NILNOT · NORMATIVE RESEARCH LABORATORY FOR LABOR STANDARDS AND PAY

Labor productivity growth without capital investment

Engineering System of Production and Labor Organization — lower cost of products, works and services

10–30 %

labor productivity growth reserve across projects

1–3 mo.

payback period

NILNOT methodology applied since 2007.

Results of projects developed and accepted by clients.

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Systems developed and accepted by clients · 2026–2024

RESULT: labor productivity growth reserve across projects — 10–30 %

through comprehensive implementation of the Engineering System of Production and Labor Organization: **technical labor standardization — labor standards handbooks (work procedure regulations, labor standards, standard headcount) by division and workplace; elimination of unproductive workplaces; rational production structure with reduction of redundant divisions, management levels and number of managers based on span-of-control standards; combination of trades and extension of service areas; pay for completion of a standardized task; optimal work regime and shift schedule — without capital investment**

CLIENT, YEAR	DEVELOPED
2026 · BI Group construction	**Labor standards handbooks for main types of construction works ▶ regulatory basis for construction cost and worker productivity** main types of works — monolithic, masonry, finishing: time, labor-intensity, output, span-of-control standards; **standard crew headcount** (on-duty, relief, payroll) **with calculation methodology** · calendar duration of operations and optimal work schedule, working time balance · trades and grades per ETKS · work order model and wage calculator
2026 · Aitas Breeders Almaly poultry farming	**Labor standards handbooks for all production divisions and workplaces** labor standards (time, output, service, labor-intensity, span-of-control standards), work procedure regulations; **standard number of workplaces and standard headcount** (on-duty, relief, payroll) **with calculation methodology** · production organization standards, rational production structure and management levels · optimal work regime and shift schedule, working time balance · equipment grouping, repair complexity, maintenance and repair labor intensity · trades, grades and positions per ETKS and KS · tariff pay system, regulations on tariff system and working time accounting · labor accounting
2025 · Akbakai Mining & Processing Plant, AK Altynalmas JSC mining	**Labor standards handbooks by technological process, division and workplace** labor standards (time, output, service, labor-intensity, span-of-control standards); **standard headcount** (on-duty, relief, payroll) **by workplace with calculation methodology** · rational production structure and management levels · optimal work regime and rotation schedule, standard working time balance of rotational staff · equipment grouping, repair complexity, standard maintenance and repair labor intensity · trades per ETKS and KS, combination of trades · tariff terms, pay for a standardized task · labor accounting
2025–2026 · Prima Kus LLP poultry plant, slaughter shop	**Labor standards handbook of the slaughter shop by workplace; vocational training and retraining of workers with grades per ETKS** labor standards (time standards, conveyor line service standards, output standards for manual work, labor-intensity, span-of-control standards), work procedure regulations; **standard headcount** (on-duty, relief, payroll) **by workplace with calculation methodology** (Excel calculation model), draft staffing table · workplace specialization, individual and collective forms of labor organization · rational production structure · optimal work regime and shift schedule, working time balance · tariff grades per ETKS, tariff pay system · labor accounting, summarized working time accounting
2024 · Kyzyl Aray Copper Caravan Resources group, mining	**Labor standards handbooks by division and workplace** labor standards (time, output, service, labor-intensity, span-of-control standards); **standard headcount** (on-duty, relief, payroll) **by workplace with calculation methodology** · rational production structure and management levels · workplace service organization, equipment grouping, repair complexity · optimal work regime and shift schedule · pay for a standardized task · labor accounting
2024 · AAEngineering Group LLP construction and installation works, construction of a mining and processing plant	**Effective pay system and labor standards for workers ▶ labor standards linked to pay — mathematical wage calculation model** time and output standards for main construction and installation works (using ENiR) · work grading per ETKS · tariff terms: minimum tariff rate, tariff rates and salaries, tariff scale, piece rates, Regulation on the tariff pay system · pay systems: time-bonus, piece-rate, progressive piece-rate, time-piece — **mathematical wage calculation models** · labor accounting: Regulation on working time accounting, timesheet and standardized shift task work order models · standard job descriptions for blue-collar trades, standard employment contract with labor standards attached
2024 · Regis-ST Polygraph LLP printing	**Handbook of time standards for production workers with calculation methodology (Excel model)** labor standards (time, output, labor-intensity, service standards) by operation and equipment; **standard headcount** (on-duty, relief, payroll) **by workplace with calculation methodology**, draft staffing table · functional structure, rational organizational management structure, grouping of divisions, span-of-control standards · optimal work regime and shift schedule · personnel classification · Regulation on pay, tariff scale, work grading per ETKS · time-piece pay, wage calculation for workers, standard employment contract · timesheet instruction and model

Systems developed and accepted by clients · 2023–2017

RESULT: labor productivity growth reserve across projects — 10–30 %

through comprehensive implementation of the Engineering System of Production and Labor Organization: **technical labor standardization — labor standards handbooks (work procedure regulations, labor standards, standard headcount) by division and workplace; elimination of unproductive workplaces; rational production structure with reduction of redundant divisions, management levels and number of managers based on span-of-control standards; combination of trades and extension of service areas; pay for completion of a standardized task; optimal work regime and shift schedule — without capital investment**

CLIENT, YEAR	DEVELOPED
2023 · Kazteleradio JSC TV and radio broadcasting	**Headcount standards approved by the Ministry of Labor and Social Protection of the Population of Kazakhstan** labor standards handbook: service standards for telecommunication equipment of satellite and terrestrial networks, span-of-control standards; **standard headcount** (on-duty, relief, payroll) **by function and workplace with calculation methodology** — head office administrative staff and production staff of branches · draft staffing table · rational management structure of head office and branches (incl. production structure) · personnel classification · optimal shift and rotational work regime · tariff pay terms · standard labor cost calculation for the tariff estimate · labor accounting
2023 · Nursultan Nazarbayev International Airport airport operations	**Standard headcount and draft staffing table for all airport services** labor standards (time, service, labor-intensity, span-of-control standards); **standard headcount** (on-duty, relief, payroll) **by workplace with calculation methodology**, draft staffing table · standards: management functions, rational organizational and production structure of services per ICAO standards, grouping of divisions by headcount, span-of-control standards · individual and team forms of labor organization · optimal shift regime, summarized working time accounting with a justified accounting period · personnel classification · equipment grouping · tariff terms: minimum tariff rate, consolidated tariff scale, unified payroll structure · labor accounting
2022 · Green Recycle — KAZ Waste Green Energy municipal solid waste processing	**Labor standards, standard headcount and tariff system** labor standards (time, output, service, labor-intensity, span-of-control standards); **standard headcount** of production and administrative staff **with calculation methodology** · functional division of labor, rational structure, grouping of divisions · optimal work regime · individual and team forms of labor organization, Regulation on the production team · tariff system: minimum tariff rate, tariff scale model, Regulation on pay, Regulation on the tariff and qualification commission · labor accounting · staff training
2019 · A. Kasteyev State Museum of Arts culture	**Labor standards** time standards and **standard headcount with calculation methodology** for 3D modeling of cultural and historical heritage objects
2017 · Batumi Oil Terminal KazTransOil group, oil transshipment	**Labor standards and standard headcount of workers, specialists and managers** labor standards (time, service, span-of-control standards) for workers, specialists and managers; **standard headcount** (on-duty, relief, payroll) **by function with calculation methodology** · rational production structure · equipment grouping, repair complexity · optimal work regime, working time balance · personnel classification, tariff terms · Regulation on labor standardization
2017 · Batumi Sea Port KazTransOil group, sea port	**Labor standards and standard headcount of workers, specialists and managers** labor standards (time, service, span-of-control standards) for workers, specialists and managers; **standard headcount** (on-duty, relief, payroll) **by function with calculation methodology** · rational production structure · equipment grouping, repair complexity · optimal rotation and shift regime · personnel classification, tariff terms

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CLIENT, YEAR	DEVELOPED
2014 · Foliant Publishing House printing	**Labor standards, tariff pay terms and labor cost accounting** labor standards (time, output, service, labor-intensity, span-of-control standards); **standard headcount** (on-duty, relief, payroll) **by workplace with calculation methodology** · rational structure · optimal work regime · personnel classification · tariff terms, pay for a standardized task · labor accounting
2013 · Medicus-Centre LLP distribution of medical products, warehouses in Almaty and Astana	**Labor standards for warehouse staff ▶ labor standards handbook with calculation methodology (mathematical model)** time and output standards for warehouse operations: receiving and placement, order picking (small-wholesale, non-standard, pallet warehouses), replenishment, packing, shipping, barcoding, returns; span-of-control standards; **standard headcount** (on-duty, relief, payroll) **by warehouse section with calculation methodology**, draft staffing table with tariff grades · training in the labor standards calculation methodology
2013 · Eurobakery and Thomis Pastry LLP culinary, confectionery and bakery shops	**Labor standards and tariff pay terms for workers ▶ time standards for dishes and products based on process sheets** process sheets and time standards for dishes (culinary shop), confectionery and bakery products; labor intensity by sales volume; **standard headcount of cooks and shop workers with calculation methodology** · span-of-control standards · tariff pay terms for workers
2010–2014 · KMG Refining and Marketing JSC: Atyrau Refinery, Pavlodar Petrochemical Plant, PetroKazakhstan Oil Products, KMG Onimderi, Akbulak resort oil refining and petroleum product supply, commissioned by Samruk-Kazyna	**Unified regulatory base for refineries, filling stations, tank farms and the group resort; standards in use for over 10 years** labor standards (time, labor-intensity, service standards) for refinery process units, filling stations and tank farms; **standard number of workplaces and standard headcount** of workers and engineering staff (on-duty, relief, payroll) **with calculation methodology** · standard rational production structure: assignment of processes to core and auxiliary production · equipment grouping, repair complexity per PPM · optimal work regime, working time balance · classifier of trades and positions, minimum tariff rate, tariff scale, Regulation on pay · timesheet accounting · specialist training
2011 · Almaty Heating Networks JSC heat supply	**Labor standards and piece-rate pay for repair staff ▶ piece-rate pay based on time standards approved by the client** time, service and span-of-control standards for heating network works (pipeline replacement, earthworks, heat chamber maintenance); **standard headcount with calculation methodology**, working time loss coefficient · team and individual piece rates, piece-work order · recommendations on pay forms and systems
2010 · Helios LLP filling station network	**Rational work and rest regime and labor accounting for filling station staff ▶ optimal shift schedules for 24/7 filling station operation (mathematical model)** time standards for vehicle fueling and cash operations, filling station throughput; **standard headcount of 24/7 filling station staff with calculation methodology** · optimal work and rest regime, intra-shift regime, Regulation on working time and rest time · summarized working time accounting, timesheet instruction and form · alignment of HR and payroll accounting, incl. overtime
2009 · Kazakhstan Pipe Plant LLP polymer pipe production	**Labor standards, standard headcount and tariff pay terms** labor standards (time, output, service, span-of-control standards); **standard headcount with calculation methodology** · rational management structure · tariff pay terms
2009 · Petropavlovsk Building Materials Plant LLP building materials production	**Labor standards and tariff pay terms** labor standards (time, output, service standards) for production workers; **standard headcount with calculation methodology** · tariff pay terms: minimum tariff rate, tariff scale, work grading per ETKS, piece rates
2009 · Eurodor Construction Company LLP road construction	**Tariff pay terms** **tariff pay terms methodology with calculation methodology:** minimum tariff rate, tariff scale, grading of workers' jobs per ETKS and positions per KS, differentiation of rates and salaries by job complexity, Regulation on pay · rational management structure
2008 · Astana International Airport JSC airport operations	**Tariff pay terms** **tariff pay terms methodology with calculation methodology:** minimum tariff rate, grade 1 tariff rate, inter-grade tariff coefficients, differentiation of rates and salaries by job complexity, unified tariff scale for workers, specialists and managers · grading of jobs and positions per ETKS and KS
2007 · Semser JSC security of oil and gas facilities	**Tariff pay terms** **methodology for calculating the minimum wage** of guard staff based on post regime, working conditions and qualification requirements

What the client receives

Labor standards handbook for each division and workplace — labor standards, standard headcount, headcount summary and analysis; **with an Excel calculation methodology** — for independent recalculation by the client's specialists when work volumes, equipment or structure change.

- **work procedure regulations (for managers, specialists and office staff — functional job maps) and labor standards by workplace:** time standards for work operations, standard labor intensity, output standards, service standards for production facilities (equipment, production areas)
- **scientifically and technically justified number of workplaces and standard headcount** (on-duty, relief, payroll) by function and division — based on work procedure regulations and time standards for all personnel categories; for repair staff — also by equipment repair complexity and standard maintenance and repair labor intensity
- **comparative analysis of standard and actual headcount** — deviations for each workplace and their systemic causes

For the organization as a whole

- **Standards of production organization and production personnel management:** division of labor, production structure and layout, span-of-control standards and rational management levels, grouping of facilities and divisions, personnel categories
- **Tariff pay terms and regulations:** on labor standardization, on tariff pay terms, on working time accounting; timesheet and shift task / work order forms
- **Regulatory basis for process sheets and the Planned Preventive Maintenance Regulation:** lists of operations, frequency and labor intensity of maintenance and repairs by type of equipment and work
- written explanations in response to client questions at acceptance — with references to calculations
- **Final report:** summary of standard headcount by staffing table with references to the labor standards handbooks; risks of keeping the current headcount and structure; phased implementation measures

Typical risks and what the client receives

	Typical risks	→	What the client receives
Financial	personnel costs above the standard requirement — higher cost of products (works, services); headcount and payroll “based on actuals”; no separation of standard and above-standard labor costs (IFRS); paying both own staff and contractors for the same types of work; paying for presence on shift rather than for the volume of work completed	→	**Labor productivity growth** through implementation of labor standards, a rational production structure (fewer management levels, no duplication or fragmentation of functions), combination of trades, extension of service areas (incl. multi-machine service), pay for completion of a standardized task, a work regime and optimal shift schedule suited to the nature of work, and an optimal work schedule — without capital investment. **Financial results: lower cost — economic effect in tenge per month and per year**; **working time reserve and the corresponding released headcount** — redistributed to core and auxiliary production without growth in headcount and payroll; **standard technical and economic indicators** (labor productivity, labor intensity of products (works, services), cost per standard hour, labor costs in the cost of sales, incl. under regulated tariffs) — basis for planning and scheduling; labor costs — per labor standards, above-standard costs — period expenses (IFRS); payroll — per standard headcount; standards for budgeting and the tariff estimate (Labor Code of Kazakhstan, Art. 101(6)); own staff or contractor — by labor intensity and economic feasibility.
Organizational	inefficient organization of the production process and labor, irrational staff deployment — loss of working time (unproductive work, unregulated breaks); idle running and downtime of equipment for organizational and technical reasons — underuse of production capacity; uneven workplace load — overtime in peak periods and idle time otherwise; night work without technological necessity — unjustified premium pay; duplication and fragmentation of functions, excessive management levels, managerial positions without their own object of management — redundant and unproductive workplaces, blurred responsibility; repair after failure without a PPM schedule — unplanned downtime, emergency repairs, overtime of repair staff	→	**Engineering base:** equipment classification and grouping regulation — repair complexity, the basis for service standards and maintenance and repair labor intensity; regulatory basis for the Regulation on planned preventive maintenance and servicing of equipment; process sheets and labor organization charts by type of work and equipment (composition and sequence of operations, crew composition) — together with the client’s specialists, the basis for worker training. **Rational work regime:** regulation on the standard shift working time balance; work regime and optimal shift schedules suited to the nature of work; summarized working time accounting with a justified accounting period; night shifts — only where technologically necessary. **Rational structure:** regulation on the production structure (sections, sub-sections, units) within the organizational structure; divisions by function and threshold headcount; span-of-control standards; each function assigned to a single responsible division; a management level — only where it has its own object of management.
Legal and HR	job and trade titles and qualification requirements not matching professional standards, ETKS and KS (Labor Code of Kazakhstan, Art. 101(8)); grades without tariff ranks — pay not linked to job complexity and labor standards; formal job and work instructions — not tied to the workplace and labor standards: scope of work and responsibility not fixed; incomplete workplace descriptions and, as a result, an incomplete list of hazardous and harmful production factors — risk of incorrect certification of production facilities for working conditions and claims by inspection authorities; loss of process knowledge when experienced staff leave — the process is not documented in process sheets	→	**Personnel and working conditions:** trades and positions per ETKS, KS and professional standards; grades linked to tariff ranks; organizational and technological workplace descriptions (scope of work, equipment serviced, raw materials, working conditions) — the basis for job and work instructions detailed per labor standards, and a complete list of hazardous and harmful production factors for certification of facilities and PPE. **Labor accounting:** per-shift work order (standardized task); per-shift accounting and payroll; working time timesheet.

Engineering System of Production and Labor Organization

A set of labor standards, organizational standards and process documents calculated from the enterprise’s technology, equipment and production facilities, with each standard traceable to a process operation and recalculated when production conditions change. For groups of companies and enterprises with branches — a single corporate standard: levers to manage labor productivity, headcount and personnel costs in each organization (branch).

SYSTEM LOGIC

function → production process → process regulation → standard-setting factors → work procedure regulation → workplace →

labor standards (time, output, labor-intensity, service, headcount) → category and grade →

standard number of workplaces and headcount (on-duty, relief, payroll) → production division (section, shop) → pay for results →

per-shift accounting and payroll → **cost**

Economic effect — lower labor costs in the cost of products (works, services) as labor productivity grows faster than the average wage.

System tools

MAIN TOOL

Technical labor standardization

(Labor Code of Kazakhstan, Art. 101) — determining the working time required per unit of output, volume of work or servicing of means of production under specific organizational and technical conditions; **the only scientifically justified method for determining the required headcount and number of workplaces, assessing labor productivity and its growth reserves.**

Principle: labor standards are set on the basis of technology. **One end-to-end methodology for all industries.**

Methods of setting labor standards: analytical-research — direct measurement at workplaces based on study of the technology: time study of typical operations or of the production process as a whole — to determine operating time; working time observation (individual, group, team), of the production process and of equipment use — to determine the structure of shift working time, losses of working time and equipment downtime; **analytical-calculation** — calculation from technology and standard-setting factors using cross-industry and industry labor norms, taking into account the client's organizational and technical production conditions, process and equipment data sheet parameters.

Structure of the time standard: operating time (main and auxiliary) — from workplace study or calculation; preparatory and closing time, workplace servicing time, rest and personal needs — per cross-industry norms.

The work procedure regulation (sequence and duration of operations) and labor standards are the standard for performing work: the basis for measuring and sustaining improvements under lean production and kaizen.

OTHER TOOLS (LINK IN THE SYSTEM LOGIC)

1. **Tariff pay terms and an effective pay system** (category and grade, pay for results)
   grading of jobs per ETKS and KS, minimum tariff rate, tariff scale; time-bonus pay with a standardized task
2. **Improvement of technical and technological production preparation** (process regulation, standard-setting factors)
   breakdown of process regulations to work operations — the basis for work procedure regulations; equipment classification and grouping, repair complexity — the basis for service standards and maintenance and repair labor intensity; where process sheets and a PPM Regulation are missing — the regulatory basis for developing them
3. **Division and cooperation of labor** (function, production process, workplace)
   functional, technological, occupational and qualification division of labor; each function assigned to a single performer; individual and collective forms of labor organization
4. **Combination of trades (positions), extension of service areas and increase in work volume** (labor standards, workplace)
   incl. multi-machine service — where equipment has machine (automatic) running time (Labor Code of Kazakhstan, Art. 111)
5. **Rational production structure** (production division)
   production structure within the organizational structure; grouping of divisions by threshold headcount; span-of-control standards
6. **Rational work regime and working time balance** (standard number of workplaces and headcount)
   optimal shift schedules suited to the nature of work; summarized accounting with a justified accounting period; standard working time balance
7. **Labor accounting** (per-shift accounting and payroll, cost)
   per-shift work order (standardized task), timesheet; integration with 1C, SAP or another accounting system

Procedure, stages and scope of work

Pilot → whole enterprise

At the client's choice — the whole enterprise or in phases, starting from a pilot (a division or branch); for a group of companies — a corporate standard.

Pilot project — one or two divisions; the pilot cost is credited towards the cost of work for the whole enterprise.

Whole enterprise — in phases: core production → auxiliary production → administrative and management staff; each phase is accepted separately.

Timeline and cost — individual: determined by industry specifics and the nature of work — types of production processes (manual, machine-manual, machine, automated, apparatus), type of production, number of shifts, geographic dispersion of facilities, number of trades, positions and workplaces, and the headcount and composition of divisions; stated in the commercial proposal.

I. Development

1. Diagnostics — study and analysis of the current organization of production and labor: technology, equipment use over time (working and idle running, downtime for organizational and technical reasons), use and loss of working time, overtime; structure, labor organization (staff deployment) and pay; duplication and fragmentation of functions, excessive management levels.

2. Labor standards — study of working time at workplaces and calculation of labor standards; labor standards handbook for each division and workplace: work procedure regulations, labor standards, standard headcount; draft staffing table; optimal staff deployment according to the production processes.

3. Standardization — standards of production organization and production personnel management: division of labor, production structure, span-of-control standards, grouping of divisions, personnel categories; Regulation on labor standardization.

4. Pay and labor accounting — tariff system; Regulation on tariff pay terms, Regulation on working time accounting; timesheet and shift task (work order) forms.

Regulatory basis: Labor Code of Kazakhstan — Art. 101 (labor standardization), Art. 107 (pay system), Art. 111 (combination of positions, extension of service area), Art. 71, 73, 75–77, 79 (working time regime, shift work, summarized accounting, night work, overtime, working time accounting); guidelines of the Ministry of Labor and Social Protection of the Population of Kazakhstan (No. 310-p, No. 530-p, No. 375/1-ө); unified cross-industry norms (No. 330). Every standard is justified by calculation — for approval in the procedure set by the Labor Code, inspections and labor disputes.

II. Implementation and support

- testing of labor standards at workplaces, verification and adjustment — together with the client's specialists; **training in the labor standardization methodology during the work** for engineering and technical staff (line managers and specialists) and for labor standards and pay specialists
- approval of standards in the procedure set by the Labor Code of Kazakhstan
- process sheets and labor organization charts — together with the client's specialists
- detailing of job and work instructions according to labor standards
- automation — integration with 1C, SAP or another accounting system together with the client's programmer
- monitoring and revision of standards

Input data from the client (before the site visit): staffing table, organizational structure, regulations on divisions, job and work instructions; process regulations and process sheets, list of equipment with technical specifications, load by shift; equipment data sheets, PPM schedules, repair logs, contracts for works and services with third parties; shift schedules, working time timesheets, absence records.

Phased acceptance with no risk for the client: each next phase starts after acceptance of the previous one; results are presented to the client's management, questions are answered in writing with references to calculations; work is accepted by a signed act, comments within the scope of work are addressed at no extra cost. **If you are interested, we will prepare a commercial proposal with phases, timeline and cost. Client references — www.nilnot.kz**