

Continuous Education in the field of Standardisation for Sustainable Development

**Professor Galina Pankina,
Research director**

**Center for Technical regulation, Standardization and
Metrology**

**The Higher School of Economics
Moscow**

Sustainable Development Goals and Standardization (I)

- * In 2015, the UN set an ambitious 15-year plan to address some of the most pressing issues faced by the world
- * **Economic, environmental and societal dimensions** of the sustainable development are all directly addressed by ISO standards.
- * Organizations and companies looking to contribute to the SDGs find that International Standards provide effective tools to help them rise to the challenge.



ISO standards

- * **ISO standards** support the three pillars of sustainable development:
 - * **Economic** – by facilitating international trade, improving a country's national quality infrastructure, supporting sustainable business practices.
 - * **Social** – by helping countries and communities to improve the health and well-being of their citizens, covering all aspects of social welfare, from healthcare systems and related products to social inclusion and accessibility.
 - * **Environmental** – by helping businesses and countries manage their environmental impact, covering environmental management systems, measuring and reducing greenhouse gas emissions and energy consumption, and encouraging responsible consumption.

Sustainable Development Goals and Standardization (II)

- * The achievement of **key SDGs** such as:
 - * clean water and sanitation (SDG6)
 - * affordable and clean energy (SDG 7)
 - * decent work and economic growth (SDG8)
 - * industry, innovation and infrastructure (SDG 9)
 - * sustainable cities and communities (SDG11)
 - * responsible consumption and production (SDG12)
 - * and climate action (SDG13)
- * demands clear and wise standards.



Education for standardization and sustainable development education

- * **In Russia**, education for sustainable development has become an important component of various curricula – from technical to humanitarian, from medical to political.
- * **At the Higher School of Economics**, sustainable development related courses are offered to all students and mid-career people looking for the enhancement of their professional skills.
- * **Education for standardization** is not an exclusion: sustainable development related issues are discussed in all training courses devoted to the majority of standards, both national and international.

HSE Experience in standardization

- * 2017 - the establishment of an International research and educational center for technical regulation, standardization and metrology.
- * 20015-2018 - the creation of more than 50 training programs for training and retraining on the standardization of industry professionals.

In 2017-2018 in the Centre more than 300 specialists increased their qualification from the industry.

Most popular ISO standards

- ISO is an independent, non-governmental membership organization and the world's largest developer of voluntary standards.
- * ISO has published **more than 22 000 International standards** covering almost all aspects of our life.
- * Most popular standards include:
 - * **ISO 9000 Quality management**
 - * **ISO 14000 Environmental management**
 - * **ISO 50001 Energy management**
 - * **ISO 37000 Sustainable development of communities**
 - * **ISO 26000 Social responsibility**
 - * **ISO 31000 Risk management**
 - * **ISO 22000 Food safety management**
 - * **ISO 27001 Information security management**
 - * **ISO 45001 Occupational health and safety**

Management system as one of the key instruments of the sustainability

- * A management system is **a set of interrelated or interacting elements** that organizations use to formulate policies and objectives and to establish the processes that are needed to ensure that **policies are followed and objectives are achieved**.
- * These elements include structures, programmes, procedures, practices, plans, rules, roles, responsibilities, relationships, contracts, agreements, documents, records, methods, tools, techniques, technologies, and resources.
- * Management systems can be developed and implemented in any organization; more over, ISO 37000 series addresses communities and their sustainability.

Plan- Do –Check – Act Cycle

Plan:

- * Establish objectives and draft your plans (analyse your organization's current systems, establish overall objectives, set interim targets for review and develop plans to achieve them).

Do

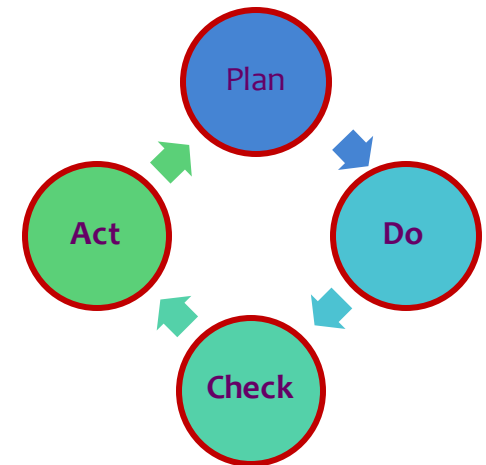
- * Implement your plans

Check

- * Measure and monitor your actual results
- * against your planned objectives

Act

- * Correct and improve your plans to meet and exceed your planned results



Integrated management systems

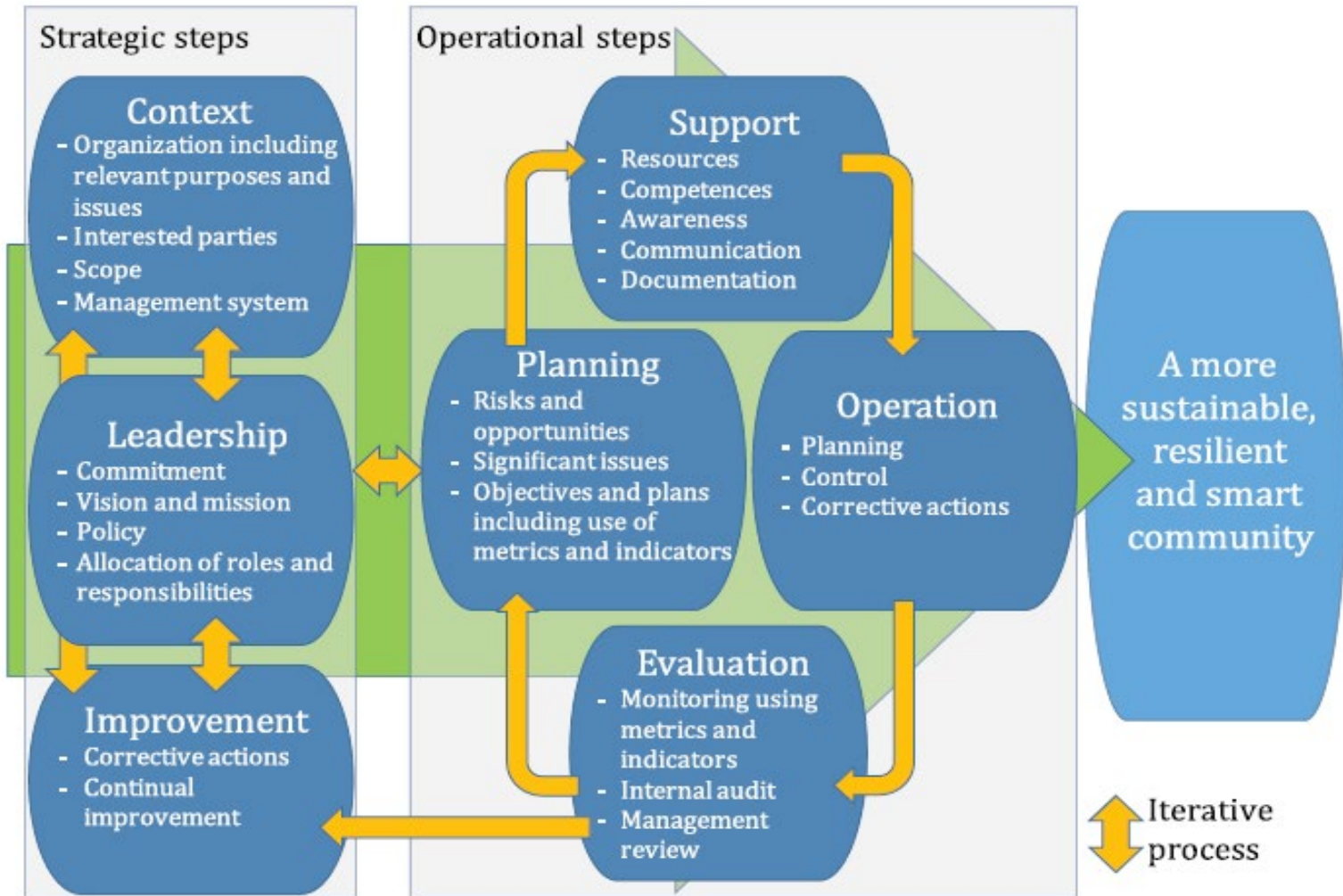
- * An integrated management system (IMS) combines all related components of a business into one system for easier management and operations.
- * **Quality, Environmental, Energy and Safety management systems** are often combined and managed as an IMS.
- * These systems are not separate systems that are later joined together, rather they are integrated with linkages so that similar processes are seamlessly managed and executed without duplication.



Benefits of integrated management systems

- * An IMS allows to:
 - * meet all standard requirements with **one set of policies and procedures**;
 - * audit more than one system at a time to save money and resources (ISO 19011:2011);
 - * improve **overall effectiveness and efficiency** by removing the need to duplicate tasks;
 - * **clearly define roles and responsibilities** and highlight common objectives;
 - * make it **easier to continually improve** all management systems
- * There is no ISO standard on IMS, but there are various PCs.

PDCA cycle in ISO 37101



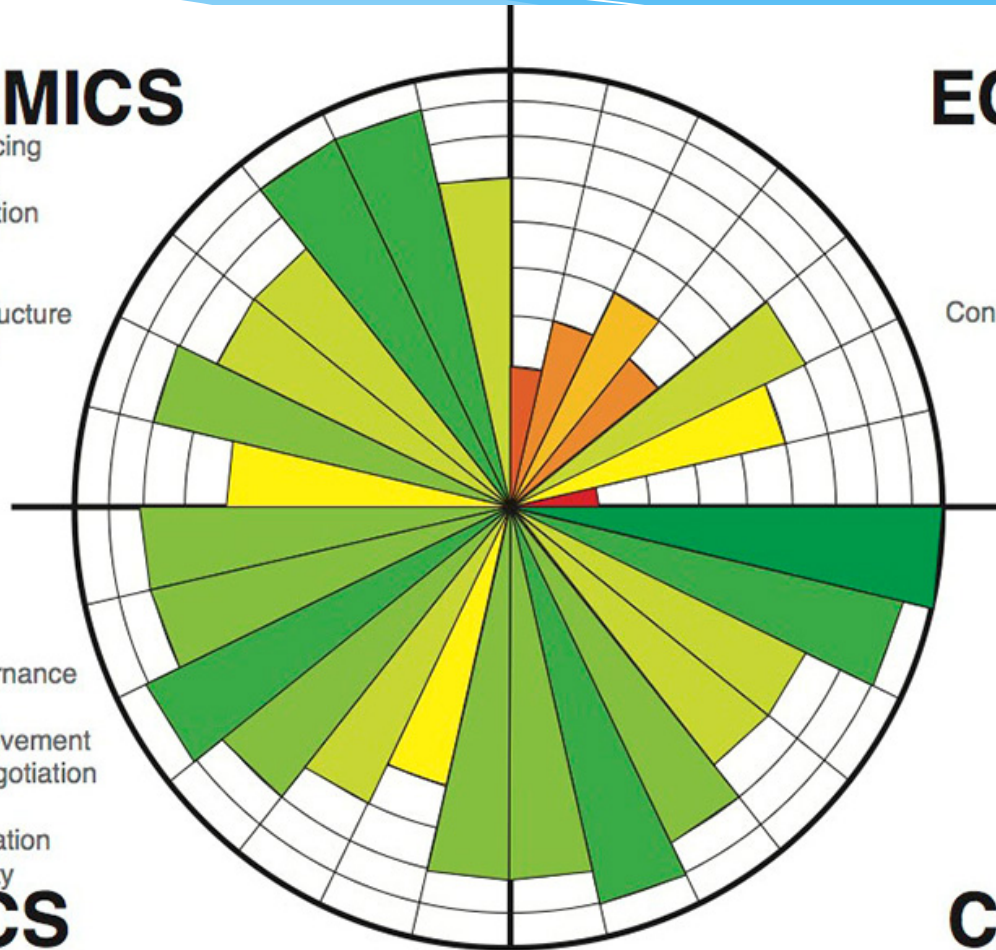
Circles of sustainability: assessment criteria

ECONOMICS

Production & Resourcing
Exchange & Transfer
Accounting & Regulation
Consumption & Use
Labour & Welfare
Technology & Infrastructure
Wealth & Distribution

ECOLOGY

Materials & Energy
Water & Air
Flora & Fauna
Habitat & Food
Place & Space
Constructions & Settlements
Emission & Waste



Organization & Governance
Law & Justice
Communication & Movement
Representation & Negotiation
Security & Accord
Dialogue & Reconciliation
Ethics & Accountability

POLITICS

Engagement & Identity
Recreation & Creativity
Memory & Projection
Belief & Meaning
Gender & Generations
Enquiry & Learning
Health & Wellbeing

CULTURE

Conclusions

- * **Management Systems Standards have been the focus for training various audiences since the 1990s.**
- * **Since 2015, standards are seen as a core element of the education for sustainable development.**
- * **At the Higher School of Economics, standardization training courses are offered to various audiences – from Bachelor level students to the trainees looking for the professional upgrading programmes.**
- * **Training materials are produced and continually improved to introduce practical examples and to cover new standards and approaches.**

Thank you!

Higher School of Economics

Professor Galina Pankina

* gvpankina@hse.ru