

## Action plan

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Name of the organization which is the subject of the inspection **Centrum dopravního výzkumu, v. v. i. (The transport research centre)**

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## 1 Basic information about Centrum dopravního výzkumu, v. v. i.

**Centrum dopravního výzkumu, v. v. i.** (The transport research centre, hereinafter referred to as “CDV”) is a public research institution established pursuant to Act 341/2005 Coll., on public research institutions, and the only research organization sharing the competence of the Ministry of Transport. By a decision of the Minister of Transport dated 1 January 1993, CDV was established as the legal successor of Czech branches of the institute known at that time as the Výzkumný ústav dopravný (the Transport Research Institute) with its seat in Žilina. CDV follows on the activity that began in 1954, and, therefore, has more than 60 years of tradition.

The CDV mission is:

- to conduct research and development activities in the area of transport,
- to provide professionally independent expert and service support for ministries (especially to ministries of transport, interior and environment), regional, city and municipal state administration and self-governing bodies when making strategic and tactical decisions,
- to support and be a tool of the knowledge transfer to commercial entities with the aim to enhance their competitiveness both on a domestic and European scale,
- to represent the transport industry in international organizations, and to be active in the field of education.

With these objectives in mind, the institution employs researchers who help meet the given objectives.

A long-term effort aims to recruit and educate other experts in the field of transport so that CDV continues to function as a specific organization that covers the key needs of transport development in the Czech Republic at the national, regional and local levels. CDV deals with classic fields such as road safety, construction technologies, maintenance, repair and reconstruction of the transport infrastructure, including geotechnical aspects and diagnostics of transport structures, impacts of transport and infrastructure on the environment, but it also focuses on transport economics,

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multimodal transport, transport psychology, education related to transport, transport demand modelling processes, management systems, geographic information systems, servicing and parking systems, telematics control systems, etc.

The research at CDV is divided into three divisions:

Division of Sustainable Transport and Diagnostics of Transport Structures:

- Transport infrastructure
- Transport and environment
- Transport infrastructure laboratory
- Environmental laboratory

Division of Traffic Engineering Safety and Strategy:

- Autonomous management
- Security assessment and strategies
- In-depth analysis of traffic accidents
- Traffic surveys and road design
- Geoinformatics
- Traffic sign laboratory
- Traffic accident laboratory

Division of Transport Technologies and Human Factor:

- Traffic psychology
- Traffic behaviour analysis and traffic modelling
- Road transport and intelligent transport systems
- Cross-sectional problems in transport
- Psychological laboratory

CDV has been involved in the European research space since its establishment. As one of the first organizations in the Czech Republic CDV participated in the project under the 4th framework programme of the EU - that was back in the 1990s, when the Czech Republic had only just begun to consider joining the EU. Subsequently, this cooperation continued. CDV has become part of a number of international organizations involved in transport research which has led to an increase in the number of European projects. Our involvement in projects and other programmes and participation in

international commissions and committees significantly contributes to our knowledge in the field of transport and represents key activities necessary for the involvement of the Czech transport research and the transport sector at international levels.

Employees overview:

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| Number of researchers and technicians working on the basis of an employment contract as of 1/ 11/ 2020 | 140 |
| Number of women from the total number of employees as of 1/ 11/ 2020                                   | 80  |
| Total number of employees working on the basis of an employment contract as of 1/ 11/ 2020             | 191 |

## 2 Strengths & weaknesses

Following the GAP analysis, the strengths and weaknesses have been arranged into the following four chapters:

1. ethical and professional aspects,
2. recruitment and selection of employees,
3. working conditions,
4. training and development.

|   | <b>Strengths &amp; weaknesses</b>   |
|---|---|
| <p>Ethical and professional aspects</p> | <p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>• CDV approves and implements "Long-term conceptual development for 2018 - 2022". The purpose of this document is to use a stimulating and measurable method able to define ambitious but realistic and time-specific basic directions of CDV in relation to strategic documents of the Czech Republic and to the requirements of the Ministry of Transport, as the founder of CDV, and the estimated financing.</li> <li>• As of 1/ 2/ 2019 the 2nd edition of the Code of Ethics, which was updated on the basis of the Government Resolution No. 1005 dated 17 August 2005 on the draft Research Ethics Framework, which was imposed on founders of research organizations and ČAV and allowed them to recommend to these organizations to develop or update their own code of ethics.<br/><br/>The Code of Ethics deals with ethical principles of research. The ethics committee was elected on the basis of this code. It is composed of one chairwoman and four CDV members and became effective on 1/ 9/ 2020/ The Commission gives priority to issues that go beyond the standards of the existing legislation dealing with general and professional ethics in a public research institution.</li> <li>• With effect from 4/ 9/ 2020, the Ten Communication Commandments of CDV was created, which is used as the guide to communicate with employees, customers, suppliers and third parties, it is a part of the code of ethics, and it is also separately available at the company Intranet.</li> </ul> |

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|  | <ul style="list-style-type: none"><li>• The protection of intellectual property is defined in the document called Intellectual Property Management, which is effective since 1/ 11/ 2020 and it is one of the governing documents of CDV. The subject is the actual definition of the concept of intellectual property within CDV environment and the determination of rights and obligations related to the creation, notification, registration, protection, use and commercial utilization of intellectual property rights.</li><li>• CDV has been utilizing a quality management system for research and other professional activities in accordance with ISO 9001 for more than ten years. The system is seen as a tool for systematic monitoring, evaluation and improvement of the quality of project solutions and processes across the institution.</li><li>• Part of the organizational structure of CDV is the Grant Office and Technology Transfer Department, whose activities include the presentation of CDV activity and service portfolio, establishment of cooperation with customers (commercial contractors, parties interested in CDV intellectual property) and protection, management and commercialization of research results for profit.</li><li>• CDV regularly participates in national and international calls (TAČR, MPO, H2020, etc.) and receives satisfactory results and evaluations.</li><li>• Research results achieved by researches are available to the public at the CDV website under the References tab.</li></ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"><li>• Annual evaluation interviews follow a uniform system for all, which however is not optimal due to the wide range of job positions in CDV and does not include particular specifics and differences.</li><li>• Duplications in research projects are not always avoided.</li><li>• The topic of freedom in terms of the choice of research type and research methods is not addressed in any basic CDV document.</li><li>• The work of researchers is insufficiently shared and disseminated across CDV. Awareness works at the level of individual areas or divisions, but it does not overlap or overreach into other areas and divisions. At present, there is no</li></ul> |
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|  | communication channel where horizontal communication between ordinary researchers takes place. |
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Work  
conditions

**Strengths:**

- CDV creates suitable work conditions for workers who have families or want to increase their expertise by attending universities. CDV offers a wide range of part-time jobs, home-office opportunities, flexible work hours (fixed work hours from 10:00 - 14:00), and the option to use a suburban summer camp for their children.
- Support for the education of researchers - professional training, internships abroad.
- Researchers may choose people from among themselves and elect them to be the members on the Institutional Council in line with Act No. 341/2005 Coll.
- CDV strives to treat men and women equally and creates work conditions suitable for both genders so that they can intertwine work activities, family life, childcare and career development in a meaningful way.
- The employer offers a number of benefits (5 weeks of holiday leave, subsidized meals in the cafeteria/canteen, the so-called social fund, employee events)

**Weaknesses:**

- CDV does not have any established rules that would govern appointment of people to senior positions.
- Managers are not always properly trained to lead teams.
- The basic CDV documents are too extensive and difficult to navigate.
- Health and safety training lacks practical exercises and specific demonstrations.
- The goals and visions of the institution are not mentioned frequently enough and are not sufficiently known to all employees.

## Training and development

### Strengths:

- Principles determining the guaranteed wage in line with the applicable wage regulations have been established together with career levels. Job positions not explicitly listed in the job classification sheet are placed under the relevant career level based on the achieved education, job classification and responsibilities.
- Employees have their job duties and their superiors who oversee their professional development (each employee has a personal development plan on the company Intranet which allows the superior to see what education process the relevant employees are involved in).
- Every employee, regardless of whether they have a fixed-term or indefinite contract, is allowed to continue with his or her training and education.
- Employees have the opportunity to increase their qualification through doctoral studies - a wide range of part-time jobs, option to work from home - home-office, option to take study leave, flexible work hours (fixed work hours 10:00 - 14:00), etc.

### Weaknesses:

- CDV does not have any official and accessible mentoring process.
- Trainings do not really follow the annual evaluation interviews.
- Often there is a lack of feedback from training participants and the available information is not sufficiently shared between other colleagues.
- English (or other) courses that employees are interested in are not organized by the employer.

## Recruitment and selection

- The process of recruiting and selecting new employees is governed by the Rules of Procedure effective from 1/ 3/ 2020, by the document called Long-Term Conceptual Development for 2018 - 2022 and also by the Labour Code No. 206/2006 Coll.
- Requirements on new employees are based on the above-mentioned long-term conceptual development of the research organization, on the current need to secure job positions, work plans of the institution and on the requirements of the division director or department director.
- Recruitment ads are displayed on CDV website and on recruitment servers.

### **Strengths:**

- The recruitment process is carried out systematically and each recruitment interview is attended by an HR specialist as an impartial person. The selection of potential employees is governed not only by the professional knowledge the candidate has demonstrated, but also by his or her personal prerequisites (the interview also includes a personality test).
- CDV has a clearly defined organizational structure with individual management positions, which is accessible to all employees.
- Available jobs are regularly updated on the CDV website and the advertising method follows a uniform style.
- Employees are offered a motivational reward for introducing a suitable candidate.
- The selection of employees is subject to anti-discrimination policy and it is governed by the Labour Code No 262/2006 Coll., Section 16, 17.

### **Weaknesses:**

- There is a lack of cooperation with universities and there is no information available to graduates about the possibility to work for CDV.
- CDV has no recruitment videos that may be used, for example, at job fairs.
- There is a lack of coherent information for newly hired employees available in the form of an information video or brochure.

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|  | <ul style="list-style-type: none"><li>• The employee's entry form and adaptation plan are not available in electronic form.</li></ul> <p>The adaptation process does not offer any uniform material from which new employees could draw information about daily events in CDV - employees get all information from their managers or colleagues.</p> |
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### 3 Type of activity

| Number | Description of problem solution       | Objectives  | Solution of particular task  | Topical chapter in GAP analysis | Responsible team or department   | Time implementation          |
|--------|---------------------------------------|---|--|---------------------------------|--|------------------------------|
| 1      | Education of employees                | Training plan following evaluation interviews.  | Creating a complete training plan for all employees.   | Training and development        | HR Award team, Personnel Department                                      | January 2021 - June 2021     |
|        |                                       | More detailed records of training for employees and feedback from completed training. | Introduction of detailed feedback on the implemented trainings followed by possible recommendations for other employees.                           | Training and development        | HR Award team, Personnel Department                                      | January 2021 - June 2021     |
|        |                                       | Language courses.   | Implementation of language courses for relevant positions within the organizational structure or for employees involved in international projects. | Training and development        | HR Award team, Personnel Department                                      | January 2021 - December 2022 |
| 2      | Professional guidance for researchers | Introduction of the mentoring process.  | Creation of internal mentoring group.  | Training and development        | HR Award team, research and development department, Personnel Department | January 2021 - May 2021      |
|        |                                       |   | Defining professional support for young researchers.   | Training and development        | HR Award team, Research and Development Department, Personnel Department | January 2021 - December 2022 |

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| 3 | <b>Duplications in research</b> | <b>Improving communication and raising awareness of project proposals across all relevant divisions.</b> | Regular introduction of upcoming project proposals to all research areas.   | Ethical and professional aspects | Research and Development Department                       | January 2021 - December 2022 |
|   |                                 | <b>Informative module in the new Intranet about charters and upcoming projects.</b>                      | Creation of a new module in the Intranet - charters / upcoming projects.  | Ethical and professional aspects | Research and Development Department, IT Department        | January 2022 - December 2022 |
|   |                                 | <b>Prevention of duplications in research.</b>   | Providing information about already implemented projects.   | Ethical and professional aspects | Research and Development Department                       | January 2021 - December 2022 |
|   |                                 | <b>Available information about research freedom at CDV</b>   | Publishing information about the freedom in research at CDV, which shall be easily accessible.  | Ethical and professional aspects | HR Award team, Research and Development Department        | January 2021 - December 2021 |
|   |                                 | <b>Reinstatement of the activities of the ethics committee</b>   | Regular meetings of the ethics committee.   | Ethical and professional aspects | Personnel Department, Research and Development Department | January 2021 - December 2022 |
| 4 | <b>OHS Training</b>             | <b>Practical demonstration and practical training focusing on occupational safety</b>                    | Introduction of the practical part of OHS training, real demonstrations carried out in CDV buildings including regular fire emergency training. | Work conditions                  | Human Resources Department                                | March 2021 – August 2021     |
|   |                                 | <b>First aid courses focusing on traffic accidents</b>   | Organization of first aid courses and practising proper conduct during a simulated traffic accident with the help of researchers.               | Work conditions                  | Personnel Department, selected researchers                | March 2021 – August 2021     |

|   |                             |  |  |                 |   |                              |
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| 5 | <b>Sharing work results</b> | <b>Increased awareness of employees about activities conducted at CDV.</b>   | Creation and introduction of Intranet bulletin board.  | Work conditions | HR Award team, Personnel Department, Marketing Department                 | January 2021 - December 2021 |
|   |                             | <b>Increased awareness of employees about activities conducted at CDV.</b>   | Regular informing of researchers about particular activities conducted in individual areas.  | Work conditions | HR Award team, Personnel Department, Marketing Department                 | May 2021 - December 2022     |
|   |                             | <b>Expansion of the English section at CDV website</b>   | Increasing awareness and the level of attractiveness of the English version of CDV website.  | Work conditions | Institution management and area managers, Marketing Department            | January 2021 - December 2022 |
| 6 | <b>Work environment</b>     | <b>Providing knowledge about our mission and CDV vision, organizational structure of CDV and its governing bodies.</b> | Presenting information on CDV in a uniform graphic form in buildings, regular information on activities conducted by CDV bodies.             | Work conditions | Institution Management, Personnel Department Marketing Department         | January 2021 - December 2022 |
|   |                             | <b>Securing the knowledge of the organizational structure of CDV.</b>  | Changing the way CDV organizational structure is displayed on the Intranet, adding photos and information about employees.                   | Work conditions | Institution Management, Personnel Department                              | January 2022 - December 2022 |
|   |                             | <b>Ensuring quality and equivalent work environment in all CDV buildings.</b>  | Regular monitoring and possible improvement of the work environment based on the requirements of employee, after approval by the management. | Work conditions | Institution Management HR Award team, Institution Management, action team | January 2021 - December 2022 |

|   |                                |   |   |                 |  |                              |
|---|--------------------------------|---|---|-----------------|--|------------------------------|
| 7 | <b>Essential CDV documents</b> | <b>Modification of internal documents and giving them more attractive appearance and reducing document length</b> | Analysis of the processing of internal CDV documents, their editing, text shortening, supervision of regular document updates.  | Work conditions | HR Award team, Institution Management, Legal Department, Personnel Department                | January 2021 - December 2021 |
|   |                                | <b>Presenting documents to newly hired employees gradually, and based on their work focus.</b>                    | Classification of documents according to the level of importance, providing documents to employees according to their work focus.   | Work conditions | HR Award team, Institution Management, Legal Department, Personnel Department, IT Department | January 2021 - December 2021 |
|   |                                | <b>Securing awareness of internal documents.</b>  | Presenting documents to employees but only those documents that must be read and understood, and which the employees really need to perform their work duties.                | Work conditions | HR Award team, Institution Management, Legal Department, Personnel Department, IT Department | January 2022 - December 2022 |
| 8 | <b>Communication</b>           | <b>Promoting communication between divisions and areas focusing on particular and current projects.</b>           | Regular quarterly meetings between all area managers and departments across CDV with the intention to share problems and propose solutions and preventive measures.           | Work conditions | Personnel and Marketing Department   | January 2021 - December 2022 |
|   |                                | <b>Creating higher awareness about CDV benefits and motivational reward for introducing a new employee.</b>       | Providing regular information to employees by the HR department about benefits, motivational rewards for introducing a new employee, about home-office requirements and more. | Work conditions | Human Resources Department   | January 2021 - December 2022 |



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|----|--|---|--|-----------------------------------|---|--------------------------------|
| 9  | <b>Internal processes approval method</b>    | <b>Modification of approval processes and comment processes (requests, speakers, etc.).</b> | Revision of approval processes and comment processes (requests, speakers, etc.) on the Intranet and their correct setting based on competencies.           | Work conditions                   | Internal auditor, Institution Management                          | January 2022 - December 2022   |
|    |  | <b>Introduction of administrative processes in electronic form</b>                          | Introduction of (for example) an electronic application for home-office.   | Work conditions                   | IT Department, Personnel Department                               | January 2021 - March 2021      |
| 10 | <b>Support for men and women in research</b> | <b>Support for employees upon return from a maternity leave or parenting time-off.</b>      | Support for employees during reintegration into the work process and into the CDV team.  | Work conditions                   | HR Award team, Personnel Department, Area and Department managers | January 2021 - December 2022   |
| 11 | <b>Employee management</b>                   | <b>Definition of rules governing appointment of employees to managing positions.</b>        | Information about the rules that govern appointment of employees into managing position based CDV wage tariffs.  | Employee development and training | Human Resources Department  | September 2021 - December 2021 |
|    |  | <b>Managerial training for management positions</b>   | Regular company training designed for division and area managers focusing on soft-skills.  | Employee development and training | HR Award team, Personnel Department                               | January 2021 - December 2022   |
|    |  | <b>Improving managerial qualifications and skills for leading positions.</b>                | Introduction of the option to study for MBA or other academic titles for managers of divisions and departments, or possibly for area managers.             | Employee development and training | HR Award team, Personnel Department                               | January 2021 - December 2022   |
| 12 | <b>Employee evaluation</b>                   | <b>Basic documents needed for annual evaluation interviews.</b>                             | Preparation of new materials for annual evaluation interviews including specifics and differences in the professional orientation of individual employees. | Employee training and development | HR Award team, Personnel Department, Institution Management       | January 2021 - December 2021   |

|    |   |   |  |                                    |  |                              |
|----|---|---|--|------------------------------------|--|------------------------------|
| 13 | <b>Employee selection and recruitment</b>           | <b>Using social networks for recruitment purposes.</b>      | Using social networks (e.g. LinkedIn) to address potential employees for job positions that remain vacant for a long time.   | Employee selection and recruitment | Human Resources Department                                       | January 2021 - December 2022 |
|    |   | <b>Participation in job fairs.</b>                          | Active participation in job fairs organized for University students and graduates.   | Employee selection and recruitment | HR Award team, Personnel Department, Marketing Department        | January 2021 - December 2022 |
|    |   | <b>Utilization of recruitment videos.</b>                   | Creation of new recruitment videos for potential research job applicants.  | Employee selection and recruitment | HR Award team, Personnel Department, Marketing Department        | January 2022 - December 2022 |
|    |   | <b>Cooperation with Universities</b>                        | Establishing work relationships with faculties for recruitment purposes, utilization of their career centres, providing conditions necessary for internships at CDV. | Employee selection and recruitment | HR Award team, Personnel Department, Marketing Department        | October 2021 - December 2022 |
|    |   | <b>Electronic approval of a job position</b>                | Creation of a new employment sheet in electronic form, which is to follow the adaptation plan of the relevant employee.  | Employee selection and recruitment | Human Resources Department<br>IT Department,<br>internal auditor | January 2021 - December 2022 |
| 14 | <b>Adaptation process for newly hired employees</b> | <b>Electronic adaptation plan for newly hired employees</b> | Introduction of electronic adaptation plan on the Intranet including competencies for individual actions.  | Employee selection and recruitment | HR Award team, Personnel Department                              | January 2021 - December 2022 |

|    |   |  |  |                                    |   |                              |
|----|---|--|--|------------------------------------|---|------------------------------|
|    |   | <b>Information brochures and videos for newly hired employees.</b> | Creation of information brochures and videos for newly hired employees to provide answers to the most frequent and most important questions related to new employment. | Employee selection and recruitment | HR Award team, Personnel Department, Marketing Department | January 2021 - December 2022 |
| 15 | <b>Popularization of research results</b> | <b>Popularization strategies and 5 educational programmes.</b>     | Improvement of strategic documents and the visitor center.   | Ethical and professional aspects   | HR Award team, Marketing Department                       | January 2022 – December 2022 |

## Conclusion

This action plan is divided into the analytical part and the part that includes specific planned activities such as: ethical and professional aspects, recruitment and selection of employees, work conditions, training and development. The document follows up on the questionnaire survey and the subsequent GAP analysis and shall serve for the next two years as the base for improving the overall functioning of the Centrum dopravního výzkumu, v. v. i. (the Transport Research Center) - as a modern research institution.

In addition to the above-mentioned planned activities, an “Action Group” was established in the autumn of 2020 to support all changes at CDV with the aim of identifying employee requirements focusing on the improvement of the work environment as well as to supervise proper implementation. Suggestions for the relevant changes are expected to be in the form of individual comments from employees or as outputs from organized regular meetings between department and area managers which shall take place on quarterly basis.

The primary aim of all planned changes at CDV is to increase the quality of care in terms of human resources, to develop professional growth of researchers and to create conditions for better career growth in the field of research and development.