



Sectoral Human Capital Study II

High-Quality Food Sector

Selected results of the second
edition of the study

Information about the project



The name of the project

Sectoral Human Capital Study II
High-Quality Food Sector,
the 2nd edition of the study*



The purpose of the study

Increasing the knowledge about the demand for competences in the sector. In the 2nd edition of the study, special attention was paid to the future and the challenges faced by the sector in relation to the economic and political situation.



The dates of implementation

the 2nd edition of the study:

March 2022 – January 2023,

including quantitative tests:

September to November 2022

*The 1st edition of the study was carried out between November 2020 – July 2021.

The report from the 1st edition of the study is available at [PARP](#)



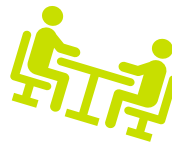
Research methods



desk research



panels
with experts
(n=3)



individual
interviews
(n=20)



workshops
with experts
(n=3)



delphi test
(n=40)



the quantitative
study concerning
employers
(n=804) and
employees (n=828)



summarising
workshops with the
members of the
Competence
Council (n=2)

The situation in the sector

Companies in the sector are doing well, despite the difficulties encountered in the recent years (the Covid-19 pandemic, the war in Ukraine)

79% of the companies in the sector recorded **profit** in 2022, which is an increase of 6 pp in comparison with 2021

45% of the entities introduced improvements in their services, products, or production methods in 2022

Positive changes in the sector

- » increasing health and safety requirements **58%**
- » reducing company maintenance costs **16%**
- » broadening the offer (introducing new products or services) **14%**
- » acquiring new customers, business partners **14%**
- » increasing the number of customers **10%**

Negative changes in the sector

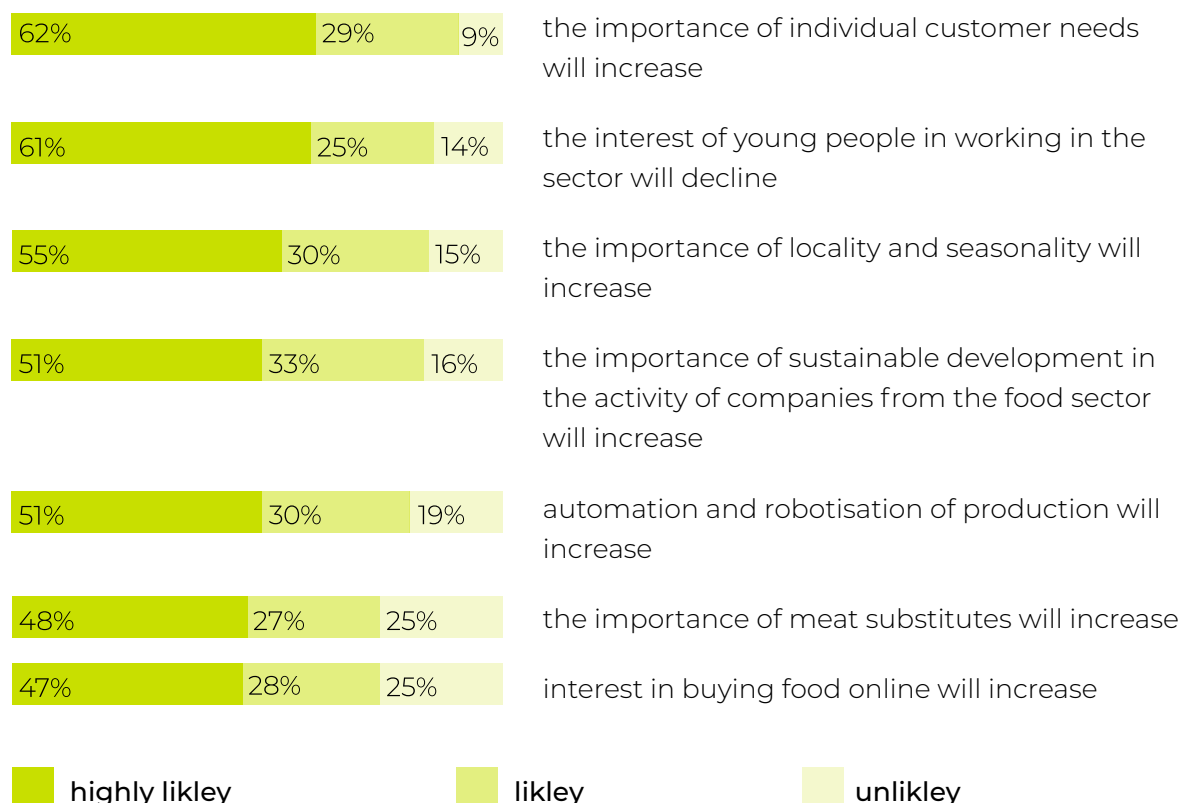
- » increase in companies' operating costs **43%**
- » issues with maintaining liquidity **30%**
- » decrease in the number of orders **29%**
- » decrease in the number of customers **28%**
- » problems with suppliers/recipients **23%**



Trends in the sectors

- ↑ Customisation and variability of customer needs*
- ↑ Declining interest of young people in working in the sector
- ↑ Locality and seasonality
- ↗ Sustainable development
- ↗ Automation and robotisation
- ↗ The growing importance of meat substitutes
- ↗ E-commerce

Changes predicted by employers in the sector in 2023



Source: Own study based on SHCS II HQF employers – the 2nd edition 2022 (n = 804).

*The arrows placed at each trend indicate the possible intensification of the change in relation to the 1st edition.

The future of the sector

Factors determining the development of companies and the entire sector

- » inflation – increase in prices and production costs
- » difficult access to raw materials
- » broken supply chains
- » geopolitical situation (the war in Ukraine)
- » variable fiscal policy
- » changing legal regulations
- » deterioration of the situation of households
- » production automation and robotisation
- » increase in demand for production workers
- » increase in public awareness of health
- » consolidation of food companies
- » increase in public awareness of food waste
- » development of local food producers
- » growing importance of meat substitutes
- » development of cooperation between schools and enterprises

Sector development scenarios

NAVIGATING ON THE STORMY SEA high inflation (rising prices and production costs) + unstable geopolitical situation (the prolonged war in Ukraine)	MISSED OPPORTUNITY high inflation (rising prices and production costs) + stable geopolitical situation (blanking/ending the war in Ukraine)
TIGHT ROOM/WAITING ROOM low inflation (stabilisation of prices and production costs) + unstable geopolitical situation (the prolonged war in Ukraine)	THE GOLDEN AGE/THE GREAT OPPORTUNITY low inflation (stabilisation of prices and production costs) + stable geopolitical situation (blanking /ending the war in Ukraine)





SCENARIO: NAVIGATING ON THE STORMY SEA

The following factors have the greatest impact on the implementation of the scenario

- » difficult access to raw materials
- » broken supply chains
- » deterioration of the financial situation of households
- » increase in demand for food production workers

The following competences are gaining importance

- » management competences: leadership, responsibility, readiness to take on new challenges and manage in times of crisis, change management and planning, resilience to stress
- » skills for work and cooperation in a crisis
- » analytical and learning skills
- » universal competences regardless of a position: the ability to cooperate, cope with stress and communicate

SCENARIO: MISSED OPPORTUNITY

The following factors have the greatest impact on the implementation of the scenario

- » difficult to predict national regulations concerning the food sector, which are a consequence of the EU regulations
- » development of the circular economy and striving for not wasting food
- » variable fiscal policy of the state
- » increase in demand for employees

The following competences are gaining importance

- » ability to acquire new suppliers and innovative technologies necessary for production
- » knowledge of the principles of modern marketing and the ability to implement them at a company
- » knowledge of the law (especially in the field of ESG, law and optimisation)

SCENARIO: TIGHT ROOM/WAITING ROOM

The following factors have the greatest impact on the implementation of the scenario

- » increase in public awareness of not wasting resources and climate protection – resulting, among others, from the national regulations and the EU
- » growing importance of meat substitutes
- » demand for highly skilled food production workers
- » development of cooperation between schools, universities and enterprises

The following competencies are gaining importance

- » ability to cooperate and communicate in the teams of employees
- » ability to acquire new competences and adapt to new challenges
- » ability to build relationships with customers and the social environment of the company, building corporate social responsibility

SCENARIO: THE GOLDEN AGE/THE GREAT OPPORTUNITY

The following factors have the greatest impact on the implementation of the scenario

- » progressive consolidation (cooperation) of food production companies
- » development of local food producers

The following competences are gaining importance

- » cooperation skills
- » willingness to engage in activities for the common good that bring long-term benefits to individual companies
- » fluency in foreign languages
- » ability to manage culturally diverse teams
- » strategic planning skills





Employment in the sector

Employment at key positions

- » Buyer/Purchasing officer **62%**
- » Production team leader **53%**
- » Logistics specialist **38%**
- » Quality controller **37%**
- » Process technologist/Process engineer **33%**
- » Quality specialist **29%**
- » Automation technician **27%**
- » Product development specialist **23%**
- » Quality assessment representative/manager **22%**
- » Maintenance manager **22%**
- » Product development manager **20%**

28% of companies were looking for new employees between October 2021 and October 2022*

Almost 60% of companies looking for employees **have recruitment problems****

The most common reasons for difficulties

- » little interest in the offer
- » the offer does not meet the expectations of candidates – salary or the nature of work
- » candidates do not meet the expectations of the employer – the lack of appropriate experience or qualifications

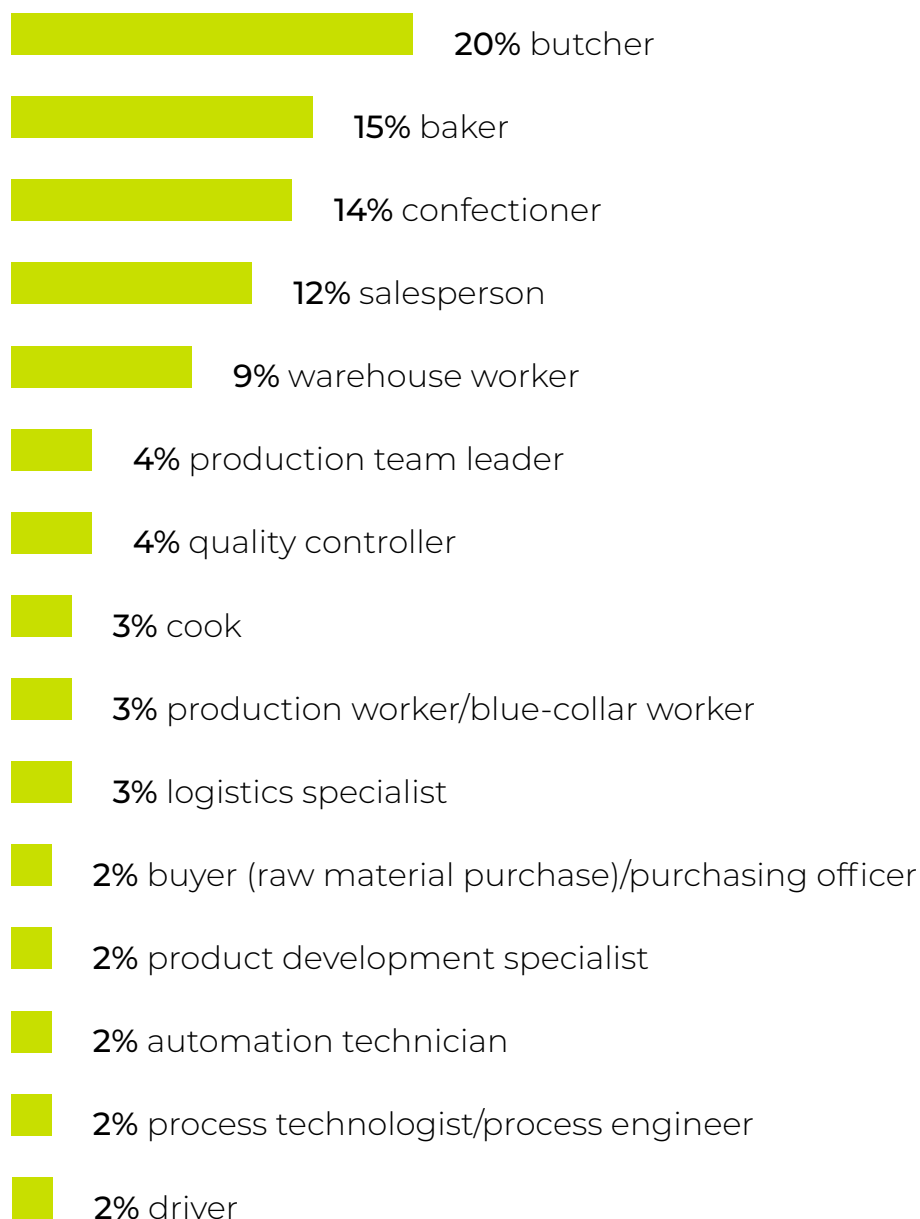
*Source: Own study based on SHSC II HQF employers – the 2nd edition 2022 (n = 804).

**Source: Own study based on SHSC II HQF employers – the 2nd edition 2022 (n = 234).

The most often sought employees in the sector

The most frequently sought employees represent traditional professions: the butcher, baker, pastry chef

The most often sought employees in 2022





Employment of foreigners

22% of companies in the food sector, at the end of 2022, **employed foreigners**, more often medium-sized and large companies

Foreigners most often work at the following positions

- » production worker **25%**
- » warehouse worker **24%**
- » salesperson **20%**
- » butcher **17%**
- » baker **16%**

Nearly 15% of employers plan to hire or increase the employment of foreigners in the next 3 years

The future of employment

The expected level of employment in most companies of the sector will not change in the next 3 years

- » employment growth is forecast only by **7% of employers**
- » no major redundancies are planned (job reduction planned by 5% of employers)

84% of employers believe that in the next three years, there will be no new positions (those that have not been present in the company so far)

New positions

Employers anticipating the emergence of new positions in the next 3 years indicate the following ones

- » Internet, online sales and promotion specialist **39%**
- » machine operator **14%**
- » machine operator **12%**
- » salesperson **12%**
- » social media specialist **9%**
- » production worker **8%**
- » infobroker **6%**

Employers who are considering employment at specialist positions in the next 12 months indicated the following ones

- » energy manager **31%**
- » account manager **30%**
- » optimisation specialist **30%**
- » sustainable development specialist **29%**
- » innovation specialist **20%**
- » IT professional **18%**
- » packaging specialist **18%**
- » IT systems designer/business and system analyst **14%**
- » recycling specialist **13%**
- » digital marketing and/or e-commerce specialist **12%**
- » data analyst, business intelligence specialist **7%**



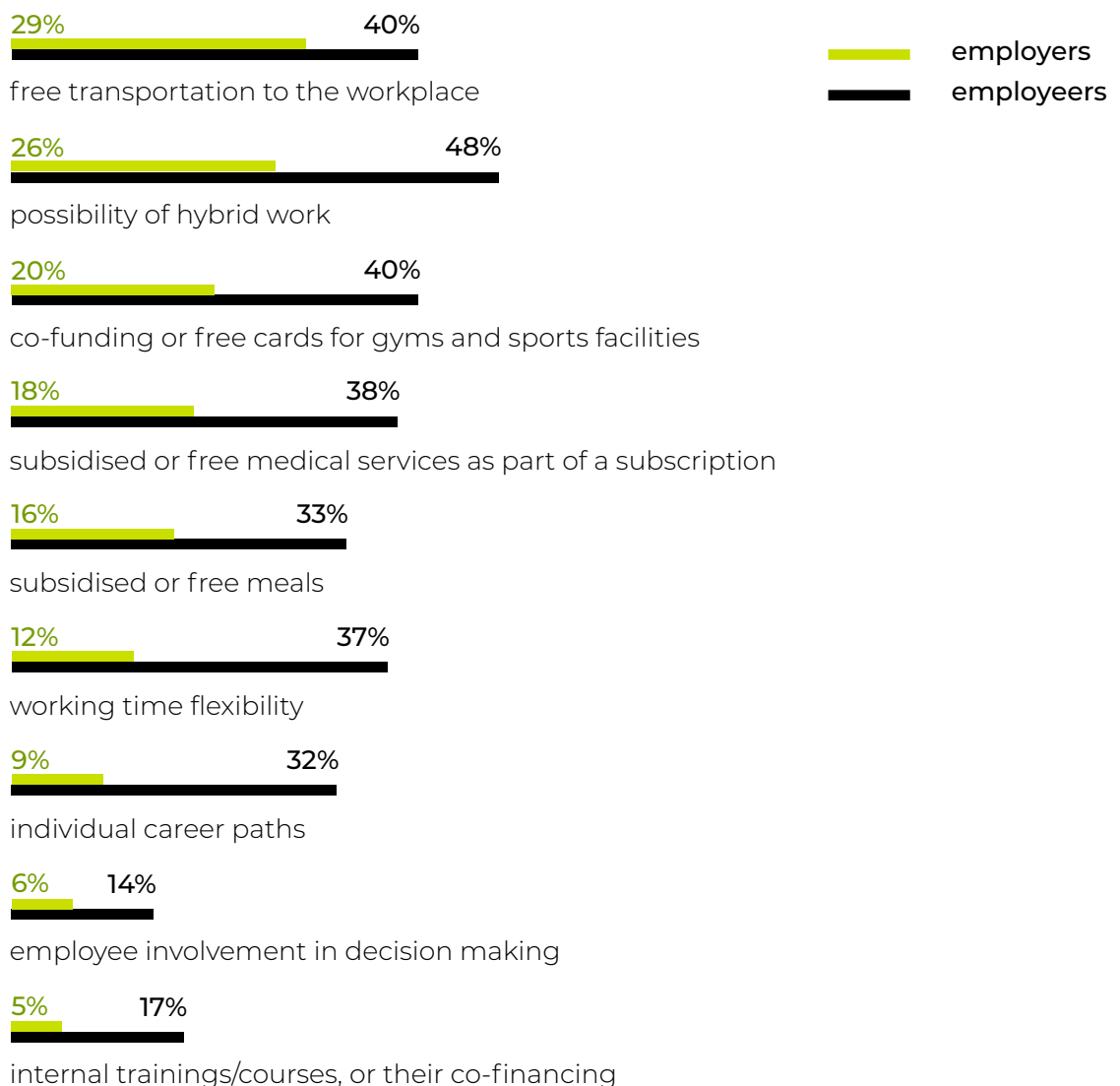
Motivating employees

The highest rated way to motivate employees, in addition to the basic salary, are bonuses



89% of employees find bonuses attractive,
79% of employers implement them

The ways of motivating employees used by employers and their attractiveness to employees



Source: Own study based on SHCS II HQF employers (n = 804) and employees (n = 828) – the 2nd edition 2022.

Assessment of employees' competences

Nearly **60%** of employers declare assessing employees in terms of their competences

Almost a quarter of employers conduct such assessment systematically

40% of employers do not do it at all

Employers positively assess the skills of their staff

51% of employers believe that the skills of the majority of employees are fully satisfactory

36% assess the skills of employees as satisfactory, but in certain areas requiring development

Every tenth employer believes that the skills of the majority of employees are insufficient and require improvement

In case of the lack of the necessary competences in the company, **employers primarily use the resources they already have: they train employees or reorganise teams**

81% the growth rate of companies in the sector

81 out of 100 employers offered their employees at least one form of competence development in 2022



Forms of development

60% of employees employed in key positions benefited from any form of development in 2022

The most commonly used forms of development from the perspective of employers and employees	Employers	Employees
Instructions regarding, for example, the operation of new equipment, machines, software	45%	24%
Courses and internal trainings conducted by the company's employees (not including health and safety and fire protection)	35%	24%
Job rotation – the planned transfer of an employee to another position for training purposes	31%	9%
Direct observation of another employee's work (the so-called <i>job shadowing</i>) – periodically following the selected person at work, observing tasks and how to perform them at a given position	30%	14%

Source: Own study based on SHCS II HQF employers (n = 804) and employees (n = 828) – the 2nd edition 2022..

Business – education cooperation

The development of cooperation between entrepreneurs, educational institutions and schools is of strategic importance due to a difficult situation with attracting employees to the sector, as well as decreasing young people's interest in working in the sector

83% of the surveyed companies do not cooperate with any school, university, teacher training institution, or another educational institution

17% of the companies that cooperate, most often have relations with the first-cycle vocational schools

For employers, it is the most essential that schools prepare students in the following aspects

- » basic practical skills related to the profession
- » specialist skills
- » advanced skills, including the ability to use the latest production technologies
- » software





Balance of competences

The aim of the balance sheet was to look at key competences at individual positions from the perspective of employers and employees. The compilation of these assessments should help to balance the labour market in terms of the supply of employees with the appropriate competences and the demand for them on the part of employers

Employers referred to competences in the following terms

- » validity of a competence
- » difficulty with finding a person who has a specific competence
- » forecast for changes in the meaning of this competence over the next three years
- » defining hot skills competences – competences, the importance of which is growing rapidly, or will be growing soon

Employees rated **their own level of competence** and **willingness to develop them**

The surveyed employees would primarily like to improve

- » knowledge of foreign languages (most positions)
- » the ability to prepare new prototypes products (43% of development specialists products)
- » knowledge of the principles of operating research equipment (34% quality controller)
- » focus on achieving goals (33% of managers maintenance)

Balance of competences

Most hard-to-reach competences are identified at the following positions



buyer (as many as 85% of competences are identified by employers as difficult to obtain)



production team leader (79% of competencies)



process technologist (70% of competences)

Over the next 3 years, the importance of competences at the following positions will increase



quality controller (77% of such competences)



maintenance manager (70%)



process technologist (70%)



buyer (66%)

The position of a **controller** has the highest number of hot skills, i.e. competences, the importance of which is already rapidly increasing or is about to increase (54% of competences).





QUALITY CONTROLLER

Hard-to-reach competences and hot skills in employers' assessment

- » ability to identify inconsistencies with the assumed standards
- » ability to interpret research results
- » knowledge of the methods of testing samples of material and the ability to analyse the results
- » knowledge of the health and safety requirements of the testing laboratory
- » knowledge of the requirements and principles of creating quality management system documentation – procedures, instructions, forms
- » knowledge of the principles of operating research equipment

Employees would like to develop in the first place

- » knowledge of the principles of operating research equipment
 - » ability to interpret research results
 - » knowledge of the methods of testing samples of material and the ability to analyse the results
 - » ability to report to decision makers non-compliances found during audits
 - » ability to identify non-compliances with the assumed standards
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QUALITY SYSTEM REPRESENTATIVE/QUALITY TEAM LEADER

Hard-to-reach competences and hot skills in employers' assessment

- » ability to create and update procedures, instructions, quality system forms
- » knowledge of the functioning of the audit bodies and organisations
- » knowledge of the rules and procedures for conducting internal and external audits
- » ability to adjust quality systems and standards to the company's strategy

Employees would like to develop in the first place

- » knowledge of quality management standards and quality management systems (e.g. IFS, ISO, HACCP, BRC, Global GAP, FSSC)
 - » ability to identify business consequences for the company resulting from the non-compliance with quality and safety standards
 - » ability to adjust quality systems and standards to the company's strategy
 - » knowledge of English (at least B2 level)
 - » knowledge of MS Office package
 - » knowledge of sensory assessment and laboratory testing methods
-





PRODUCT DEVELOPMENT MANAGER

Hard-to-reach competences and hot skills in employers' assessment

- » knowledge of software for the analysis of sector and consumer trends (e.g. SPSS, R, SAS, Statistica)

Employees would like to develop in the first place

- » knowledge of English (at least B2 level)
- » knowledge of methodologies and techniques supporting creative thinking and the search for new ideas
- » goal-orientation
- » creativity
- » project management skills



BUYER (PURCHASE OF RAW MATERIAL) /PURCHASER OF RAW MATERIAL

Hard-to-reach competences and hot skills in employers' assessment

- » ability to identify customer needs, market and consumer trends
- » knowledge of the supply market
- » knowledge of how to source raw material with better quality parameters

Employees would like to develop in the first place

- » knowledge of a foreign language in addition to English (at least B2 level)
- » knowledge of English (at least B2 level)
- » resistance to stress



Hard-to-reach competences and hot skills in employers' assessment

- » resistance to stress and work dynamics
- » ability to delegate tasks adequately to employees' skills
- » ability to plan and supervise the processes of technical inspection, overhauls and maintenance of machines
- » ability to solve technical problems
- » ability to create instructions for the safe operation of machines and devices

Employees would like to develop in the first place

- » goal-orientation
 - » ability to optimise machine maintenance costs
 - » knowledge of all production processes, machines, technologies
 - » knowledge of manufacturers' market, suppliers of machinery and service companies
 - » resistance to stress and work dynamics
 - » knowledge of the basic tools helpful in solving problems and streamlining processes – e.g. Lean Manufacturing tools (5S, TPM, Kaizen, SiX Sigma)
-





PROCESS TECHNOLOGIST/PROCESS ENGINEER

Hard-to-reach competences and hot skills in employers' assessment

- » ability to assess the costs of proposed solutions
- » knowledge of systems and tools for monitoring the course of production processes (e.g. OEE indicator)

Employees would like to develop in the first place

- » knowledge of tools for troubleshooting and streamlining processes – e.g. Lean Manufacturing (5S, TPM, Kaizen, SiX Sigma)
- » knowledge of English (at least B2 level)
- » knowledge of programs used in production management (e.g. ERP, SAP, CMMS)



QUALITY SPECIALIST

Hard-to-reach competences and hot skills in employers' assessment

- » ability to prepare and present inspection and audit reports
- » knowledge of food technology

Employees would like to develop in the first place

- » knowledge of English (at least B2 level)
- » ability to create and update procedures, instructions, quality management forms
- » knowledge of food technology



AUTOMATION TECHNICIAN

Hard-to-reach competences and hot skills in employers' assessment

- » knowledge of machine construction, machine suppliers
- » knowledge of programs used in production management (e.g. ERP, SAP, CMMS)
- » ability to diagnose and analyse the cause of hardware problems, as well as propose solutions

Employees would like to develop in the first place

- » knowledge of English (at least B2 level)
- » knowledge of machine construction, machine suppliers
- » machine programming skills
- » knowledge of tools for troubleshooting and streamlining processes – e.g. Lean Manufacturing (5S, TPM, Kaizen, SiX Sigma)



PRODUCT DEVELOPMENT SPECIALIST

Hard-to-reach competences and hot skills in employers' assessment

- » ability to develop recipes for new products

Employees would like to develop in the first place

- » ability to prepare prototypes of new products
- » ability to develop recipes for new products
- » ability to specify the required raw materials, packaging





PRODUCTION TEAM LEADER/SUPERVISOR

Hard-to-reach competences and hot skills in employers' assessment

- » ability to control the course of production processes

Employees would like to develop in the first place

- » resistance to stress and work dynamics
- » ability to solve production problems
- » knowledge of tools for troubleshooting and streamlining processes – e.g. Lean Manufacturing (5S, TPM, Kaizen, SiX Sigma)
- » knowledge of English (at least B2 level)



LOGISTICS SPECIALIST /PLANNING AND LOGISTICS SPECIALIST

Hard-to-reach competences and hot skills in employers' assessment

- » ability to optimise supply costs

Employees would like to develop in the first place

- » resistance to stress and work dynamics
- » ability to solve production problems
- » knowledge of problem-solving and process improvement tools – e.g. Lean Manufacturing (5S, TPM, Kaizen, SiX Sigma)
- » knowledge of English (at least B2 level)

For the full discussion of the
research findings, see the
following Report:

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Report on the 2nd edition of the
research:



<https://www.parp.gov.pl/index.php/component/publications/publication/1697>