

Standardized Format for 15 Minute Project Presentation

Ultra-high field 7-Tesla scientific project presentation

Aim. To present the information that is required at the Scientific Project Presentation to evaluate (1) the scientific impact, (2) the feasibility and (3) the 7T resource demands of each research project that will use 7T-ICE resources (University of Glasgow, NHS, including functional equipment, and computer GRID of INP). It is suggested that the PowerPoint slides are kept to the strict minimum required for a 15 min presentation.

Inform

Slide 1. The Problem

- 1.1 Background
- 1.2 Hypothesis
- 1.3 Why is it important (what is the projected impact)?
- 1.4 Envisaged publication?

Slide 2. Study Design (e.g. Experimental-, Stimulation- paradigm, group comparison)

- 2.1 Participants: number, type (e.g. right-handed with normal vision), schedule (e.g. just 10 minutes on day 1; and 1 hour on day 3), etc.
- 2.2 Conditions, or Independent variables
- 2.3 Sequence design: e.g. counterbalancing, random, 'history controlled', jittering
- 2.4 Control conditions: attentional, low-level physical
- 2.5 Software: e.g. Presentation, E', Matlab
- 2.6 Hardware: e.g. eye-tracker, sound stimulation

MRI hardware and measurement protocols

- 2.7 Type of hardware: standard or new
- 2.8 Sequences: e.g. EPI, DTI, ASL, standard or new
- 2.9 Spatial coverage: voxel size, # slices, gap
- 2.10 Timing: TR, # volumes per run, # runs, overall duration
- 2.11 Options: e.g. prospective motion correction, real-time EPI

Slide 3. Analysis

- 3.1 Analysis package: e.g. BVQX, FSL, SPM
- 3.2 ROI vs. voxel-wise approach; functional localizers
- 3.3 Fixed-, Mixed- or Random effects design
- 3.4 Pre-processing details: e.g. smoothing kernel, temporal filtering
- 3.5 Analysis strategy: e.g. General Linear Model, Granger Causality, ICA, Multi voxel pattern analysis
- 3.6 Level of confidence in mastering the above aspects and people involved

Slide 4. Expected Results

- 4.1 Expected results, e.g.
- 4.2 activation of region X in contrast Y
- 4.3 Correlation between behavioural measure Z and activity in region X, etc.
- 4.4 Strategy, e.g.
- 4.5 What would be the optimal result (high-risk)
- 4.6 What would be fallback options if a) does not work?

Slide 5. Summary of requested resources

- 5.1 NHS resources Radiographer, Patients, Medication
- 5.2 Stimulation
- 5.3 Response
- 5.4 Number of scanning hours
- 5.5 Analysis tools
- 5.6 IT- Resources (Computer-GRID, GPU-grid) use?
- 5.7 Storage space

Slide 6. Ethics and grant funding

- 6.1 Standard within current CRIF
- 6.2 Grant explicit funded (additional potential)