# **How will the data be stored and backed up during the research?**

* The Data will be stored on the Cloud-server of the ZHAW.
* If an data is processed on local drives, the files and folders need to be saved in the following folder:

:/project/data

* This folder is secured and all files are automatically uploaded and backed-up.
* It will require 500gigabyte, hence we will require additional storage.
* The data will be backed up end of the week, and uploaded automatically to the server.
* The IT admin in responsible and recovery of the data.
* Barring any major incidents on the server, the data can be retrieved from the cloud-server if any mishaps occur on the local data.

# **How will you manage access and security?**

* Only authorised user will be given access to the data i.e.
  + the project supervisor
  + the project leader
  + the project collaborators/ hospitals
* A password protected will be provided to the authorised person
  + two-factor security of access will be established using the Authenticator app
* Collaborators will need to provide an email address and a phone number for accessing the data
* Data encryption will be put in place before the data is uploaded to the main secure system
* GDPR will be applied and personal data
* Files uploaded and backed-up to the secure server will appear in a color-coded format (e.g. green-> for uploaded and backed up, blue-> for only local files, red-> unsaved files)

# **Which data are of long-term value and should be retained, shared, and/or preserved?**

* Patient critical Meta data and business critical data will be long-term data on:
  + Long-term is defined to 10 years
  + Observations, findings and Results will also be kept for Long-term
  + Each dataset is initially assigned to a unique ID and classification, automatically generated through a Universally Unique Identifier (UUID) application.
* Processed data will be kept for 5 years
* The data can be used for future research studies
* Data can be used Research Paper publications in international journals
* No additional cost is associated with the maintenance of data on the main server (10 years)
* A dedicated software will be deployed for saving the data with specific identifiers which will allow the definitions of the data retain-ability
* A training will be established for familiarising the project participant on different classes of the data

# **What is the long-term preservation plan for the dataset?**

* Once the project is completed, it will be the responsibility of the project leader to close the project.
* When the project is closed, the project supervisor will sign-off the main server location to be moved to the archived repository
* Only authorised user will be given the access to the archive folder
* No additional cost will be accrued for the data preservation
* It is the responsibility of the project leader to prepare data for sharing / preservation
* Internal audits of the folder may take place each quarter for the assuring the quality of the data and folders

# **How will you share the data?**

In general only data related to publications will be made openly available In general, the project-leader will decide on a case-by-case basis which data can be released in order to avoid issues related to IP rights protection or access.

* Digital search engine will allow university researchers to look for keywords related to the projects which will allow them to find out the existence of the data
* The data could be shared within the ZHAW researchers, under the condition of maintaining the confidentiality and not divulging the trade-secrets
* the data can only be used for research and non-commercial purposes
* Credits and citation will be given by the future users to the project team
* A handle request will be established and access to only the relevant files will provided
* The data-request form will be established for access the data in future
* The data-log will be established and password secured will be put in place to identify who is accessing the data and when it is access
* Reports from unauthorised attempts to access the data will also be logged-in
* An NDA will be established so that the data is not dispersed to any third-parties

# **Are any restrictions on data sharing required?**

* Personal and confidential information and data will be restricted before sharing
* Normalisation of any identifiers will be established during the project i.e. keeping the identity of any individual secured
* Specific agreements with the Editors of scientific/technological journals will be considered and provided.
* Results of the study and any improvements will only be exclusive between ZHAW and the external partner
  + Hospital
  + Machine manufacturers
  + Software manufacturers
* A data sharing agreement will be required if the request is coming from outside of ZHAW
* NDA will still be established between external parties and the project leader