Breakout Session I: Gap analyses by [Scientific Team]

(Complete this form, save and upload to GoogleDocs after Team presentations in Session IV)

Group leader(s): Names and contact information

Team members: Names and contact information

Team organization and communication strategies:
> How will plans and strategies be developed and subsequently disseminated such that all members are kept informed and provided opportunities for real-time feedback.

Team statement(s):
> From the genomic research project(s) description, short, intermediate and/or long-term goals, and current impasses that hinder attaining their attaining of these goals create a summary statement for the group that identifies overlap in these elements.

Gap analysis

A) <u>Purpose</u>: Determine the gaps in research and analytical procedures that inhibit the team from meeting of goals, inclusive of knowledge and skills, hardware and software resources, and data management. Also, identify gaps in current team practices and the best available practices. The aim is to provide an assessment of needs within the group and/or select best practices to implement within the group.

B) <u>Assessments</u>: For each project goal that addresses a Grand Challenge
   1) Identify existing activities and key aspects in those activities

    Develop workflows & best practices: Outline all experimental methods and procedures, equipment and expertise, data collection and storage, and pipelines and workflows.

   2) Identify steps in workflow required by the team to accomplish goals. Review each activity and describe in relation to the following:

1. Manpower — The people resources, knowledge and skills you need.
2. Methods — The processes you need; procedural or analytical.
3. Metrics — The measurements you need to measure closing of the gap..
4. Machines — The technology or computational hardware you need.
5. Materials — The material items (such as physical resources) you need.
6. Minutes — The time you need.

   3) Identify steps in processes where gaps exist. Describe the nature and degree of each of these gaps. Document current practices and describe gaps with the best practices for each element; adequacy of current practices, resources or available skills. Be specific with respect to resources that will be required.

4) Develop a vision for the successful completion of the activity, steps needed to fill gaps, and identify target goals/milestones (short-, intermediate- and long-term) to build complete workflow(s). Establish a mechanism to measure progress. In other words, determine actions that are required to fill research gaps and lead to the successful completion of the Team research.

C) <u>Synthesis</u>: Identify gaps that are common across different activities and workflows performed by the Team. Determine best practices that are inhibitory or lacking in readily available resources or solutions. Prioritize measures to be taken and group members charged with leading efforts to fill those gaps.

D) <u>Summarize</u>: Prepare PowerPoint slides to present in Day2 Session IV

E) <u>Identify team member skills:</u> Outline the skills of each team member in terms of data types, and applications and solutions. Identify those in the team who would benefit from additional training or who could be paired with more experienced ARS colleague in order for data to be analyzed, reach project goals, and contribute towards Grand Challenge areas.