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|  | <h1>AP03 Technical Infrastructure</h1> |
|   | <p>state-analysis: interview</p>       |

## 1. Introduction

*This part has not been translated – please refer to the extended version in the German document for details!*

## 2. Interview-Guide

### 1 Information on participant

|   |  |
|---|--|
| Name / email  |  |
| Position  |  |
| Name of the institution                                       |  |
| Type of institution (public, private ...) + short description |  |
| Headcount   |  |
| Single-/multi-site  |  |

### 2 Introductory questions

2.1 How long have you worked at this company/organisation?

|               |                          |               |                          |               |                          |
|---------------|--------------------------|---------------|--------------------------|---------------|--------------------------|
| Under 5 years | <input type="checkbox"/> | 5 to 10 years | <input type="checkbox"/> | Over 10 years | <input type="checkbox"/> |
|---------------|--------------------------|---------------|--------------------------|---------------|--------------------------|

2.2 Do any of the following data-related tasks to your daily work duties?

*( ) = no, (x) = yes, (y) = partially/not regularly*

|  |                          |                                      |                          |
|--|--------------------------|--------------------------------------|--------------------------|
| Use of data storage                      | <input type="checkbox"/> | External cloud resources             | <input type="checkbox"/> |
| Use of computing power                   | <input type="checkbox"/> | Self-training in data-related skills | <input type="checkbox"/> |
| Data analytics                           | <input type="checkbox"/> | Teaching on working with data        | <input type="checkbox"/> |
| Artificial intelligence/Machine learning | <input type="checkbox"/> | Data management                      | <input type="checkbox"/> |
| Big Data Analytics                       | <input type="checkbox"/> | Collaborative work with data         | <input type="checkbox"/> |
| Data archiving                           | <input type="checkbox"/> | Others:                              | <input type="checkbox"/> |

2.3 To which extent is your job linked to working with data?

|                           |                          |                           |                          |                          |                          |
|---------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| Under 25% of working time | <input type="checkbox"/> | Up to 50% of working time | <input type="checkbox"/> | Over 50% of working time | <input type="checkbox"/> |
|---------------------------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|

### 3 Data infrastructures today

3.1 Which infrastructures are currently operative in your company/organisation?

|                   |                          |                 |                          |
|-------------------|--------------------------|-----------------|--------------------------|
| Data centre       | <input type="checkbox"/> | Cloud solutions | <input type="checkbox"/> |
| Storage resources | <input type="checkbox"/> | Others:         | <input type="checkbox"/> |

3.2 How has the work with data changed for your company in the last years?

Scale 1-5: (1) = does not apply, (5) = strongly applies

|   |  |
|---|--|
| Data use/demand has grown significantly |  |
| Use of data sources has expanded        |  |
| Data-intensive analysis has grown       |  |
| High computing power needed             |  |
| More storage capacity needed            |  |
| Other:                                  |  |

3.3 How are these changes noticed? *Either by acquisition of new infrastructures in-house (x) or use of external providers (y)*

|                                 |  |                                  |  |
|---------------------------------|--|----------------------------------|--|
| Repositories or cloud solutions |  | High Performance Computing (HPC) |  |
| Analytics tools                 |  | Docker System                    |  |
| Version systems (zB. Git)       |  | Other:                           |  |

3.4 Does your institution have enough resources for data infrastructures?

|  |  |
|--|--|
| Yes, my institution has enough resources                   |  |
| No, at the moment there are not enough resources available |  |

3.5 Where is there a noticeable gap or uncovered need?

Answer (free text):

3.6 Are you satisfied with the current situation?

Scale 1-5: (1) = not satisfied, (5) = very satisfied. Answer:

3.7 Do you see any demand for changes? If yes, how would you grade it?

Scale 1-5: (1) = mild, (5) = very pressing. Answer:

## 4 Working with data

4.1 How do you usually work with data?

Answer:

4.2 Which of the following standards oder processes do you normally use?

( ) = no, (x) = yes, (y) = sometimes/partially

|  |  |   |  |
|--|--|---|--|
| Data management plans                  |  | Certified repositories (listed on re3data ) |  |
| (Meta-)data standards                  |  | Open Source                                 |  |
| International Repos (e.g. Zenodo, ...) |  | Proprietary Software                        |  |
| Others:                                |  |   |  |

4.3 Which standards (archiving, processing) and which standardi data are typical in your branch?

Answer:

4.4 Are there specific practicies in your disciple? If yes, which ones?

Answer:

4.5 Which tools do you use in your work with data?

|                           |  |                               |  |
|---------------------------|--|-------------------------------|--|
| Digital documentation     |  | Distributed/Federated Storage |  |
| Resource Scheduling Tools |  | Backup strategy               |  |
| Big Data techniques       |  | Work-flow management          |  |
| AI, Machine Learning      |  | Others:                       |  |

4.6 With which size of data do you work per month?

|            |              |                |                |           |
|------------|--------------|----------------|----------------|-----------|
| Under 1 GB | 1 GB to 1 TB | 1 TB to 100 TB | 100 TB to 1 PB | Over 1 PB |
|------------|--------------|----------------|----------------|-----------|

4.7 Are you familiar with the FAIR principles? Answer:

|  |  |
|--|--|
| If yes, do they play an important role in your organisation? |  |
| Are data reused?   |  |
| Do you share data with others (e.g. service providers)?      |  |

## 5 Human resources in data

5.1 How many staff members work with data in your organisation/company? Do you have enough staff to work with data?

Answer:

5.2 Which position have these staff members in your company/organisation?

Answer:

5.3 Do these staff members have the specific training in data?

Answer:

5.4 Are there special courses/training/education, in-house or external to the organisation/company, that your staff members must/should complete? E.g. discipline-specific, IT expert

Answer:

5.5 Which competences do you expect future staff will need to have in data-related topics, to satisfy the demands of the job market?

Answer:

## 6 Collaborative work with

6.1 Do you work collaboratively with data?

|   |  |
|---|--|
| Data from the company are shared with others for collaboration purposes |  |
| Data from other organisations are used for collaboration purposes       |  |

6.2 Do all steps, from data generation to analysis and evaluation and archival, take place in-house?

|   |  |
|---|--|
| Yes   |  |
| No  |  |
| These steps are carried out by others:                                    |  |
| Do you have collaborations with partners in your sector / other sectors?: |  |

6.3 Do you use resources from service providers?

|  |  |                  |  |
|--|--|------------------|--|
| HPC Cluster Maribor                        |  | Know-Center GmbH |  |
| External Clouds (e.g. Amazon Web Services) |  | Others           |  |

6.4 In what context (e.g. scope, frequency, type) does data exchange happen, and how would you like that it took place?

Answer:

## 7 International networks

7.1 In which networks does your organisation participate?

|     |  |      |  |         |  |         |  |
|-----|--|------|--|---------|--|---------|--|
| RDA |  | EOSC |  | EuroHPC |  | Others: |  |
|-----|--|------|--|---------|--|---------|--|

## 8 Assessment of Styria

8.1 What is the current situation of data infrastructures in Styria?

*Scale 1 – 5, (1) = not good, (5) = very good, (0) = do not know/not applicable.*

|                                 |  |
|---------------------------------|--|
| Storage and computing power     |  |
| Speed of internet connection    |  |
| Participation in networks       |  |
| Collaboration opportunities     |  |
| Support from Styrian Government |  |
| Others:                         |  |

8.2 How, in your opinion, could the collaboration from different stakeholder be improved? *Scale 1 – 5, (1) = not relevant, (5) = very relevant*

|  |  |
|--|--|
| With a new platform for collaboration      |  |
| With improved information networks         |  |
| With improved collaboration opportunities  |  |
| With more support from regional Government |  |
| Others:                                    |  |

## 9 Data infrastructures in the future

9.1 How do you assess the future development and strategy in your organisation/company with regard to data?

|  |  |
|--|--|
| <i>Please mark the following sentence from 1 (not appropriate) to 5 (very appropriate)</i>                               |  |
| Demand for data infrastructures for my organisation/company will grow and become more important for my business/activity |  |
| ...  |  |

9.2 Do you plan big changes?

|                               |  |                                |  |
|-------------------------------|--|--------------------------------|--|
| Increase competences in-house |  | Increase/develop cloud systems |  |
| Acquisition of resources      |  | Advice from external experts   |  |
| Others:                       |  |                                |  |

Please ask the interviewee to suggest other possible interviewees in your close contact network.

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