National Institute of Public Health

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D1.3 – Dissemination Tools

Project Title:	*Genomic surveillance of selected infectious diseases in the Czech Republic*
Project Acronym:	*HERA2CZ*
Project ID:	*Grant Agreement - Project 101113387*
Type of action:	*EU4H Project Grants*
Call:	*EU4H-2022-DGA-MS-IBA-1*
Topic:	*EU4H-2022-DGA-MS-IBA-01-02*
Beneficiary:	*National Institute of Public Health, the Czech Republic*
Coordinator:	*Jana Kozáková, MD*
Authors of the Deliverable:	*Jana Kozáková, Markéta Šimková, Karolína Řípová*
Date of the Deliverable:	*12th October 2023*

Disclaimer

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Dissemination Level

PU	Public	☒
SEN	Sensitive	☐

History of Changes

Version	Date	Name	Chapters edited	Changes tracked
v1	12/10/2023	Marketa Simkova	All	Document prepared
v2	12/03/2024	Marketa Simkova	Document Template changed	Changed project template, updated status of online sources in Chapter 1, online links in CZ and EN added to Chapter 3 and Chapter 4, changed templates in Chapter 5.

Table of Contents

List of Abbreviations

ARI/ILI surveillance	*Acute Respiratory Infection and Influenza-Like Illness surveillance national system*
FWD	*Food- and Water-borne Diseases*
MDR	*Multidrug Resistant Bacteria*
MPXV	*Monkeypox Viruses*
NIPH	*National Institute of Public Health*
NRLs	*National Reference Laboratories*
RSV	*Respiratory Syncytial Viruses*
RT-PCR	*Reverse Transcription Polymerase Chain Reaction*
WGS	*Whole Genome Sequencing*

List of Figures

1. Executive Summary

The primary objective of Deliverable D1.3 - Dissemination Tools is to assemble a comprehensive collection of communication tools that have significant importance for the HERA2CZ project and will enable the impact on a wide spectrum of stakeholders. This package of materials is designed to facilitate effective communication and engagement with individuals and groups from diverse backgrounds and perspectives.

In conjunction with this respective deliverable, Deliverable D1.2 - Communication Strategy is presented simultaneously. This strategy (D1.2) outlines the core focus of the project, identifying the primary audiences that the project seeks to engage and the key channels through which the information will be disseminated. Together, these two deliverables form an integrated approach that underlines the project's communication and dissemination efforts.

In summary, the combination of Deliverables D1.3 and D1.2 highlights the HERA2CZ project's commitment to effective communication and engagement of key audiences. By offering this set of materials, the project strives to ensure that its importance and value resonate widely, fostering a deeper common understanding and appreciation of the project's contributions to the application of modern and precise methods in genomics, the protection of public health, and the prevention of cross-border health emergencies.

2. Public Relation Kit (PR Kit)

A basic Public Relations kit (PR kit) was created and this set includes essential materials that helps effectively communicate the project's purpose, findings, and impact to various audiences. Here's a list of key components:

1. **Project site with an Executive Summary**: A brief summary of the research project's goals, work packages, contact details and the acknowledgement of the funding. Available on-line at the project dedicated subsite that is available via main website of the National Institute of Public Health (NIPH/SZU in Czech): https://szu.cz/hera2/
2. **Project Overview or Fact Sheet/Leaflet**: A concise document outlining the key details of the research project, including the project's objectives, methodology, key researchers, timeline and the source of funding. The document is available online.
3. **Press Release**: A press release summarizing the objective of the project. It highlighted the project's significance and potential impact in a clear and engaging manner accessible for general audience. Press release was published in Czech language on September 26th, 2023. (Link)
4. **Visual Materials**: The project has a set of unified communication materials with unified visual style. All these templates are available to the project team on internal Teams site.
5. **Links to Relevant Resources**: Include links to any related websites, videos, or additional resources that provide more context or information about the research. *(Under preparation)*
6. **References and Citations**: Include relevant citations to previous work, studies, or publications that have formed the current research project. *(Under preparation)*
7. **Presentations from Conferences**: Include project relevant presentations from conferences and workshops. *(Under preparation)*
8. **Public Deliverables**: Include project deliverables with public status after formal approval of the European Commission. *(Under preparation)*
9. **Project's Final Conference**: planned for Month 30 of the project realisation. This conference will summarise the most relevant project results to the key stakeholder audience. *(Under preparation)*

3. Project Site with an Executive Summary

The NIPH website contains a section for Projects realised at the NIPH. One of the projects is HERA2CZ that can be reached at:

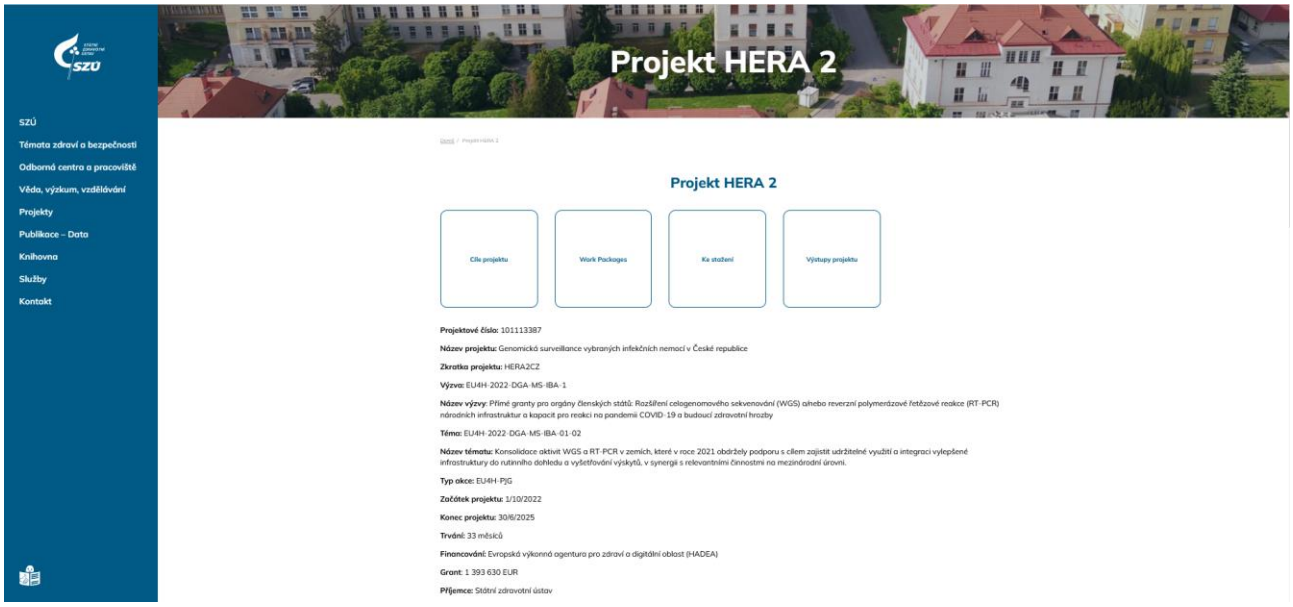

Figure 1: Czech subsite https://szu.cz/hera2/

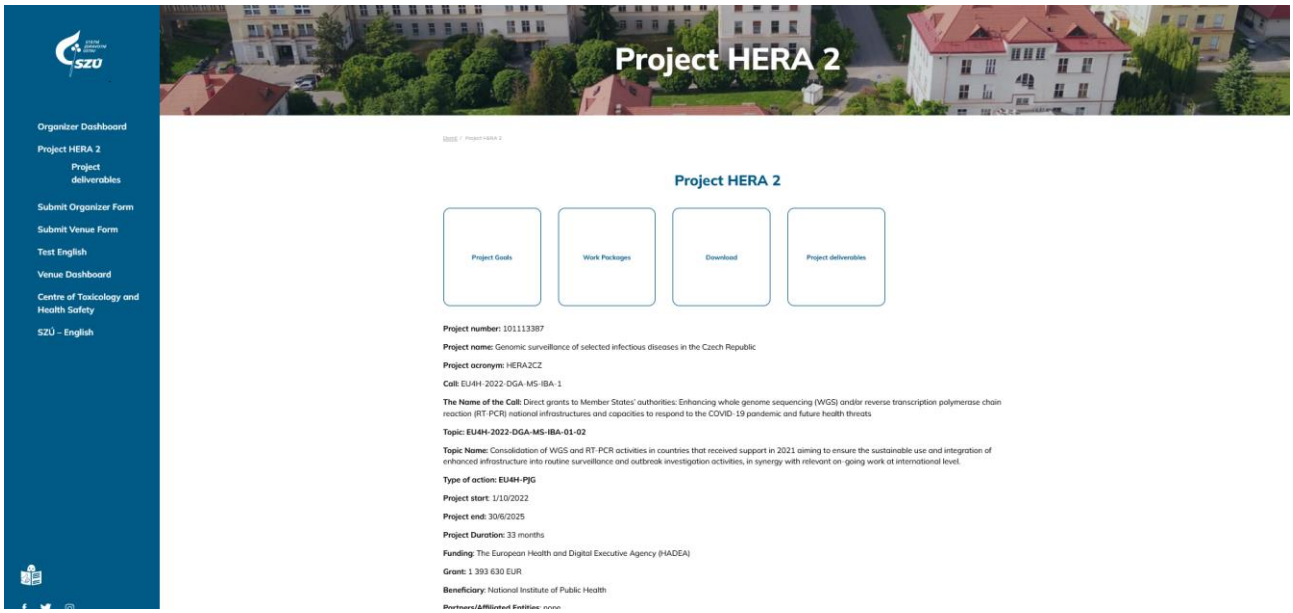

Figure 2: English subsite: https://szu.cz/en/project-hera-2/

The subsite of the NIPH official website was created in April 2023, and visitor statistics were implemented on this subsite. The project subsite contains these features; points in grey are currently under preparation.

I. **A brief summary of the project**, its research goals, work packages, contact details and the acknowledgement of the EU funding.

CZ, EN

II. **Project Leaflet,** A concise document outlining the key details of the research project, including the project's objectives and source of funding.

CZ, EN

III. **Press Release**: A press release summarizing the objective of the project. It highlighted the project's significance and potential impact in a clear and engaging manner accessible for general audience.

CZ, EN

IV. **Links to Relevant Resources**: Include links to any related websites videos, or additional resources that provide more context or information about the research related to the project.

CZ, EN

V. **References and Citations**: Include relevant citations to previous work, studies, or publications that have formed the current research project. Under relevant WPs:

CZ, EN

VI. **Presentations from conferences**: Include project relevant presentations from conferences and workshops. Under relevant WPs:

CZ, EN

VII. **Public deliverables:** Include project deliverables with public status after formal approval of the European Commission.

CZ, EN

VIII. **Project's Final Conference:** Information on the event and conference materials published.

4. Project Overview and the Project's Factsheet/Leaflet

Genomic Surveillance Project of Selected Infectious Diseases in the Czech Republic (HERA2CZ)

Enhancing Public Health Protection through the HERA2CZ Project

The HERA2CZ project aims to enhance the quality of public health protection and improve the preparedness of the Czech Republic for emergency health situations and pandemics such as Covid-19, or any future health crisis with potential international impact. The HERA2CZ project assists the National Institute of Public Health (NIPH/SZÚ) in increasing the capacities of the National Reference Laboratories (NRL) for Whole Genome Sequencing (WGS) of infectious agents and expanding the spectrum of WGS characterization to various human pathogens, especially SARS-CoV-2 and other respiratory viruses, bacterial pathogens with cross-border impact, including antibiotic-resistant bacteria. WGS is a modern, precise, and time-efficient analytical method that enables rapid and accurate identification of infectious disease outbreaks, control of these outbreaks, monitoring the spread of infectious agents, and their mutations. Early detection of potential threats and a proper understanding of the spread of infectious diseases are crucial for timely responses from public health authorities.

Key Points of the HERA2CZ Project

- Public health protection requires a comprehensive approach crossing national borders, strengthening healthcare systems, analytical capacities, implementing modern methods, and improving cross-border data sharing.
- The HERA2CZ project addresses shortcomings in the healthcare system, particularly considering the experiences from the Covid-19 crisis.
- The main objective is to enhance the Czech Republic's preparedness for future health emergencies related to the spread of infectious diseases at national and global levels.

What is Whole Genome Sequencing (WGS)?

- WGS is a modern method used to analyse the complete DNA sequence of an organism's genome.
- WGS allows precise tracking and differentiation of individual strains, aiding in identifying sources of infection and understanding the spread of infectious diseases.
- The accuracy of the method makes WGS an indispensable tool for effective surveillance of the occurrence and spread of infectious diseases.
- WGS enables timely and accurate identification, monitoring, and prevention of the spread of infectious diseases in a global context.
- Cross-border data sharing through WGS supports collaboration between countries is necessary for efficient monitoring and prevention of global health threats.

Challenges Associated with WGS

- While WGS is highly effective, it is more resources intensive compared to other sequencing methods and requires robust technical and personnel resources.
- WGS generates complex data, the precise analysis of which demands specialized expertise, management, and storage, necessitating additional skilled personnel.
- Some of these challenges were partially addressed in the previous HERA project.

Focus of the HERA2CZ Project

- The follow-up HERA2CZ project focuses on increasing the genotypic characterization capacity within the National Reference Laboratories (NRLs) of the National Institute of Public Health (NIPH/SZÚ) in the Czech Republic and expanding the spectrum of WGS characterization to various human pathogens, especially SARS-CoV-2 and other respiratory viruses, bacterial pathogens with cross-border implications, including antibiotic-resistant bacteria.
- The HERA2CZ project further refines methods based on whole genome sequencing and incorporates these modern methods into routine genomic surveillance of selected infectious diseases.

The Project's Basic Data

Project Title (acronym):	*Genomic surveillance of selected infectious diseases in the Czech Republic (HERA2CZ)*
Project ID:	*Grant Agreement - Project 101113387*
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Topic:	*EU4H-2022-DGA-MS-IBA-01-02*
Coordinator:	*Jana Kozáková, MD*
Project duration	*1.10.2022 – 30.6.2025*

Find out more: https://szu.cz/en/project-hera-2/

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5. Press Release

Genomic Surveillance Project of Selected Infectious Diseases in the Czech Republic (HERA2CZ)

The National Institute of Public Health (NIPH/SZÚ) is currently implementing a project called HERA2CZ, which is a continuation of the successful HERA project. This project represents another step toward enhancing the Czech Republic's preparedness for potential threats of national or global health emergencies. Experiences from the pandemic caused by SARS-CoV-19 have underlined the importance of genomic surveillance of infectious diseases for public health protection. Effective public health protection cannot be achieved through sole steps limited to the national level. Strengthening the laboratory infrastructure of National Reference Laboratories (NRL) and improving the quality of shared data at the European level are key components of the EU strategies collectively referred as EU4Health. These strategies aim to protect European citizens from the impacts of global health crises and enhance the ability of EU member states to respond effectively to cross-border health threats.

"The preparedness within the Czech Republic is ensured by the National Reference Laboratories (NLR), which conduct diagnostic and analytical activities within their specific focus. These laboratories employ various analytical methods to determine the complete DNA sequence of the genome. High-resolution information allows precise tracking and differentiation of strains, enabling scientists to identify infection hotspots and better understand the spread of diseases and the emergence of mutations. Currently, the most precise method used is Whole Genome Sequencing (WGS), which the public is likely remember from the Covid-19 pandemic. The National Reference Laboratory for Influenza and Non-Influenza Viral Respiratory Diseases utilized it and still uses it to monitor mutations of the SARS-CoV-2 virus," explains Barbora Macková, MHA, the director of the National Institute of Public Health

WGS is employed to determine the complete DNA sequence of an organism's genome. This technique provides a comprehensive view of the organism's genetic composition and its potential variants or mutations. Due to its precision, WGS enables rapid and accurate identification of infection hotspots and monitoring the spread of infectious diseases. This allows public health authorities to respond immediately to the occurrence of infections and trace their spread.

"Cross-border collaboration and data sharing through WGS databases enable a faster and coordinated response to global health threats, which is a crucial step in preventing the cross-border spread of infectious diseases, protecting public health, and minimizing the economic impacts of health threats on a global scale," emphasizes Jana Kozáková, Head of the Center for Epidemiology and Microbiology at the National Institute of Public Health

Although WGS is a highly effective method, it is more expensive and resource-intensive compared to other sequencing methods. The process of sequencing the entire genome generates a large amount of data demanding modern technological equipment and sufficient computational and analytical capacities. Managing, sharing, and storing this data requires data capacities, regular system maintenance, and security. Effective analysis and proper interpretation of data require personnel with expertise in bioinformatics.

These structural requirements can be a burden for smaller research facilities or local laboratories to utilize this method. The aforementioned challenges were partially addressed by the previous HERA project, which significantly improved the material capacity of the National Reference Laboratory for Influenza and Non-Influenza Viral Respiratory Diseases and regional sequencing centres.

The follow-up HERA2CZ project focuses on increasing the capacity for genotypic characterization within the National Reference Laboratories (NRLs) of the National Institute of Public Health (NIPH/SZÚ) in Prague and expanding the spectrum of WGS characterization to various human pathogens, especially SARS-CoV-2 and other respiratory viruses, bacterial pathogens with cross-border implications, including antibiotic-resistant bacteria. The HERA2CZ project also involves refining methods based on whole genome sequencing and incorporating these methods into routine genomic surveillance of selected infectious diseases.

"The project not only enhances the ability to monitor infectious diseases but also strengthens the coordination and response mechanisms of public health protection systems across the European Union. By increasing the capacity for WGS sequencing and refining the methodology, the HERA2CZ project contributes to improving the public health protection system," concludes Jana Kozáková.

Find out more: https://szu.cz/en/project-hera-2/

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Press Release for download CZ, EN

6. Visual Materials

The project does not have a unique project logo. Instead of creating its own visual materials, the HERA2CZ project uses the organization's logo and the unified style of NIPH/SZU communication materials. Using the organization's logo maintains a consistent visual identity across all its projects and initiatives. This consistency helps reinforce the organization's overall brand and values, providing credibility and respect to the information provided. NIPH/SZU has a well-recognized and trusted logo. Associating the research project with the organization's logo thus lends credibility to the project.

Last but not least, by using the organization's logo, the research project is more closely aligned with the preceding HERA project, as well as with the organization's overarching mission and goals of public health protection. Communicating the HERA2CZ project under the NIPH/SZU branding is more resource-efficient, and this approach emphasizes the project's contribution to the organization's larger objectives.

6.1. Project Template – Word

The project realisation team uses for the HERA2CZ project communication the unified project template in MS Word.

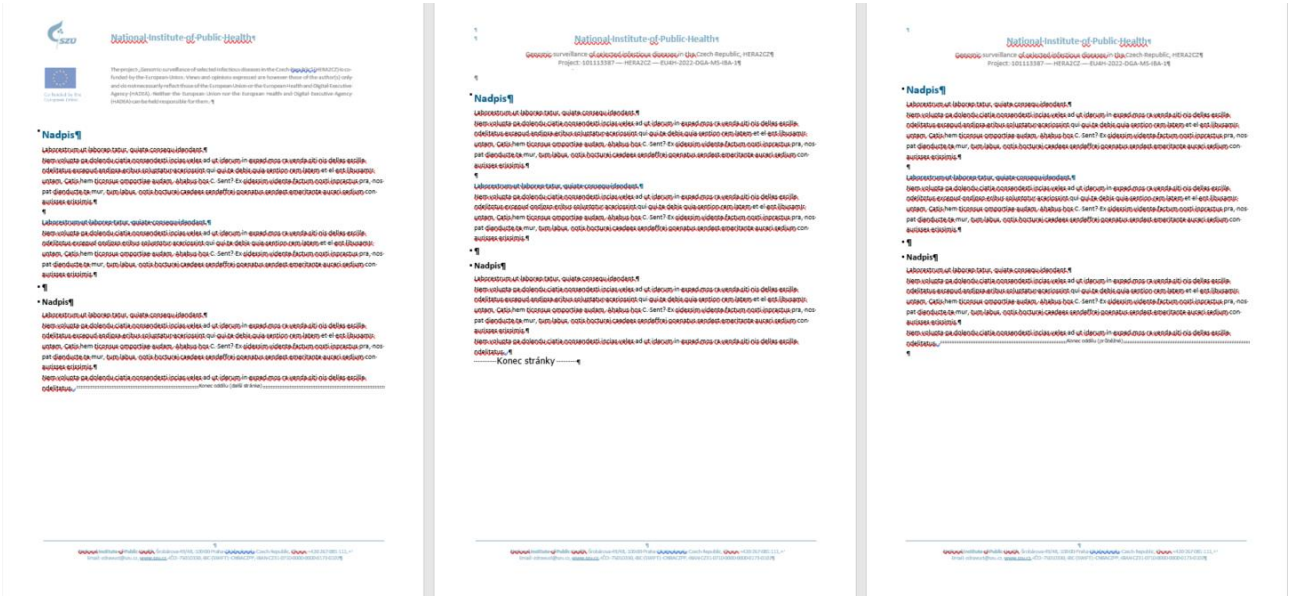

Figure 3: HERA2CZ MS Word template

6.2. Project Template – Deliverable

The project realisation team uses for the HERA2CZ project reporting the unified project template in MS Word.

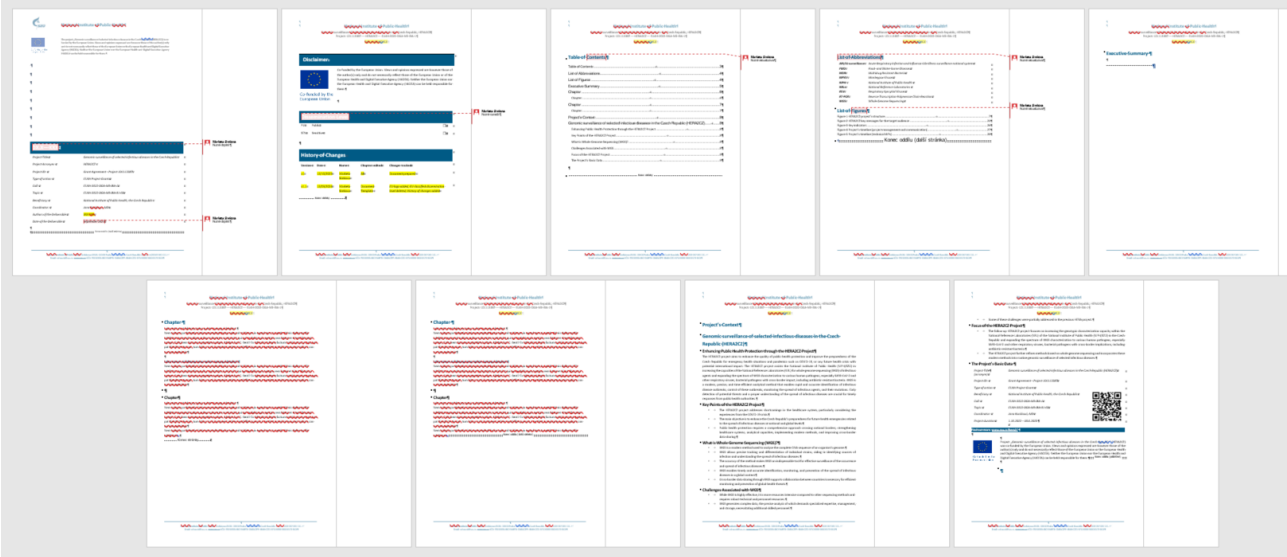

Figure 4: HERA2CZ deliverable template in MS Word

6.3. Project Template – PowerPoint

The project realisation team uses for the HERA2CZ project communication the unified project template in MS PowerPoint.

Figure 5: HERA2CZ MS PowerPoint template

All templates are stored in the project internal Teams and will be updated upon need.

7. Other Sources

The team is currently compiling a comprehensive list of online sources related to the project's topics, as well as Citations and Reference sources. This list will be made available on the project's dedicated subsite, providing readers with access to a rich array of information sources on the surveillance problematics.

In addition to this, the project will also leverage presentations and materials from conferences that are relevant to the project's themes. These conference outcomes will serve as another valuable source of information, offering insights and updates on the project's outputs and findings.

The project's deliverables with public status will be published on the project subsite after formal approval of the content by the European Commission.

Deliverable No	Deliverable Name	Work Package No	Type	Due Date
D1.1	**Project summary report**	WP1	R	33
D1.2	**Dissemination and communication strategy**	WP1	R	11
D1.3	**Dissemination tools (project site and communication material)**	WP1	DEC	11
D1.4	**Impact evaluation strategy**	WP1	R	11
D1.7	**Dissemination report**	WP1	R	33
D1.10	**Evaluation report**	WP1	R	33
D4.1	**Report on the iImplementation of WGS protocol for N. meningitidis, S. pneumoniae, H. influenzae, B. pertussis in NRLs**	WP4	R	33
D4.2	**Report on Implementation of WGS based surveillance of invasive diseases caused by meningococci, pneumococci, haemophilus and B. pertussis.**	WP4	R	33
D5.1	**Report on the implementation of WGS protocol**	WP5	R	33
D5.2	**Report on implementation of protocol for WGS surveillance of CRE/CCRE**	WP5	R	33

Figure 6: The list of public deliverables and their time schedule

8. Project's Final Conference

The project is committed to disseminating its outputs at the final conference planned for Month 30. This conference will be organized by the National Institute for Public Health and will present the results of the HERA2CZ project to key stakeholders. The target audience invited to the event will include representatives from all key stakeholders of the project: surveillance specialists, representatives from the health sector, academia, and policymakers from the Ministry of Health. These groups will be informed through various media channels. We plan to engage members of the Evaluation Advisory Board, media channels of the National Institute for Public Health, and professional channels of the project team. The conference outputs, including presentations and photos, will be published on the project subsite after the event.

9. Project's Context - Genomic surveillance of selected infectious diseases in the Czech Republic (HERA2CZ)

Enhancing Public Health Protection through the HERA2CZ Project

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