We strongly support reproducible research and we will share all the assets generated in this project, aiming to meet or exceed RC guidelines. The broad scope of assays used in this project will generate diverse data types including: imaging/microscopy data for whole plants and protoplasts, transcriptomics, as well as phylogenetic analyses of specific gene families.

The largest data volume will come from imaging and microscopy and we estimate it to be more than 50TB. The remaining raw and secondary data will be under 15TB.

In order to allow inter-institutional collaboration we will use cloud storage for our active research data. We have selected Dropbox Business as the provider, an enterprise solution that will assure data security and distributed access. The Dropbox Business accounts can access theoretically unlimited storage space, thus it is a cost-effective option for the storage of the large amount of the data we anticipate to generate. It will also allow affordable long-term data preservation, until sharing them by 3 years after the end of the grant by when we will release all unpublished data (see below).

We will use the UoE Wiki as our collaboration platform. Additionally, the UoE group will use the same wiki as an Electronic Lab Notebook, making it possible to easily share original experimental records upon publication; to reciprocate the same level of data and protocol share, the RGBE and KSU colleagues will use Electronic Lab Notebook via Evernote. We will use Skype Video Group Calls for regular remote meetings, which will take place at least every month.

For public dissemination of our data and results we will use University’s DataShare service, which provides various search options and stable public identifiers such as DOI for dataset citation. Apart from this general sharing service, we will also submit to dedicated repositories for particular datatypes (for new DNA sequences and transcriptomics), which will assure that we adhere to the best practice standards.

The identifiers from DataShare and specialized repositories will be added to our manuscripts, which we will submit to journals that support open-access publication of at least the Green, but preferably the Gold level. We plan to release all of our unpublished data after the short 3 years embargo period using DataShare.

In addition, the data we will collect for WP1 will be organized into a publically open database with both quantitative results and example images of the regeneration assays. This website will be hosted by the RBGE or UoE and made available beyond the duration of the grant. A bioinformatics MSc student will be recruited to set up the website as a part of his/her summer research project.