a backlog of over a hundred companies waiting for certification. Most firms seeking certification were electronics firms that depended on exports to Europe.

At the time of the JTEC visit, JQA was limited to about thirty assessments per month. It typically took companies one year to eighteen months to gain certification; most had little difficulty in obtaining ISO certification. In addition to JQA certification, there were an equal number of firms obtaining ISO certification from non-Japanese auditors.

#### Text № 8

Read the text and summarize its main points. Translate it into Russian.

#### **STRATEGY**

One can often hear companies proclaim they are "already doing Quality"; this means training courses, clever posters and commitment statements in the annual report. The emphasis is on tools and techniques. People are assigned to committees and work on internal process stabilization. Quality is viewed in terms of products, production-related activities and reduction of defective output. This is a beginning, but not part of the long-term business strategy.

Total Quality must be integrated with the overall mission, objectives and plans of the organization. Frequently, it is not. Many companies, in fact, don't have the strategies necessary for survival in the 1990's. Few include Quality as an integral building block. Consider the following examples:

Company A: "Our strategy is to grow sales by 20%." This is not a strategy, it is an objective or goal. The strategy should describe how sales will be increased, i.e. the methods or means for accomplishing the sales objective. Examples could include:

- Development of more attractive pricing or product features More effective advertising or promotional activity
- Faster delivery or distribution
- More training and support for sales representatives

Company B: "Our strategy is to be the leader in Customer Satisfaction." This is also an objective or hope, requiring defined methods or strategies to be meaningful. The strategy could be:

- Gather information from customers and translate customer feedback into annual product and service improvements
- Install an ongoing process for identifying improvement needs, stimulating projects, and reviewing results on a quarterly basis

In each case, there is softness in connecting quality to the practical plans for running the business.

Total Quality can be reflected in these strategy elements. It then becomes an essential part of business strategy which is accepted and supported by top management. This is often a missing connection.

Read the text and summarize its main points. Translate it into Russian.

#### **STRUCTURE**

The good news: many companies are streamlining their "command and control" organization structures; reducing management levels, eliminating layers of approval, reducing barriers between departments and work groups. The bad news: there is still a lot of restructuring by the 5% Rule: "Every year you get 5% more work and 5% less to work with". Employment levels and expenses are reduced. As a consequence, people are often overloaded and processes lose their performance capability.

The structure becomes an obstacle to quality. Common structural barriers include:

- A) Conflicting goals and objectives. One part of the organization is tasked with reducing inventories to meet corporate asset management goals. In other areas material shortages cause production delays, missed deadlines and late completion.
- B) Inadequate resources. Senior management cuts employment levels or capital expenditures to meet short term budget targets. As a consequence personnel and equipment capacity is reduced, unable to meet customer demands.
- C) Systems misalignment. Systems for administering performance evaluation, compensation and promotions focus on dollar volumes, production units or sales quotas. To employees quantity is seen as the top priority, quality as a secondary concern.

Misalignment of goals, resources and systems wastes 20 - 30% of most organizations' true potential. Structures must be realigned to encourage improvement. Characteristics of quality-focused structures include:

• Organization Charts - reflect the needs of customers and external markets rather than internal work functions and administrative convenience

- Goals/Measurements go beyond financial indicators, to include external customer satisfaction, internal supplier/customer relationships, and key vendor performance
- Recognition/Reward Systems consider quality of performance as well as quantity, and encourage suggestions, innovation and change

Read the text and summarize its main points. Translate it into Russian.

### FUNDAMENTALS OF TOTAL QUALITY MANAGEMENT

The current approach to Japan's quality improvement programme has changed the balance of the present trade situation between Japan and the rest of the world. Improving quality is very often regarded as an activity which is going to increase cost. In this competitive world, organizations and countries as a whole must achieve recognition from consumers about their top quality activities at all times in order to conduct business successfully. Many large organizations are now trying to emulate that Japanese achievement in their commitment to quality.

Improving quality is very often regarded as an activity which is going to increase cost. This view confuses the terms used in industry concerning quality and grade. Improving or raising the grade of products relates to the use of more expensive materials or processes to produce a product and will raise product costs.

Improving quality means, among other things, making less faulty products with the same amount of effort or cost which usually gives a lower unit cost. Improving quality aims to reduce this cost. This cannot be achieved overnight but requires an investment to be made in activities which are designed to avoid defective production, not activities designed to detect defects after they have been made.

The search for the key to quality has been going on since the Japanese made us aware that we had missed something out along the way. Various analyses of Japanese success have attempted to condense the effect to one particular activity; hence fashions of 'quality circles' and 'statistical process control'.

The latest analysis has developed the concept of Total Quality Management', which may well provide an answer to the problem. The keynote here is that the achievement of quality should not be considered to be a separate activity from the achievement of production.

#### Text № 11

Read the text and summarize its main points. Translate it into Russian.

### **EVOLUTION OF ISO 9000**

ISO 9001 describes the framework of what an organization should have in its quality management system and how to ensure that you train employees within that framework. You can consider it a guide for the design of products or services. (Remember, organizations get certified only in 9001.)

Other standards in the 9000 series are only foundational and supporting. The organization intended ISO 9002 to describe a framework for production and installation, and 9003 provided guidelines for testing and inspection. However, today's professionals consider both to be obsolete. 9004 describes how organizations can sustain the success they have achieved through the implementation of quality improvement measures.

Since its initial release in 1987, ISO 9000 standards have received five updates, in 1994, 2000, 2005, 2008, and, most recently, 2015. Each year forms a suffix on standard document numbers, such as 9000:2005 or 9000:2015. ISO/TC 176, or technical committee 176, revises ISO 9000. Here are short explanations of the five updates:

- **9000:1994:** This version moved toward quality assurance, the process of monitoring requirements and processes in creation of an item or service, rather than merely inspecting the finished product.
- **9000:2000:** This major revision recognized the vital importance of process management in quality management, including a focus on stakeholder needs (the types of principles expounded upon by total quality management) as foundational to the 9000 standard.
- 9000:2005: This update clarified key terms used to define the management system.
- **9000:2008:** This revision (ISO 9004:2009) is a quality management approach that focuses on an organization's long-term success.
- **9000:2015:** This 25th anniversary of the original release of the ISO 9000 standards contains considerable updates.

Read the text and summarize its main points. Translate it into Russian.

ISO (International Organization for Standardization) is a global network that identifies what International Standards are required by business, government and society, develops them in partnership with the sectors that will put them to use, adopts them by transparent procedures based on national input and delivers them to be implemented worldwide. ISO standards distil an international consensus from the broadest possible base of stakeholder groups. Expert input comes from those closest to the needs for the standards and also to the results of implementing them. In this way, although voluntary, ISO standards are widely respected and accepted by public and private sectors internationally. ISO – a non-governmental organization – is a federation of the national standards bodies of 157 \* countries, one per country, from all regions of the world, including developed, developing and transitional economies. Each ISO member is the principal standards organization in its country.

René Ffrench sees ISO 9000 as "the personification of the fourth generation of quality management methods, wherein products and processes focus more

and more on meeting customer requirements." He sees the quality management evolution as follows:

- 1st Generation: Quality control, with the inspection of output at the end of the production line.
- 2nd Generation: Product assurance, with a focus on creating clear requirements, instructions, and documentation for the product before you begin production.
- 3rd Generation: Process assurance, with an emphasis on ensuring that the
  product-building process is sound. Ffrench believes that both the first
  iteration of ISO 9000 and the rewrite in 2000 addressed process
  assurance.
- 4th Generation: Systems assurance, with the understanding that a focus
  on quality happens not just on the production line, but also in other areas
  of the business, such as the HR department, who must hire qualified
  candidates who fit well with the team.

#### Text № 13

Read the text and summarize its main points. Translate it into Russian.

## ZERO QUALITY CONTROL

Shingo has pioneered the area of Zero Quality Control, by asking similar questions to those asked by Taguchi. Shingo argues that the effort put into tightening tolerances does not necessarily raise production costs significantly as is widely believed. Shingo has been teaching concepts of production engineering to many Japanese managers and is still promoting the area of Zero Quality Control by arguing that inspection processes or the use of statistical quality control should be completely eliminated. He believes that quality should be controlled at the source of the problem not after the problem has manifested itself.

Consequently he recommends that inspection should be incorporated within the process where the problem has been identified and where it should be eliminated. He considers that Statistical Quality Control (SQC) tends to focus on the effect (subsequent errors related to operators) rather than the cause which is due to process imperfections and abnormalities. He is the developer of a concept called Poka-Yoke. Poka-Yoke means that checklists for each operation are provided so that human error is completely eliminated. It is also similar to the concept of autonomation based on low-cost automated processes which stop automatically when the required operations are completed or when mistakes/abnormalities develop.

#### Text № 14

Read the text and summarize its main points. Translate it into Russian.

There have been many contributors to the concepts of quality during this century. The next paragraphs summarize the views of three leaders: W.W. Deming, J.J. Juran, and P. Crosby.

The Deming Approach. Deming tends toward assessment of quality in human terms, yet espouses the utility of tools for understanding data. Deming created fourteen major points that are widely utilized. These include such items as; create constancy of purpose, institute training, drive out fear, break down barriers, and so forth. The core of the Deming approach, however, lies in the use of simple data analysis tools that include control charts, flow charts, Pareto diagrams, Scatter plots, cause and effect diagrams, etc. Deming is also responsible for the Plan, Do, Check, Act cycle (see below).

The Juran Approach. The Juran approach divides the quality effort into three parts: quality planning, quality control, and quality improvement. The planning process attempts to discover who the customers are and what their needs are, the control process attempts to reach new levels of improved quality (e.g., lowering defects, reducing cost, improving customer satisfaction, etc.) and the improvement process attempts to continuously improve the quality of the process. Juran was a pioneer in the understanding of the interrelationships among customers, suppliers, and processes.

The Crosby Approach. This approach is based on culture change in an organization. By identifying areas in which quality can be improved in an organization and improving awareness, instituting teams, setting goals, giving recognition, and continuously repeating the quality improvement cycle, this approach is a truly human-oriented technique.

#### **Text № 15**

Read the text and summarize its main points. Translate it into Russian.

# MAJOR CONTRIBUTORS TO TQM: W. EDWARDS DEMING

Deming's management system was based on a system known as the Fourteen Points. These points express the actions an organization must take in order to achieve TQM:

- 1. Create constancy of purpose for improvement of product and service. Dr. Deming suggests a radical new definition of a company's role: A better way to make money is to stay in business and provide jobs through innovation, research, constant improvement, and maintenance.
- 2. Adopt a new philosophy. For the new economic age, companies need to change into "learning organizations." Furthermore, we need a new belief in which mistakes and negativism are unacceptable.
- 3. Cease dependence on mass inspection. Eliminate the need for mass inspection by building quality into the product.
- 4. End awarding business on price. Instead, aim at minimum total cost, and move towards single suppliers.
- 5. Improve the system of production and service constantly. Improvement is not a one-time effort. Management is obligated to continually look for ways to reduce waste and improve quality.
- 6. Institute training. Too often, workers learn their jobs from other workers who have never been trained properly.
- 7. Institute leadership. Leading consists of helping people to do a better job and to learn by objective methods.

- 8. Drive out fear. Many employees are afraid to ask questions or to take a position—even when they do not understand what their job is or what is right or wrong. The economic losses from fear are appalling. To assure better quality and productivity, it is necessary that people feel secure.
- 9. Break down barriers between departments. Often, company departments or units compete with each other or have goals that conflict. They do not work as a team; therefore they cannot solve or foresee problems. Even worse, one department's goal may cause trouble for another.

Read the text and summarize its main points. Translate it into Russian.

## MAJOR CONTRIBUTORS TO TQM: W. EDWARDS DEMING

Deming emphasized surveying customers, consulting production-line workers to help solve quality problems, and teamwork. His system was readily accepted in Japan, where workers and management were used to uniformity and allegiance to institutions. Japanese companies learned to collect data for the statistical monitoring and measuring of customer satisfaction. The goals of these companies were to produce many of the same consumer goods—better and cheaper—that were produced in the U.S. These Japanese companies succeeded, much to the chagrin of companies in the U.S.

Deming saw businesses as bedrock institutions in a society—much like churches and schools. Companies attain long-term success only if business leaders make their employees' contributions matter. If organizations use their employees' ideas, they will improve efficiency and productivity.

Most of the applications of Deming's ideas occurred in the 1950s and 1960s in Japan. In the United States, the desperation needed for executives to finally

try a "radical" plan such as Deming's came from economic rather than wartime defeats. Most notably, in the 1980s, Japanese car manufacturers pushed their market share toward 25 percent, sending fear throughout Detroit. The Ford Motor Co. called on Deming after NBC featured his successes in a documentary, "If Japan Can, Why Can't We?" Deming took Ford's invitation as notice that his home country was finally ready for his program. He continued teaching seminars until his death, at age 93, in 1993. Deming's system made such an impression that he is known at the Father of TOM.

#### Text № 17

Read the text and summarize its main points. Translate it into Russian.

## MAJOR CONTRIBUTORS TO TQM: W. EDWARDS DEMING

Total quality management is a much broader concept than just controlling the quality of the product itself. Total quality management is the coordination of efforts directed at improving customer satisfaction, increasing employee participation, strengthening supplier partnerships, and facilitating an organizational atmosphere of continuous quality improvement. TQM is a way of thinking about organizations and how people should relate and work in them. TQM is not merely a technique, but a philosophy anchored in the belief that long-term success depends on a uniform commitment to quality in all sectors of an organization.

The concept of quality started in Japan when the country began to rebuild after World War II. Amidst the bomb rubble, Japan embraced the ideas of W. Edwards Deming, an American whose methods and theories are credited for Japan's postwar recovery. Ironically enough, Deming's ideas were initially scoffed at in the U.S. As a result, TQM took root in Japan 30 years earlier than in the United States. American companies took interest in Deming's ideas only when they began having trouble competing with the Japanese in the 1980s.

Deming's management system was philosophical, based on continuous improvement toward the perfect ideal. He believed that a commitment to quality requires transforming the entire organization. His philosophy is based on a system known as the Fourteen Points. These points express the actions an organization must take in order to achieve TQM.

Deming emphasized surveying customers, consulting production-line workers to help solve quality problems, and teamwork. His system was readily accepted in Japan, where workers and management were used to uniformity and allegiance to institutions. Japanese companies learned to collect data for the statistical monitoring and measuring of customer satisfaction. The goals of these companies were to produce many of the same consumer goods—better and cheaper—that were produced in the U.S. These Japanese companies succeeded, much to the chagrin of companies in the U.S.

#### **Text № 18**

Read the text and summarize its main points. Translate it into Russian.

The process of Total Quality Management (TQM) implementation in an organization can be organized in the following stages:

## 1. Identification and Preparation

This stage is concerned with identifying and collecting information about the organization in the prime areas where improvement will have most impact on the organization's performance and preparing the detailed basic work for the improvement of the organization's activities. It is also important to find out the cost of quality, which incorporates the total cost of waste, error correction, failure appraisal and prevention in the organization. It is also required to understand the views and opinions of the customers, suppliers the managers and the employees. The differences between their views and opinions will provide an idea of the scale of the problem and task ahead. The measurements of the cost of quality made at the beginning of the Total Quality Management (TQM) process can be compared with measurement at a later stage to establish the achieved improvements. The initial measurements of the costs will also indicate the potential areas for

improvement and direct efforts towards the areas where they are most needed. All data and information must therefore be identified, prepared and summarized in a manner to ensure that the managers get the correct information to make their decision.

### 2. Management Understanding

This step is concerned with making sure that the management understands the objective and methodology of Total Quality Management (TQM) and is ready to adopt them all the time. For many companies, Total Quality Management (TQM) means a major change in the management practice and it is difficult to implement over a short period of time.

#### **Text № 19**

Read the text and summarize its main points. Translate it into Russian.

The process of Total Quality Management (TQM) implementation in an organization can be organized in the following stages:

## 1. Management Understanding

This step is concerned with making sure that the management understands the objective and methodology of Total Quality Management (TQM) and is ready to adopt them all the time. However, to make a significant change in management practice, it is necessary to educate the managers in their understanding and approach to TQM. Once they have mastered the principle and practice of TQM the managers can then demonstrate their total commitment and take the lead in the quality improvement process.

### 2. Scheme for Improvement

This stage is concerned with identifying quality issues and affects a resolution of them by management led improvement activities. To develop quality improvement scheme, it is necessary to identify the quality problems in each division, in each department and throughout the whole organization. A scheme of training for improvement can be established after the realization of the following aspects of the organization. They are:

• Purpose of the department,

- Customer's and suppliers relationship,
- Meeting customer needs,
- Problem causes and best solutions,
- Prevention of recurring problems,
- Customer satisfaction,
- Priorities for improving efficiency

At this stage it is essential to know that any scheme for improvement requires substantial investment in training, management time and communication.

#### Text № 20

Read the text and summarize its main points. Translate it into Russian.

## 7 IMPORTANT PRINCIPLES OF TOTAL QUALITY MANAGEMENT

Total Quality Management (TQM) is an approach that organizations use to improve their internal processes and increase customer satisfaction. When it is properly implemented, this style of management can lead to decreased costs related to corrective or preventative maintenance, better overall performance, and an increased number of happy and loyal customers.

Whatever other resources you use, you should adopt these seven important principles of Total Quality Management as a foundation for all your activities.

- 1. Quality can and must be managed: Many companies have wallowed in a repetitive cycle of chaos and customer complaints. They believe that their operations are simply too large to effectively manage the level of quality. The first step in the TQM process, then, is to realize there is a problem and that it can be controlled.
- 2. Processes, not people, are the problem: If your process is causing problems, it won't matter how many times you hire new employees or how many training sessions you put them through. Correct the process and then train your people on these new procedures.
- 3. Don't treat symptoms, look for the cure: If you just patch over the underlying problems in the process, you will never be able to fully reach your

potential. If, for example, your shipping department is falling behind, you may find that it is because of holdups in manufacturing. Go for the source to correct the problem.

#### Text № 21

Read the text and summarize its main points. Translate it into Russian.

#### WHAT IS MANAGEMENT?

Management is the practice of consciously and continually shaping organizations. All organizations have people who are responsible for helping them achieve their goals. These people are called managers. These managers - coaches, conductors, sales executives - may be more obvious in some organizations than in others, but without effective management, organizations are likely to fail. This subject is about how organizations are managed. More specifically, it is about how managers can best help their organizations set and achieve goals. Our emphasis will be on the so-called formal organizations - such as business, religious organizations, government agencies, and hospitals - that provide goods or services to their customers or clients and offer career opportunities to their members. But no matter how formal or informal, all managers in all organizations have the same basic responsibility: to help other members of the organization set and reach a series of goals and objectives.

As part of this process, managers can set the tone, influencing the attitude that employees have about their work.

Your conversations with friends, parents, classmates, and co-workers are probably filled with talk about organizations such as colleges, musical ensembles, athletic teams, and companies where you work. In a world where organizations are everywhere, there are three compelling reasons for studying them and the practice of management. In each case involving the past, present, and future the effect of people collaborating as an organization, under the guidance of managers, can be far-reaching.

Read the text and summarize its main points. Translate it into Russian.

## IMPORTANT PRINCIPLES OF TOTAL QUALITY MANAGEMENT

Every employee is responsible for quality: Everyone in the company, from the workers on the line to the upper management, must realize that they have an important part to play in ensuring high levels of quality in their products and services. Everyone has a customer to delight, and they must all step up and take responsibility for them.

Quality must be measurable: A quality management system is only effective when you can quantify the results. You need to see how the process is implemented and if it is having the desired effect. This will help you set your goals for the future and ensure that every department is working toward the same result.

Quality improvements must be continuous: Total Quality Management is not something that can be done once and then forgotten. It's not a management "phase" that will end after a problem has been corrected. Real improvements must occur frequently and continually in order to increase customer satisfaction and loyalty.

Quality is a long-term investment: Quality management is not a quick fix. You can purchase QMS software that will help you get things started, but you should understand that real results won't occur immediately. TQM is a long-term investment, and it is designed to help you find long-term success.

Before you start looking for any kind of quality management software, it is important to make sure you are capable of implementing these fundamental principles throughout the company. This kind of management style can be a huge culture change in some companies, and sometimes the shift can come with some growing pains, but if you build on a foundation of quality principles, you will be equipped to make this change and start working toward real long-term success.

Read the text and summarize its main points. Translate it into Russian.

#### **QUALITY COSTING**

Quality costing is not an exercise which is going to solve organisational problems or have an impact on performance. Quality costing can be considered as a means to an end, to help improve quality and help companies reach their quality targets. Quality costing is a process-related exercise rather than for product control. Process effectiveness is however not constant and can be improved upon. Opportunities for improvement depend on process capability studies and information provided by process costing.

Intention of quality costing: 'Quality cost systems are used as an aid in setting priorities for quality improvement projects, studying cost trends to reallocated resources, focusing multistep operations, measuring performance, and balancing efforts in reducing variation in design versus manufacturing. Measurements don't solve problems but can spur beneficial action.'

There are two approaches to quality costing:

(i) The traditional model or PAF mode1 where the pattern of quality costing includes

Prevention, Appraisal and Failure: These tend to decrease as quality improvement becomes more and more an integral part of business operations. PAF costs include the following:

Prevention costs: Costs of quality systems, quality training and education;

Appraisal costs: Costs of performing quality inspection and audits in-house as well as audits of suppliers;

Failure costs (external): Costs associated with failures discovered outside the plant. These affect both cost and reputation;

Failure costs (internal): Costs associated with failures discovered inside the plant.

(ii) Process-based costing: A more radical approach to costing is one which considers the Cost of Quality (COQ) to be made up of two distinct components: - the price of conformance (Prevention and Appraisal) and the price of nonconformance (Failure cost)

Process modeling leads to a good understanding of how a process functions in its present state. By identifying different variables, costs can be placed under categories such as people, equipment, materials and environment. The costs are allocated according to whether they enable the process to be 100% effective (Cost of Conformance = COC) or whether the cost is linked to an attributable variable that is causing the process to be ineffective (Cost of Non-Conformance = CONC).

Process effectiveness is however not constant and can be improved upon. Opportunities for improvement depend on process capability studies and information provided by process costing. Process modeling for costing purposes is compatible with the ethos of TQM, which places emphasis on process ownership, understanding, control and improvement.

#### Text № 24

Read the text and summarize its main points. Translate it into Russian.

In relation to TQM it is well-known that the level of quality will be improved by investing in the so-called quality management costs. The group management asked Milliken Denmark's top management to find out how high the quality costs were. The group management wanted to establish a simple quality cost system without arbitrary cost allocations.

Failure costs:

Failure costs are normally divided into the following two groups:

- 1. Internal failure costs. These are costs which accrue when defects and problems are discovered inside the company. These costs are typically costs of repairing defects.
- 2. External failure costs. These are costs which accrue when the defect is first discovered and experienced outside the firm. The customer discovers the defect and this leads to costs of claims and as a rule, also a loss of goodwill corresponding to the lost future profits of lost customers.

Investing in preventive costs has the following effects:

- 1. Defects and failure costs go down.
- 2. Customer satisfaction goes up.
- 3. The need for inspection and inspection costs go down.

- 4. Productivity goes up.
- 5. Competitiveness and market shares increase.
- 6. Profits go up.

HOW IT STARTED: The definition of the costs on these four accounts was the following:

- 1. Discounts. This is an internal failure cost element. A failure has been built into the product but it is found before shipment to the customer. The customer is offered a discount in order to accept the failure.
- 2. Allowances. This is an external failure cost element. A failure has been built into the product and the customer finds the failure. An allowance is negotiated. If the customer does not accept the shipment the allowance is equal to the amount of invoice.
- 3. Returns. This is an external failure cost element. If a customer does not accept a shipment because of a failure caused by Milliken the customer may decide to send the shipment back. Returns are the freight of returned shipments.

## **GLOSSARY**

acceptable quality product	товар приемлемого качества
accuracy	точность
address the issues	обращаться к вопросам
advise on	давать рекомендации
alignment of key processes	слаженность ключевых процессов
allow for	обеспечивать, позволять
ascertain differences	определить различия
2 <sup>nd</sup> /3d party audit	опрос потребителей / аудиторская проверка
board of directors	совет директоров
charting data	данные диаграммы
collect data	собирать данные
compatibility	конкурентоспособность
competitive indices	конкурентные показатели
competitor	конкурент
complementary disciplines	смежные дисциплины
complications	трудности
confirm a hypothesis	подтвердить гипотезу
conform to	соответствовать
continuous improvements	постоянные улучшения
customer loyalty	доверие потребителя
data-driven	управляемый данными
decision making	принятие решений
deliver results	доставлять результаты
direct access	прямой доступ
dominate business life	доминировать в деловой жизни
embed QM system	внедрить систему УК
employee	работник

ensure	обеспечивать
ensure quality	обеспечить качество
establish the objectives	устанавливать новые цели
excellence	высокое качество
execute the cycle	выполнить цикл
expected output	ожидаемый результат
extend the knowledge	расширить знания
facilitate trade	способствовать развитию торговли
flexibility	гибкость
foundation for innovation	основа для инноваций
gain an advantage over smb	получить преимущество над кем-либо
go forward	двигаться вперед
have the courage	иметь мужество
implement the approach	реализовать подход
implementation	реализация, внедрение
implicit goal	потенциальная цель
independent certification body	независимый сертификационный орган
indication	указание, знак
industrial advancement	развитие промышленности
input / output	входящий поток / выходящий
iterative method	итеративный подход
internal audit	внутренний аудит
key competitive factor	основной конкурентный фактор
lean manufacturing	бережливое производство
management pyramid	пирамида управления
management's commitment	обязательства руководства
mass production	массовое производство

meet customers' needs	соответствовать требованиям потребителей
multiple subtle reasons	множественные неявные причины
non-conformance	несоответствие
nonconforming item	изделие, не удовлетворяющее техническим требованиям
optimize costs	сокращать издержки
outdated	устаревший
outline quality policies	определить политику качества
overall performance	качество в целом
participate actively in a team	активно работать в команде
performance	эффективность, производительность
potential benefits	потенциальные преимущества
prior standard	исходный стандарт
process capability	возможности технологического процесса
process flow	последовательность выполнения производственного процесса
project-driven management	управление, ориентированное на процесс (процессно- ориентированное)
promote	способствовать, продвигать
quality assurance	гарантия качества
quality audit	аудит качества
quality inspection	проверка качества
rate of improvement	уровень улучшения
reliability	надежность
result from	быть результатом
review the quality goals	пересмотреть цели качества

robust methodology	надежный метод
see trends	видеть тенденции
short-term plans	краткосрочные планы
simultaneously	одновременно
specification	технические условия, техническое задание
strive for	стремиться к
take action	действовать
Total Quality Management	общее управление качеством
variability	разнообразие

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### **ENGLISH FOR TQM STUDENTS**

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