## Modular Approach to Supply Chain Management

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## key words

enterprise management, profitability, cost reduction, logistics, resource planning, information interaction The modern market dictates the need for automated supply chain management as the most effective tool for increasing company profits and product competitiveness. Requirements for supply chain security is the main objective of the international standard GOST R ISO 28000–2019.

We have analyzed the features, methods, and stages of building a supply management system to form an effective chain with carefully planned management. They pointed out the important role of information support, which is necessary for high-quality interaction of all participants in the chain — from supply planning to analysis of consumer demand. Having studied the possibilities of modular supply chain management systems, we came to the conclusion about the key advantages of modular solutions.

We believe, the ever-increasing increase in the impact of uncertainty factors on organizations requires the use of risk-based thinking. This is the only way companies will be able to prepare for emergency situations and minimize possible damage. Today there are many standards with recommendations on the use of risk management tools, but ultimately each organization must independently adapt solutions based on the specifics of its activities and ambition.

## References

1. Shcherbakov V.V. [i dr.]. Logistika i upravlenie tsepyami postavok: uchebnik dlya SPO [Logistics and supply chain management], Moscow, Yurait, 2019, 582 P.

2. Antrushin G.M. Standartizatsiya i sertifikatsiya logistiki: uchebnoe posobie [Standardization and certification of logistics], Arkhangel'sk, *Izd-vo Arkhangel'skogo GTU*, 2017, 182 P.

3. Andreeva E.Yu., Pilivanova E.K. Upravlenie integrirovannymi tsepyami postavok na osnove metodologii mezhdistsiplinarnogo modelirovaniya [Management of integrated supply chains based on the methodology of interdisciplinary modeling], *Vestnik RGEU RINKh*, 2017.

4. Bowersox D. J., Closs D. J. Logistika. Integrirovannaya tsep' postavok [Logistics. Integrated supply chain], Moscow, Olimp-biznes, 2017, 640 P.

5. Protsenko O.D., Protsenko I.O. Logistika i upravlenie tsepyami postavok — vzglyad v budushchee. Makroekonomicheskiy aspekt [Logistics and supply chain management. A look into the future. Macroeconomic aspect], Moscow, *Delo RANKhiGS*, 2017, 192 P.

Smirnova E.A. Upravlenie tsepyami postavok: uchebnoe posobie [Supply chain management], St. Petersburg, SPbGUEF, 2016, 120 P.
Dmitriev A.V. Logistika i upravlenie tsepyami postavok: uchebnik dlya akademicheskogo bakalavriata [Logistics and supply chain management], Moscow, Yurait, 2015, 530 P.

8. Anikin B.A. Integrirovannoe planirovanie tsepey postavok: uchebnik dlya bakalavriata i magistratury [Integrated supply chain planning], Moscow, Yurait, 2015, 498 P.

9. Puzanova I.A. Integrirovannoe planirovanie tsepey postavok: uchebnik [Integrated supply chain planning], Moscow, Yurait, 2015, 320 P.

10. GOST R ISO 28000–2019 Specification for supply chain security management systems.

11. GOST R ISO 28001–2019 Supply chain security management systems. Best practices for implementing supply chain security, assessments and security plans. Requirements and guidance for use.

12. GOST R ISO 28002–2019 Supply chain security management systems. Supply chain sustainability. Requirements and guidance for use. 13. GOST R ISO 28003–2019 Supply chain security management systems. Requirements for bodies conducting audit and certification of supply chain security management systems.

14. GOST R ISO 28004-1–2019 Supply chain security management systems. Guidelines for the implementation of ISO 28000. Part 1: General principles.

15. GOST R ISO 28004-2–2019 Supply chain security management systems. Guidelines for the implementation of ISO 28000. Part 2: Guidelines for the implementation of ISO 28000 in seaports of medium and small businesses.

17. GOST R ISO 28004-4–2018 Supply chain security management system. Guidelines for the implementation of ISO 28000.

Part 4: Additional specific guidance for the implementation of ISO 28000 when compliance with ISO 28001 is a management objective. 18. Nikanorov P.A. Obzor sanktsiy i ogranicheniy v sfere standartizatsii, akkreditatsii i sertifikatsii [Review of sanctions and restrictions in the field of standardization, accreditation and certification], *Kontrol' kachestva produktsii*, 2022, no. 5.

<sup>16.</sup> GOST R ISO 28004-3–2018 Supply chain security management system. Guidelines for the implementation of ISO 28000. Part 3: Additional specific guidance for the implementation of ISO 28000 in organizations of medium and small businesses (excluding seaports).