



KPO TECHNICAL WEBINAR ON STEEL AND METAL MATERIALS WITH THE PARTICIPATION OF THE IMB CENTER

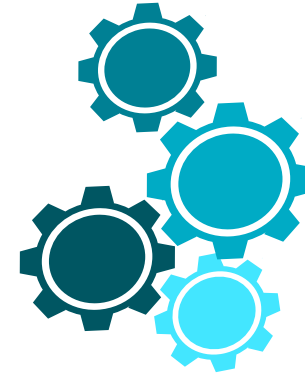
KARACHAGANAK PETROLEUM OPERATING B.V

04/03/2025

DISCLAIMER

The information contained in these slides is made available for consideration. It represents KPO's preliminary description of the company's demands as presently envisaged, but KPO reserves the right to change this information in the course of planning and implementing the projects, and KPO cannot be held responsible for any loss, damage or expense arising from reliance on this information. The information will not form part of any agreement between KPO and contractors participating in the workshop.

Today's engagement is one of many steps which KPO and its stakeholders are taking to develop local content.



1

Steel sections.
Localization perspectives.

1. Short description of the field
2. Introduction
3. Range as per GOST and Eurocode
4. Requirements for structural steel as per GOST
5. Requirements for structural steel as per Eurocode
6. Forecast of consumption of tons per year
7. Main requirements of Company's Specifications.

SHORT DESCRIPTION OF THE FIELD

Karachaganak oil and gas condensate field (KOGCF)

Karachaganak oil and gas condensate field is located in Burlin District, West-Kazakhstan Oblast, near Aksay town. It is a part of the Pre-Caspian oil and gas basin. Discovered in 1979 year. Industrial development started in mid-80s. Currently the field is operated by Karachaganak Petroleum Operating b.v. (KPO b.v.)

Characteristics of the field:

- Reservoir Area — 29×16 km
- Upper boundary of a group of fields is located at 3526 m. Gas oil contact - at 4950 m; oil water contact - at 5150 m.
- The initial reserves of the field consist of 1.35 trillion cubic metres of gas and 1.2 billion tonnes of oil and gas condensate.
- As per information from the Ministry as of 1 January 2024, remaining reserves of oil - 253 million tons, gas – 791.7 billion cubic meters.

INTRODUCTION

For implementation of the projects Karachaganak oil and gas field requires more than 600 tons per year of different types of rolled metal products (beams, channels, angles, sheet metal, reinforcement bars and so on).

According to requirements during designing, rolled metal products shall be selected according to GOST of the Republic of Kazakhstan. For example, beams shall be selected as per GOST 26020-83. During review it is not possible to find a supplier or manufacturer according to GOST 26020-83 on the territory of the Republic of Kazakhstan. Suppliers of rolled metal products which correspond to GOST R 57837-2017 have been found. These products are manufactured in the Russian Federation, but since GOST R57837-2017 is not updated and is not valid in the territory of the Republic of Kazakhstan, its use is impossible.

In turn, lack of rolled metal products results in production losses as KPO is unable to procure the necessary products for implementation of the projects.

Based on the above, the purpose of this presentation is to allow you to find potential suppliers and manufacturers of the required rolled metal products in accordance with GOST requirements, or to organise an alternative supply of materials in accordance with Eurocode requirements.

RANGE AS PER GOST AND EUROCODE

Beam

- ✓ GOST 26020-83
- ✓ BS EN10025:2004



Channel

- ✓ GOST 8240-97
- ✓ BS EN10025:2004



The stated materials



Angles

- ✓ GOST 8509-93
- ✓ BS EN 10025:2004



Hot-rolled steel sheets

- ✓ GOST 19903-2015
- ✓ BS EN10025:2004



Reinforcing bars

- ✓ GOST 34028-2016



Pipe electric weld

- ✓ GOST 10704-91
- ✓ EN 10210-2

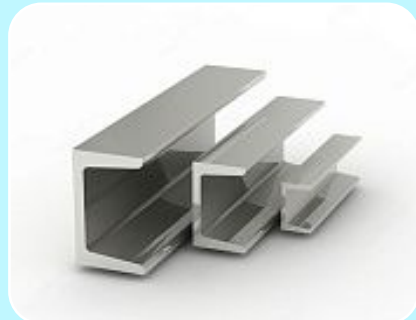


RANGE AS PER GOST AND EUROCODE



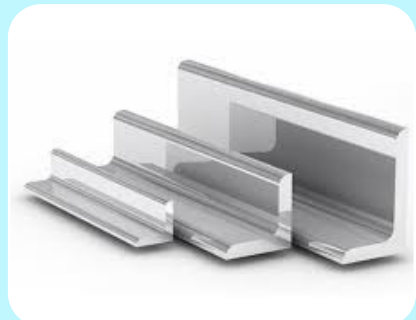
Beam: GOST 26020-83 / Eurocode BS EN 10025:2004

- Steel for rolled metal products should correspond to the requirements for structural steel as per GOST, Eurocode and Company. Metal structures shall be made from structural steel with 345 N/mm² of specified minimum yield strength as per GOST and 355 N/mm² as per Eurocode, suitable to operate under low temperatures (-40 > t > -50). Quality of rolled metal products shall be certified.



Channel: GOST 8240-97 / Eurocode BS EN10025:2004

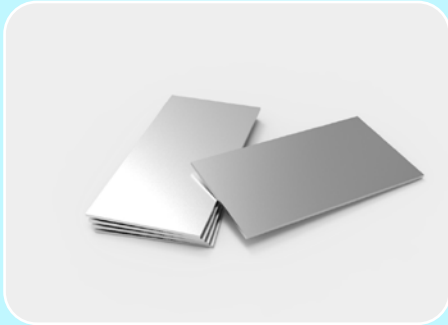
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Angle: GOST 8509-93 / Eurocode BS EN 10025:2004

- Steel for rolled metal products should correspond to the requirements for structural steel as per GOST, Eurocode and Company. Metal structures shall be made from structural steel with 345 N/mm² of specified minimum yield strength as per GOST and 355 N/mm² as per Eurocode, suitable to operate under low temperatures (-40 > t > -50). Quality of rolled metal products shall be certified.

RANGE AS PER GOST AND EUROCODE



Hot-rolled steel sheets: GOST 19903-2015 / Eurocode BS EN10025:2004

- Steel for rolled metal products should correspond to the requirements for structural steel as per GOST, Eurocode and Company. Metal structures shall be made from structural steel with 345 N/mm² of specified minimum yield strength as per GOST and 355 N/mm² as per Eurocode, suitable to operate under low temperatures ($-40 > t > -50$). Quality of rolled metal products shall be certified.



Pipe electric weld: GOST 10704-91 / Eurocode EN 10210-2

- Steel for rolled metal products should correspond to the requirements for structural steel as per GOST, Eurocode and Company. Metal structures shall be made from structural steel with 345 N/mm² of specified minimum yield strength as per GOST and 355 N/mm² as per Eurocode, suitable to operate under low temperatures ($-40 > t > -50$). Quality of rolled metal products shall be certified.



Reinforcing bars: GOST 34028-2016

- Technical specifications shall correspond to A240, A400, A500 classes. The quality of reinforcing bars shall be certified.

REQUIREMENTS FOR STRUCTURAL STEEL AS PER GOST

Metal structures shall be made from structural steel with 345 N/mm² of specified minimum yield strength, suitable to operate under low temperatures.

Steel grades of steel structures according to GOST - steel structures and facilities exposed to outdoor atmospheric temperatures.

- a) All steels shall correspond to C345 grades and higher, suitable for operation under low temperatures. (-40 > t > -50).
- b) All grades shall correspond to requirements of GOST 27772-2021 «Rolled products for structural steel structures. General technical specifications.”
- c) All steels shall undergo U-notch Charpy impact tests in accordance with GOST 9454-78 «Metals. Method of Charpy impact test under reduced, indoor and elevated temperatures”.
- d) Steel of C345 grade and higher shall undergo U-notch Charpy impact test at -40°C temperature. Minimum values of energy are 39 J/cm² with thickness from 4 mm to 10mm, 34 J/cm² with thickness above 10mm.

Structural steel grades according to GOST – Structures and buildings inside heated facility

- a) All steel shall be according to grades C255 and higher, and be suitable for operation at low temperatures ($-20^{\circ} > t > -30^{\circ}$).
- b) All steel shall comply with GOST 27772-2021: “Rolled products for structural steelworks. General specifications”.
- c) All steel shall be subject to impact testing with U-notch concentrator according to GOST 9454-78: “Metals. Impact bending test method at low, room and high temperatures”.
- d) Steel grade C255 and higher shall be subject to Charpy V-notch impact test at a temperature of -20°C . Minimum energy values are at average of 29 J/cm^2 .

REQUIREMENTS FOR STRUCTURAL STEEL AS PER EUROCODE

Steel structures shall be made of structural steel with a minimum yield strength of 355 N/mm², suitable for operation at low temperatures.

Structural steel grades according to Eurocode for open structures and facilities

STRUCTURAL STEEL FOR COLD AMBIENCE (up to -45°C)

Material	Specified grade and standard*	Impact test temperature, Charpy V-notch values	Specific material restrictions	Application condition	Welding
Rolled sections and sheets up to and including 40 mm thick	BS EN 10025-3: S355NL	-45°C, 27J min average 20J min individual	Used material shall be fully deoxidized, not aged or cold worked	All structural elements	Impact test required @-45 °C
Hot rolled profiles and sheets up to 40 mm thick	BS EN 10025: 355EM	-45°C, 27J min average 20J min individual	As specified above	As specified above	As specified above
Handrails, vertical ladders and flooring (not less than 15 mm thick)	S EN 10025-1: S275J2	-20°C, 27J min average 20J min individual		Only for handrails, vertical ladders and flooring	
Nuts and bolts (diameter up to 30 mm)	**BS 3692: Gr 8.8	-45°C, 27J min average 20J min individual		All bolts for structural connections	

EUROCODE REQUIREMENTS FOR STRUCTURAL STEEL

Eurocode grades of structural steel for buildings and structures with heating system

STRUCTURAL STEEL FOR STEEL STRUCTURES INSIDE HEATED BUILDINGS (to -20°C)

Material	Indicated grade and standard*	Impact test temperature, Charpy V-Notch impact test	Specific material constraints	Conditions of use	Welding
Rolled sections and sheets up to and including 40 mm thick	BS EN 10025-1 S275JR or S355JR	-20°C, 27J min average 20J min individual	No	All structural elements	Impact test required @ -20°C

MAIN REQUIREMENTS OF THE COMPANY'S TECHNICAL SPECIFICATIONS

COMPANY'S SPECIFICATIONS

- ✓ **KPO-00-CVS-DTD-00104** – Steelworks details. General Notes.
- ✓ **KPO-00-CVS-SPC-00005** – Steelworks for Structures and Buildings – Materials and Fabrication.
- ✓ **KPO-00-CVS-STD-00001** – Concrete Details. General Notes.
- ✓ **KPO-00-ENG-DTD-00003-ER** – Fencing Details.
- ✓ **KPO-00-CVS-DTD-00095** – Typical Details. Stairs.
- ✓ **KPO-00-CVS-DTD-00096** – Typical Details. Steel Handrails.
- ✓ **KPO-00-CVS-DTD-00097** – Typical Details. Steel Ladders.
- ✓ **KPO-00-CVS-DTD-00098** – Typical Details. Steel Flooring.

ROK AND EUROCODE REQUIREMENTS

- ✓ **GOST 26020-83/BS EN10025:2004** - Hot-rolled steel 1-beam with parallel flange edges. Dimensions
- ✓ **GOST 8240-97/BS EN10025:2004** - Hot-rolled steel channels. Dimensions
- ✓ **GOST 8509-93/BS EN10025:2004** - Hot-rolled steel equal-leg angles. Dimensions
- ✓ **GOST 19903-2015 /BS EN10025:2004** - Hot-rolled steel sheets. Dimensions
- ✓ **GOST 10704-91/EN 10210-2** - Electrically welded steel line-weld tubes. Dimensions
- ✓ **GOST 34028-2016** - Reinforcing rolled products for reinforced concrete constructions. Specifications
- ✓ **ГОСТ 27772-2021** - Rolled products for structural steel constructions. General specifications

ACCOMPANYING DOCUMENTS

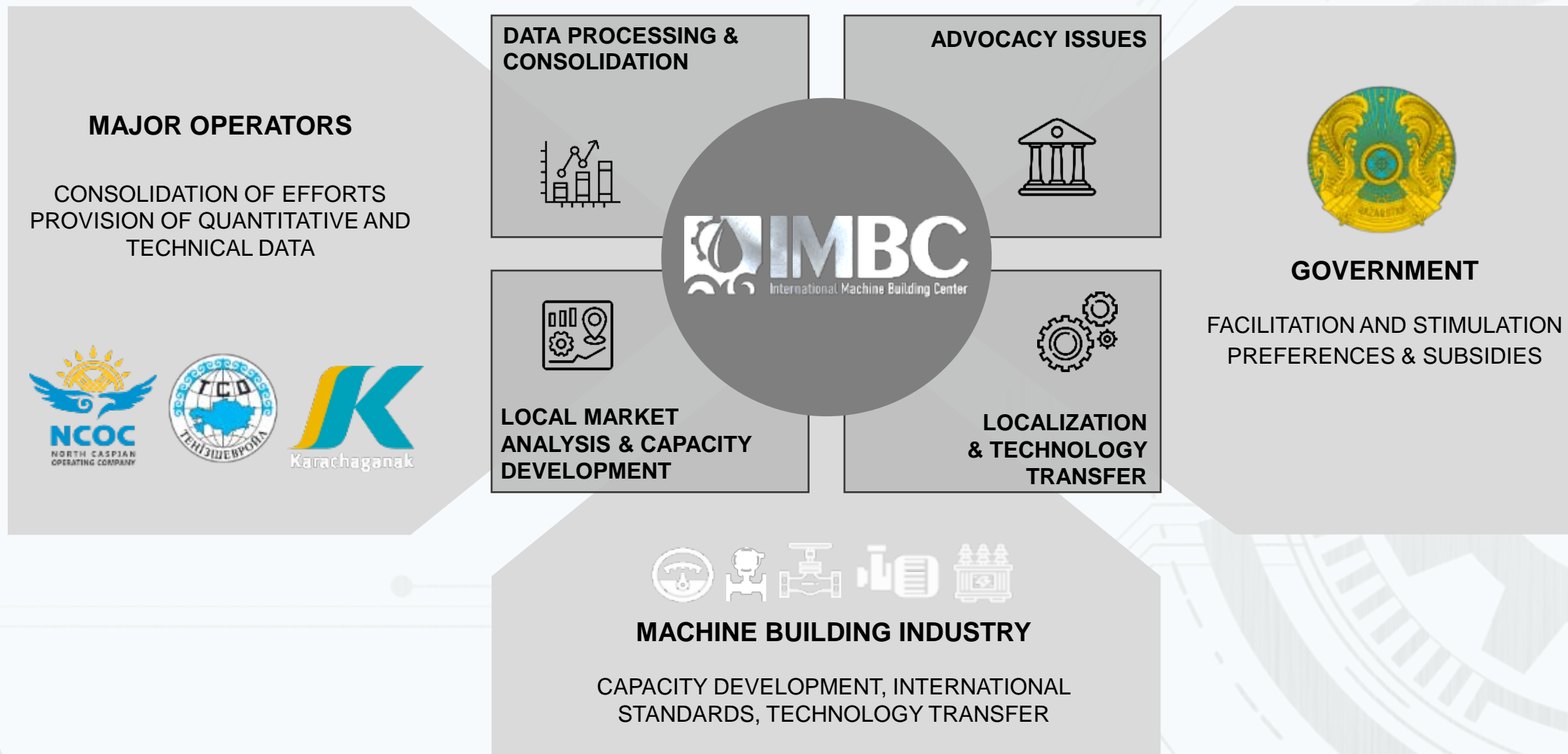
1. Material Specification
2. Product's Certificate of Origin
3. Test Report.



OVERVIEW OF IMB CENTER'S ACTIVITIES

KPO TECHNICAL WEBINAR ON STEEL & METAL MATERIALS





In our analyses of demands and identifying localization priorities, we utilize the FPAL coding system

FPAL Commodity Codes

1.01
Drilling Equipment

1.02
Material and Product Handling Equipment

2.99
Other Products / Equipment and Materials

Commodity Group A

1.09
Electrical Equipment and Materials

1.10
Instrumentation / Process Control Equipment / Materials

2.02
Valves and Accessories

Commodity Group B

1.04
Pumps and Seals

1.11
Process Filters

1.12
HVAC

2.01
Line pipe

Commodity Group C

1.02
Material and Product Handling Equipment

1.07
Heat Exchangers / Heat Transfer Equipment

1.16
Firefighting Equipment

2.07
Chemical / Oils / Paints

2.08
Insulation / Refractory Materials

Commodity Group D

1.03
Compressors / Expanders / Blowers and Accessories





1.05
Drivers and Accessories

2.03
Steel / Metal Materials

2.11
Workshop and Handtools

Procurement in above commodity groups accounts for **over 75% of all procurement of goods** by three Operators **

PROGRESS UNDER COMMODITY GROUPS

	 Commodity Group A	 Commodity Group B	 Commodity Group C	 Commodity Group D
Demands analysis	35 000 items analysed	55 000 items analysed	7 000 items analysed	12 000 items analysed
High demand goods identified	22 types of goods	19 types of goods	27 types of goods	39 types of goods
Market analysis, longlist from available resources	more than 90 manufacturers identified	more than 100 manufacturers identified	more than 80 manufacturers identified	more than 150 manufacturers identified
Site surveys, manufacturers who expressed interest	81 site surveys conducted	73 site surveys conducted	50 site surveys conducted	55 site surveys conducted
Shortlisting, manufacturers producing types of goods with high demands	23 manufacturers shortlisted	16 manufacturers shortlisted	In process	TBC
Summarized Technical Requirements	12 STRs developed	8 STRs developed	In process	TBC
Capacity development	10 CDPs developed	4 CDPs developed	TBC	TBC
Implementation of capacity development	3 recommended manufacturers	2 recommended manufacturers	TBC	TBC
Localization Cases	13 LC cases developed with investors	5 LC cases developed with investors	4 LC cases developed with investors	1 LC cases developed with investors

Recommendations to Operators

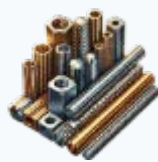
STEEL & METAL MATERIALS



Plates & sheets
 (carbon, stainless steel,
 aluminium, inconel)
24,860
 ea/kg/lg/sh/m2/pc



Grating
1,589 st



Bar alloy, Angle,
 Rods, Channels, Bar
 (hex, flat, bronze)
152,734
 ea/lg/pk/kg/m



Bearings (ball,
 plain, thrust),
 Spares,
 Accessories
46,959 ea/pr/set



V-belts,
 belts
3,261 ea



Fasteners (Anchors,
 anchor bolts, nuts,
 washers, pins,
 screws, bolts)
4,567,818
 ea/set/cs/pk/st



infoimbc@imbc.kz



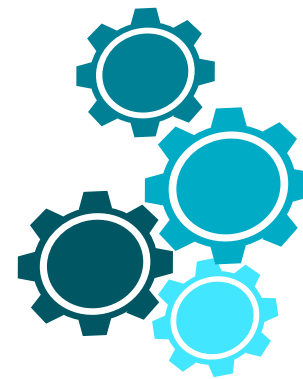
+ 7 (7172) 39-99-66



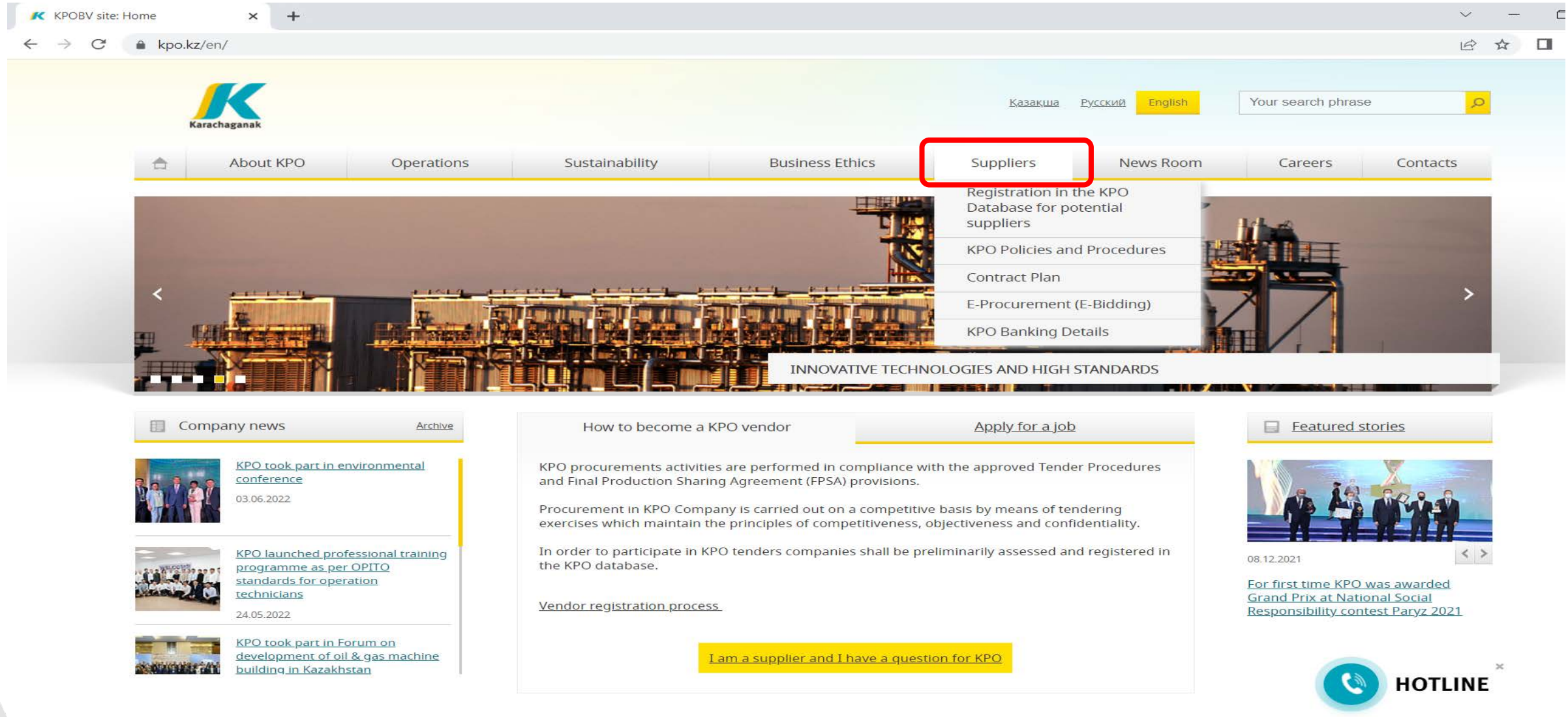
www.imbc.kz

The range and specificity of services for assistance in the development of the potential of manufacturers, offered by IMBC, are limited and are subject to provision on an individual basis, depending on the readiness of the manufacturer to supply their manufactured goods in line with the requirements of the Operators.

Assistance from IMBC does not oblige any retaliatory action from the potential manufacturer. The services of IMBC do not represent a guarantee of the successful participation and / or successful award of Contracts to the manufacturer in the procurement processes of the Operators.



KPO Supplier Database



The screenshot shows the KPO website interface. The top navigation bar includes links for About KPO, Operations, Sustainability, Business Ethics, **Suppliers** (highlighted with a red box), News Room, Careers, and Contacts. A dropdown menu is visible under the Suppliers link, containing the following items:

- Registration in the KPO Database for potential suppliers
- KPO Policies and Procedures
- Contract Plan
- E-Procurement (E-Bidding)
- KPO Banking Details

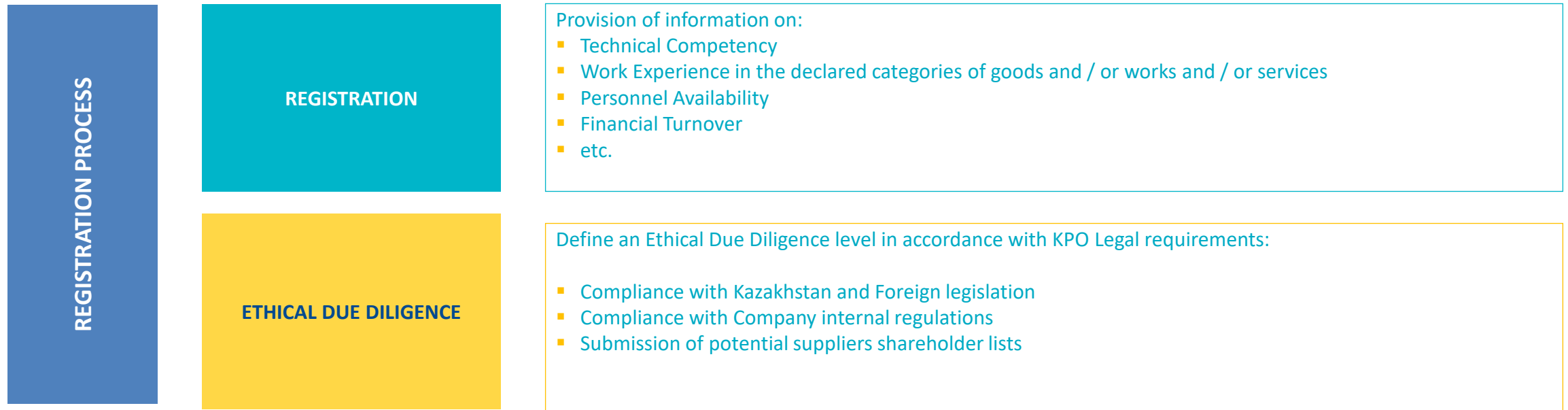
The main banner features an industrial facility with the text "INNOVATIVE TECHNOLOGIES AND HIGH STANDARDS". Below the banner, there are three main sections:

- Company news**: A list of recent news items with dates and brief descriptions.
 - [KPO took part in environmental conference](#) (03.06.2022)
 - [KPO launched professional training programme as per OPITO standards for operation technicians](#) (24.05.2022)
 - [KPO took part in Forum on development of oil & gas machine building in Kazakhstan](#)
- How to become a KPO vendor**: A section detailing the procurement process and vendor registration requirements.
 - How to become a KPO vendor**
 - KPO procurements activities are performed in compliance with the approved Tender Procedures and Final Production Sharing Agreement (FPSA) provisions.
 - Procurement in KPO Company is carried out on a competitive basis by means of tendering exercises which maintain the principles of competitiveness, objectiveness and confidentiality.
 - In order to participate in KPO tenders companies shall be preliminarily assessed and registered in the KPO database.
 - [Vendor registration process](#)
 - [I am a supplier and I have a question for KPO](#)
- Apply for a job**: A section for job applications.
- Featured stories**: A section highlighting recent achievements.
 - [For first time KPO was awarded Grand Prix at National Social Responsibility contest Paryz 2021](#) (08.12.2021)

In the bottom right corner, there is a **HOTLINE** button with a phone icon.

VENDOR REGISTRATION

All potential suppliers shall be registered in KPO Database



Vendor registration in KPO Vendor Database does not guarantee the participation in a tender or contract award, but suggests that a registered company may be considered as a market research participant for provision of goods, works and services for further pre-qualification process or tender as the need arises.

VENDOR REGISTRATION

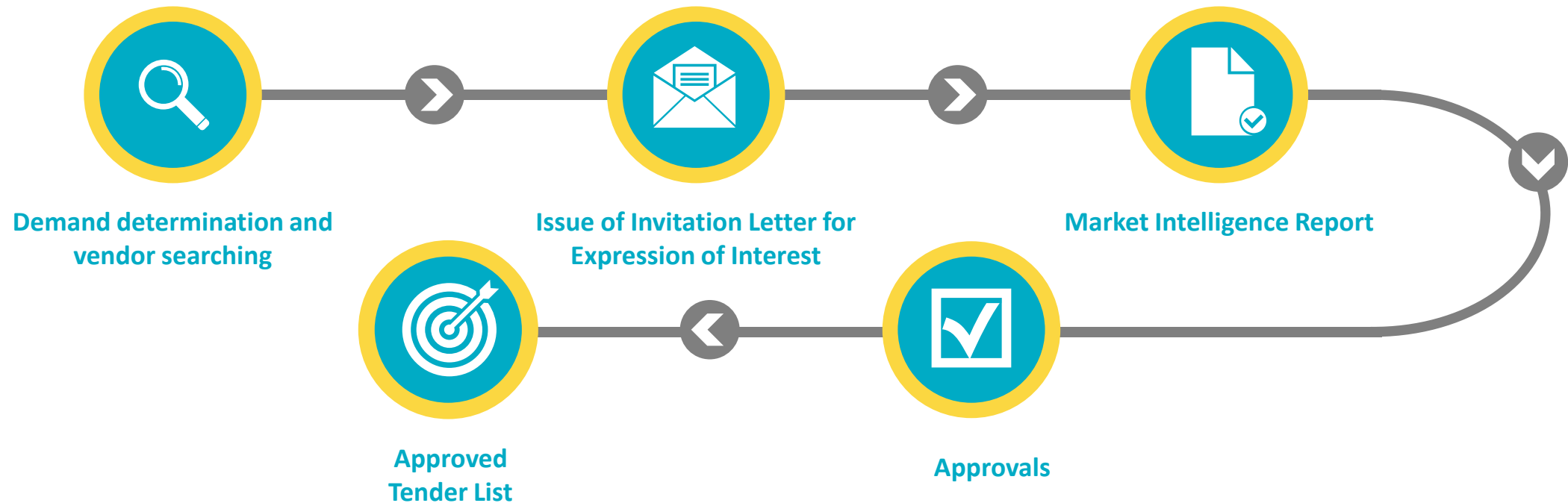
- To register in KPO Vendor Database, potential suppliers shall:
 - Download a questionnaire on KPO website – <https://kpo.kz/ru/postavshchikam/registracija-v-baze-dannykh-postavshchikov-kpo>
 - Fill in the questionnaire for the preliminary vendor assessment and indicate activity codes
 - Attach copies of required documents
 - Submit the completed pack of documents for vendor assessment and registration by e-mail at MIVQ@kpo.kz
 - Contact phone: +7 (711336) ext. 4943, 4946, 2192
- KPO encourages Suppliers to update registration data on an ongoing basis, related to:
 - Work Experience in the declared categories of goods, works, services
 - Certification, accreditation
 - Reorganization
 - Contact persons

MARKET RESEARCH

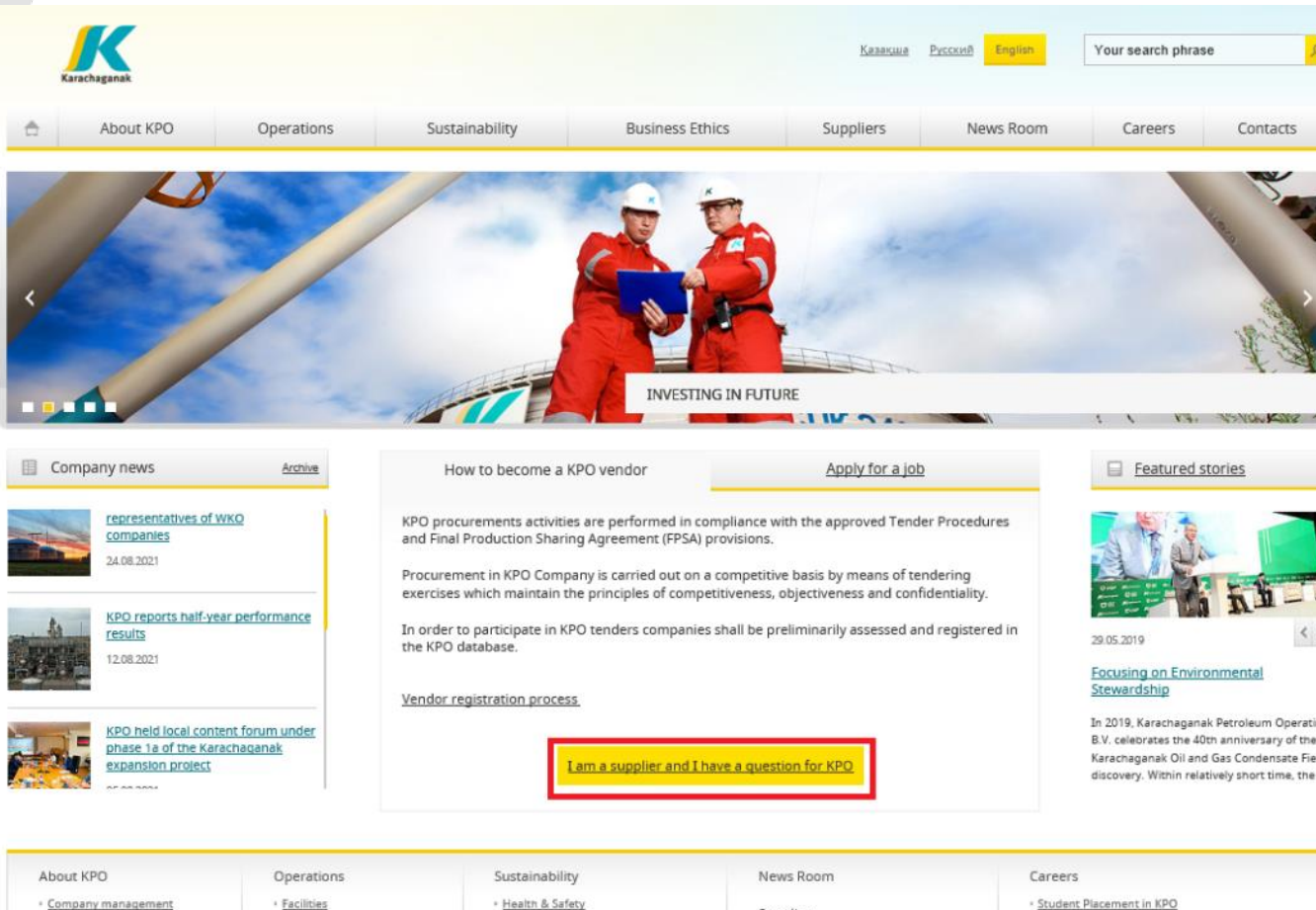
Purpose

- Define potential suppliers of goods, works, services who can perform as per KPO requirements
- Ensure free competition for KPO tenders

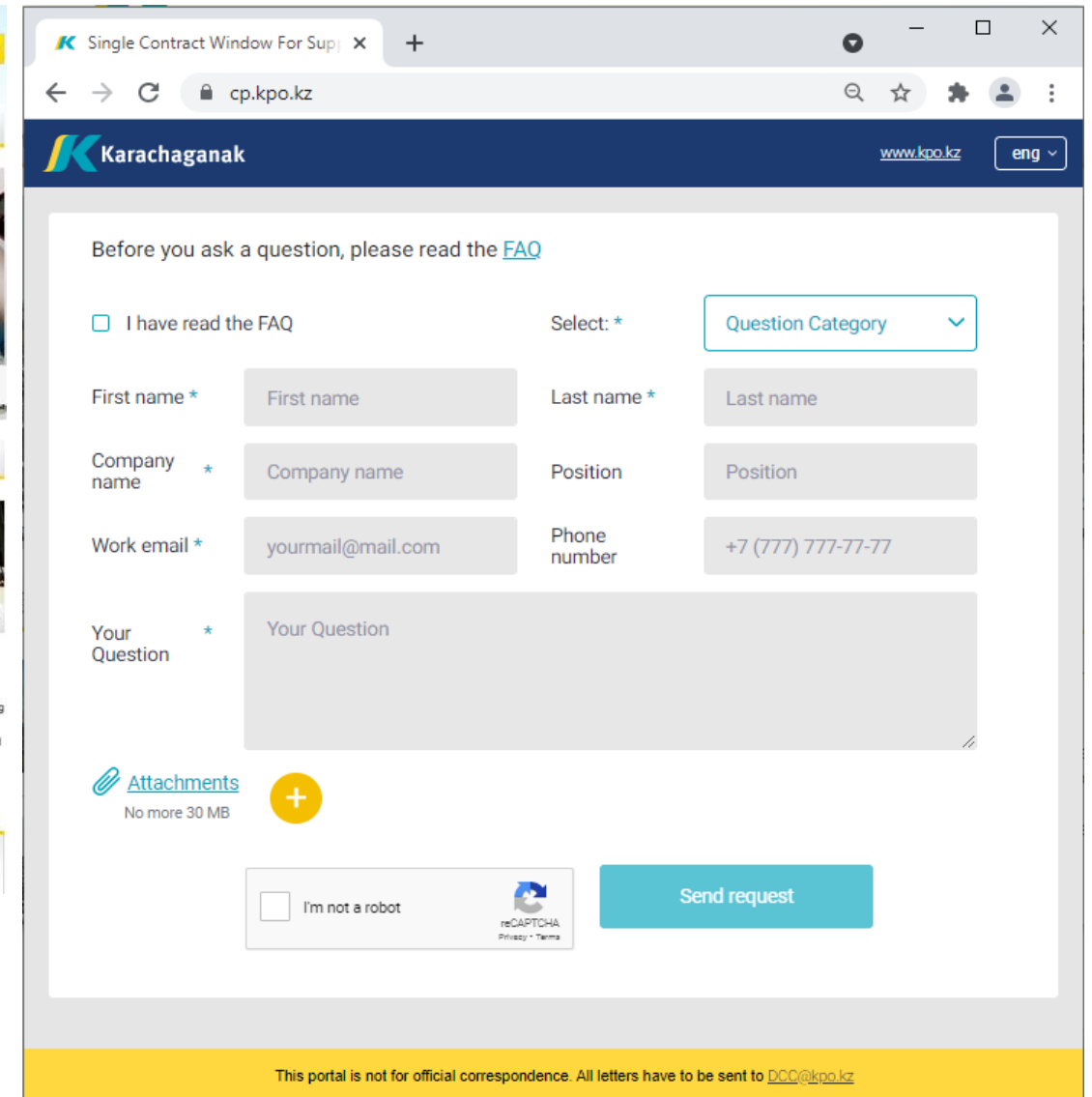
PROCESS



"SINGLE WINDOW" SYSTEM



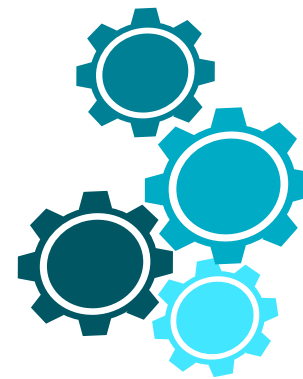
The screenshot shows the Karachaganak website homepage. At the top, there is a navigation bar with the Karachaganak logo, language options (Kazakh, Russian, English), and a search bar. Below the navigation bar is a large banner image of two workers in red uniforms looking at a tablet, with the text "INVESTING IN FUTURE". The main content area is divided into three columns. The left column contains a "Company news" section with three articles. The middle column contains a "How to become a KPO vendor" section with a link to "Apply for a job" and a highlighted button that says "I am a supplier and I have a question for KPO". The right column contains a "Featured stories" section with a link to "Focusing on Environmental Stewardship". At the bottom, there is a footer with links to "About KPO", "Operations", "Sustainability", "News Room", and "Careers".



The screenshot shows the "Single Contract Window For Suppliers" form. The form is titled "Single Contract Window For Suppliers" and has a URL of "cp.kpo.kz". It includes the Karachaganak logo and a language selector set to "eng". The form contains the following fields and sections:

- A message: "Before you ask a question, please read the [FAQ](#)".
- A checkbox: "I have read the FAQ".
- A "Select:" dropdown menu labeled "Question Category".
- Input fields for "First name", "Last name", "Company name", "Position", "Work email", and "Phone number".
- A large text area for "Your Question".
- An "Attachments" section with a plus icon and the text "No more 30 MB".
- A reCAPTCHA checkbox labeled "I'm not a robot".
- A "Send request" button.

At the bottom of the form, there is a disclaimer: "This portal is not for official correspondence. All letters have to be sent to DCC@kpo.kz".

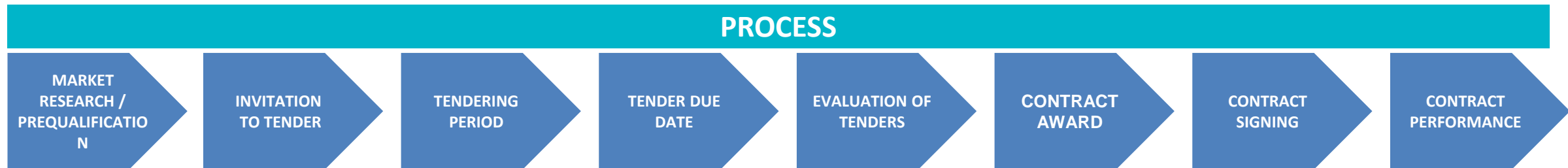


Procurement Process

PROCUREMENT PROCESS

KPO shall perform the procurement activities in accordance with:

- the Final Production Sharing Agreement (confidential and intended only for the use of KPO, its Shareholders and the Republic) and the Joint Operating Committee's Tender Procedures (JOC)
- current legislation
- approved budget and work program



MAXIMUM ATTENTION SHALL BE PAID TO



**TENDER PACKAGES
SUBMISSION
REQUIREMENTS**

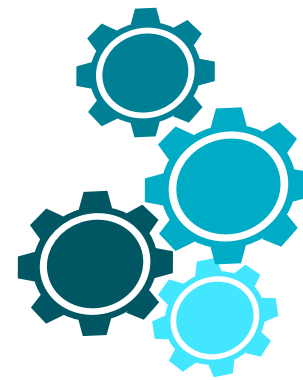
**TENDER PACKAGES
SUBMISSION
REQUIREMENTS THROUGH E-
BIDDING SYSTEM**
([Link to the instructions](#))

**INSTRUCTIONS
TO TENDERERS**

TENDER DUE DATE / TIME

TENDER DOCUMENTATION CONTENTS

1. Cover letter
2. Forms, that shall be mandatorily signed, stamped and provided within timeframe specified:
 - Tender Acknowledgement and Confidentiality Agreement
 - Form of Tender
 - Certificate of Corporate Ownership and Declaration of Compliance
3. A package of documents related directly to the tender subject itself
4. Instructions to Tenderers
 - Form of Contract includes:
 - Form of Agreement
 - Schedule A – General Terms and Conditions
 - Schedule B – Scope of Goods/Services to be Supplied and Specifications
 - Schedule C – Compensation and Payment
 - Schedule D – Health, Safety and Environment (HSE) requirements
 - Schedule E – Special Conditions
 - Schedule F – Statement of Local Content
 - Schedule H – Industrial Relations
 - Questionnaire for Tender Participants
 - List of goods and technical delivery conditions (if applicable)
5. Instructions for preparing a tender proposal:
 - Instructions to Tender Participants
 - Bid marking template



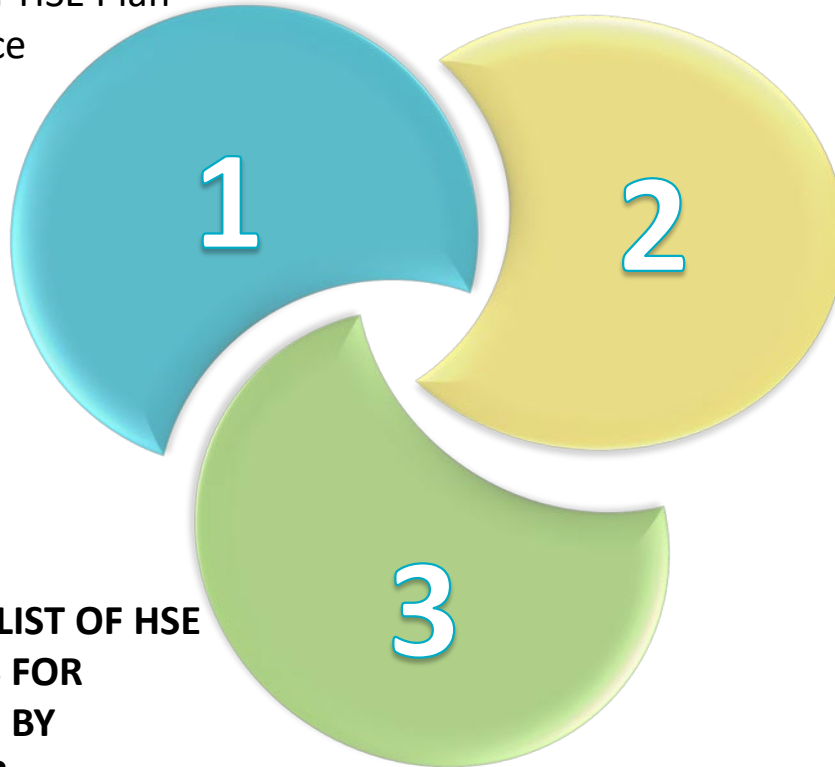
KPO General HSE requirements

KPO GENERAL HSE REQUIREMENTS

1 GENERAL PROVISIONS

- Scope
- Contractor HSE Plan
- Compliance

3 MINIMUM LIST OF HSE PROCEDURES FOR COMPLIANCE BY CONTRACTOR



2 EXECUTION OF THE CONTRACT

- ❖ Leadership and Commitment
- ❖ HSE policy
- ❖ Planning
 - *HSE Legislation*
 - *Risk Management*
- ❖ Support
 - *HSE Personnel*
 - *HSE Competence Requirements*
 - *HSE Training and Induction*
 - *HSE Communications*
 - *HSE Meetings*
 - *HSE Procedures*



KPO FORM	
<input type="checkbox"/> Safety	<input type="checkbox"/> Environment
<input type="checkbox"/> Health	<input type="checkbox"/> Other
Contractor	
Contractor Name	
Date and Time	
Location/Activity	
Contractor Signature	
KPO Representative Signature	
Comments	

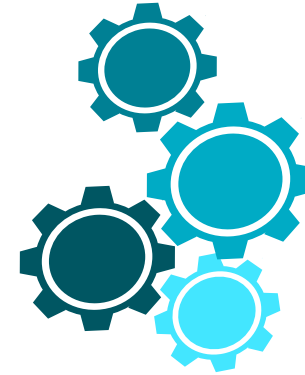
❖ Implementation

- *Equipment Maintenance and Inspection*
- *Occupational Health and Hygiene*
- *Environment*
- *Road Transport Safety*
- *PPE Requirements*
- *Emergency Response Interaction*
- *Subcontractor management*

❖ Control and Monitoring

- *HSE Observations and Reporting*
- *Incident Investigation*
- *HSE Audits and Inspections*
- *Safety Reporting*
- *Environmental Reporting*

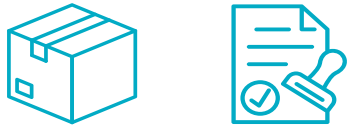




Local Content Mechanisms

SUPPORTING MECHANISMS FOR LOCAL COMPANIES

TRIAL ORDER



Tenders for testing a trial batch of GOODS from Kazakhstani suppliers

EARLY TENDER



Contract is concluded for the supply of GOODS with a suspensive condition or with a long-term delivery schedule

KAZAKH TENDER



Tenders exclusively among Kazakhstani Suppliers. The goal is to award contracts to Kazakhstani suppliers of GWS

CONTRACT IN **EXCHANGE** FOR INVESTMENTS (UNDER REVISION)



A contract in exchange for investment is a long-term contract concluded on a Single source basis, under which the supplier undertakes to produce goods of local origin that are the subject of a procurement contract in the territory of the Republic of Kazakhstan





Thank you!

