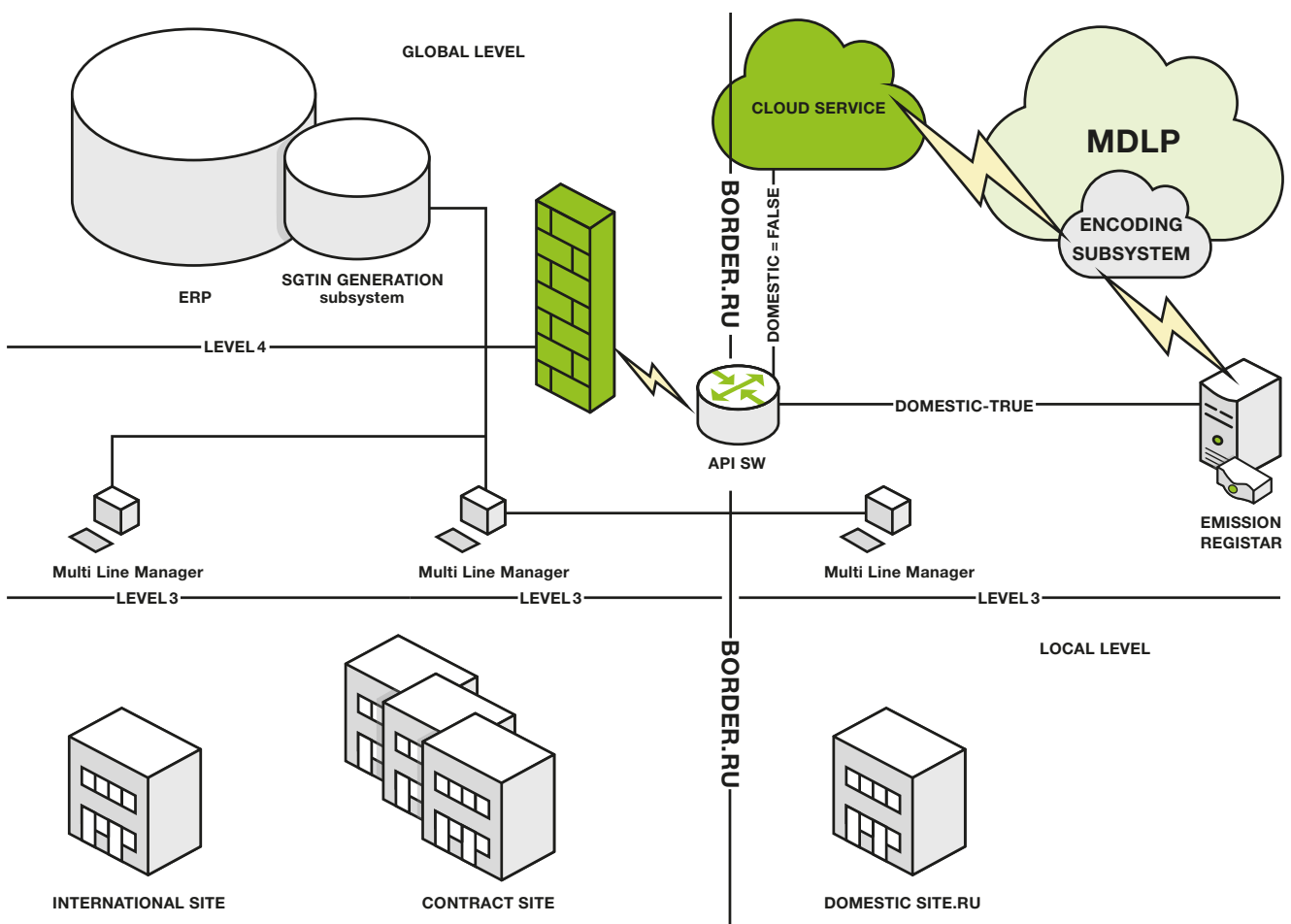


RUSSIA'S CRYPTO CODE

MEET THE NEW SERIALIZATION AND AGGREGATION REQUIREMENTS FOR THE RUSSIAN MARKET

Even if counterfeit medicines only occasionally enter regular drug distribution, they still pose an immense risk to patients. In order to better protect the legal supply chain from this risk, an IT-based protection system is currently being set up in Russia. Government regulation No. 1556 from December 13th 2018 requires pharmaceutical products to be serialised and tracked from manufacturer to consumer. Decree No. 1557 from December 14th 2018 sets the timeline for serialization and ag-

gregation for certain products to the beginning of October 2019 and for all remaining products for the beginning of January 2020. It formalizes the role of the CRPT (Center for Research in Perspective Technologies), as operator of the MDLP (Monitoring of Medical Preparates Movement), or Markirovka. For manufacturers within the Russian Federation, the CRPT provides an emissions register (black box). However, all foreign locations receive a distribution service via the "cloud".



CRYPTO CODE

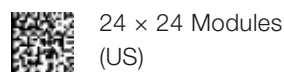
- Signature is created using an asymmetric encryption method based on Russian Cryptographic technologies
- is provided by a closed (sub-) system
- implies the obligatory printing of encrypted information, such as the public key (4 numeric digits), and the Crypto Code Signature (88 alphanumeric characters, which corresponds to 64 bits)
- uses GS1 Application identifier 91 for Crypto Code public key, and AI 92 for Crypto Code Signature
- indubitably verifies the correctness of the identification features, even in offline mode
- Min. DMC size = 40 × 40 modules (total digits = 130) //
Max. DMC size = 44 × 44 modules (total digits = 169)

COMPONENTS OF THE CRYPTO CODE

Data Matrix Code	AI	Format	Requirement
GTIN	1	14 numeric	Obligatory
Serial Number	21	13 alphanumeric	Obligatory
Batch Number	10	20 alphanumeric	Optional
Expiration Date	17	6 Digits: YYMMDD	Optional
Customs Commodity Code	240	4 numeric	Optional
Crypto Code Public Key	91	4 numeric	Obligatory
Crypto Code Signature	92	88 alphanumeric	Obligatory

IMPACT ON CODING AND VERIFICATION

Coding of a GS1 Data Matrix with 44 × 44 modules requires smaller module sizes to fit onto the common layouts:



Implications:

- Higher camera resolution is required for online grading
- Line upgrade or code pre-print might be necessary

YOUR PARTNER – TRAXEED

- offers serialization solutions for the entire pharma production process from a single source
- (incl. consulting, implementation from Level 1 – 5, full validation documentation and support)
- keeps an eye on the pharmaceutical market and offers expert solutions to meet present and future requirements
- has already successfully implemented solutions at several big Russian pharmaceutical companies
- has decades of experience in vision technology, and keeps close contacts with printing technology suppliers, which grants you access to complete Crypto Code inline printing and verification solutions
- offers excellent service management, which allows for easy updating or upgrading of all existing TRAXEED machines when new requirements must be fulfilled.

CONTACT

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Our new systems already meet all requirements!